MINISTRY OF HEALTH OF UKRAINE
BUKOVINIAN STATE MEDICAL UNIVERSITY
МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ

IMPROVE YOUR PROFESSIONAL ENGLISH FOR «KROK 1. DENTISTRY»

(2006-2022)

III edition

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e-Study Guide

Edited by I. Yu. Oliinyk, L.V. Stegnitska

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The study guide aims to improve professional English and theoretical knowledge in nine fundamental medical and biological disciplines included in the structure of USQE, Stage 1 "Krok 1 and professional English language exam". This publication is designed to provide training for students in the specialty "Dentistry" and consists of 3300 tests selected by the compilers, which may enhance the self-improvement and self-training of students during the 1-3 years of study. The suggested collection of tests can also serve as supplemented material for the teachers to organize their classroom activities where acquired knowledge is consolidated through a system of purposeful tasks.

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П Е Р Е Д М О В А

Одним із важливих напрямів реформування вищої медичної освіти в Україні є вдосконалення контролю якості навчального процесу. Адже вимоги Європейського простору вищої освіти чітко вимагають об'єктивних результатів засвоєння студентами фундаментальних та професійно-орієтованих навчальних дисциплін. Результатом продуктивної співпраці між професорсько-викладацьким складом і студентством є високий рейтинг університету в європейській системі вищої освіти, який ґрунтується на показниках навчально-методичної, наукової та лікувальної роботи. В Україні з метою уніфікованого контролю якості підготовки медичних фахівців відповідно до чинних нормативно-правових документів у вищих медичних навчальних закладах з 1999 року впроваджений Ліцензійний інтегрований іспит (ЛІІ) «КРОК-1».

Програма підготовки студентів-медиків передбачає глибокий рівень знань із ряду фундаментальних навчальних дисциплін, насамперед тих, які входять до структури Єдиного державного кваліфікаційного іспиту (ЄДКІ), який на першому етапі складається з двох компонентів: інтегрованого тестового іспиту «КРОК-1», якій оцінює відповідність якості підготовки фахівців стандартам вищої освітита іспиту з англійської мови професійного спрямування, який оцінює компетентність студента з володіння професійною англійською мовою.

Запропоновані у посібнику тестові завдання складені відповідно до вимог діючих навчальних програм із відповідних дисциплін. При його підготовці використано багаторічний досвід підготовки студентів стоматологічного факультету до складання Ліцензійних інтегрованих іспитів «КРОК-1. Стоматологія» у Буковинському державному медичному університеті. Укладена як навчальний посібник добірка тестових завдань англійською мовою містить вибрані та вивірені тестові завдання, які розміщені за роками оприлюднення Центром тестування та містять на першій позиції із запропонованих 5-и варіантів відповідей визначено правильну відповідь. До позитивних сторін укладеного видання слід віднести класичне (згідно структури Ліцензійного іспиту „Крок-1. Стоматологія") співвідношення тестових завдань з усіх дев'яти залучених в даний „КРОК" дисциплін медико-біологічного профілю.

Посібник розрахований на студентів 1-3 курсів стоматологічних факультетів та може бути використаний, як при підготовці студентів до практичних занять і підсумкових модульних контролів з відповідних навчальних дисциплін, так і безпосередньо при підготовці до складання І етапу ЄДКІ. Водночас, навчальний посібник можуть широко використовувати у своїй самопідготовці іноземні студенти- стоматологи 1-3 курсів з англійською мовою навчання.

Укладачі

PREFACE

One of the crucial directions of reforming higher medical education in Ukraine is to improve the quality control of the educational process, as the requirements of the European Higher Education Area accurately require objective results of students' mastering of fundamental and professionally-oriented disciplines. Our university's high ranking in the European higher education system has resulted from the efficient collaboration between the academic staff and students, which is based on the indices of educational, methodological, scientific, and medical work. In Ukraine, for unified quality control of the training of medical specialists under the current regulatory documents in higher medical educational institutions, since 1999, the Unified State Qualification Exam has been introduced "KROK 1".

The training program for medical students provides a profound level of knowledge in several fundamental disciplines, primarily those included in the structure of the Unified State Qualification Examination (USQE). In the first stage, USQE consists of two components, namely the integrated test exam "KROK-1", which is prepared to evaluate the quality of training that meets the standards of higher education, and the examination in English for professional purposes, which assesses the student's competence in mastering professional English.

The test tasks offered in the present edition are compiled under the requirements of current curricula in the relevant disciplines. The compilers used many years of experience gained during the preparation of students to take licensed integrated exams "Krok 1. Dentistry" at Bukovinian State Medical University. The test tasks in English, arranged as a study guide, contain selected and verified test tasks, which are placed according to the years of publication by the Testing Center and enclose one correct option in the first position of 5 suggested answers. The positive aspect of this publication includes the classical (according to the structure of the Unified State Qualification Exam "Krok 1. Dentistry") ratio of test tasks from all nine disciplines involved in general and morphological profiles.

The manual is designed for the 1-3 year university students of dentistry faculties and can be used both in preparing students for practical classes and final module testing in relevant disciplines and purposefully in preparation for the first stage of USQE. At the same time, the study guide can be widely used in self-training by international students with English as the language of instruction.

Compilers

Content
(Зміст)

1. The lung hypertension and cardiac insufficiency of the right ventricle with ascites and edemata developed at the patient with pneumosclerosis. What is the principal pathogenetic mechanism of edemata development?
A. Increase of hydrostatic blood pressure in veins
B. Increase of oncotic pressure of the intercellular fluid
C. Decrease of oncotic blood pressure
D. Decrease of osmotic blood pressure
E. Increase of vascular permeability

2. A sportsman was examined after an intensive physical activity. The examination revealed the disorder of movement coordination but the force of muscle contractions remained the same. It can be explained by the retarded speed of excitement conduction through:
A. Central synapses
B. Neuromuscular synapses
C. Efferent nerves
D. Afferent nerves
E. Conduction tracts

3. A patient with adenoma of the glomerular zone of the adrenal cortex (Conn's disease) has arterial hypertension, convulsions, polyuria. What is the main link in the pathogenesis of these disorders?
A. Aldosterone hypersecretion
B. Aldosterone hyposecretion
C. Catecholamine hypersecretion
D. Glucocorticoid hypersecretion
E. Glucocorticoid hyposecretion

4. During the histologic examination of the thyroid gland of a man who died of cardiac insufficiency together with hypothyroidism, there was found the diffusive infiltration of the gland by lymphocytes and plasmocytes, parenchyma atrophy and growth of connective tissue. Formulate a diagnosis:
A. Hashimoto's thyroiditis
B. Thyroid gland adenoma
C. Purulent thyroiditis
D. Thyrotoxic goiter
E. –

5. For assessment of the neutralizing function of the liver, a patient with chronic hepatitis went through a test with sodium benzoate load. The excretion of which acid with urine will characterize the neutralizing function of the liver?
A. Hippuric acid
B. Phenylacetic acid
C. Citric acid
D. Valeric acid
E. Oxalic acid

6. A patient has painfulness along big nerve trunks and excessive content of pyruvate in blood. Which vitamin deficit may cause such changes?
A. B1
B. B2
C. PP
D. Pantothenic acid
E. Biotin

7. A surgeon is going to take lympha from the patient's thoracic duct in the point of its flowing into the venous channel. Where exactly should he insert a cannula?
A. Left venous angle
B. Right venous angle
C. Point of formation of inferior vena cava
D. Point of formation of superior vena cava
E. Point of formation of portal vein

8. A patient has the following diagnosis: renal hypertension. What is the initial pathogenetic factor of arterial hypertension development in this case?
A. Renal ischemia
B. Hypernatremia
C. Hyperaldosteronism
D. Intensified renin synthesis
E. Intensified angiotensin synthesis

9. Examination of a child who hasn't got

fresh fruit and vegetables during winter revealed numerous subcutaneous hemorrhages, gingivitis, carious cavities in teeth. What vitamin combination should be prescribed in this case?
A. Ascorbic acid and rutin
B. Thiamine and pyridoxine
C. Folic acid and cobalamin
D. Riboflavin and nicotinamide
E. Calciferol and ascorbic acid

10. During the examination of a patient's oral cavity, a dentist found a carious cavity on the crown surface of the second premolar tooth that was turned to the first molar tooth. Name the damaged crown surface:
A. Faciesmesialis
B. Faciesvestibularis
C. Facieslingualis
D. Faciesdistalis
E. Faciesocclusalis

11. A patient with gingivitis was prescribed a gargle with a certain preparation. Its antiseptic properties are determined by atomic oxygen that slivers in the presence of organic substances. It has also deodorant, adstringent (anti-inflammatory), and in big concentrations – cauterizing effect. Water solutions are used for bathing of wounds, mouth gargling and in higher concentrations - for burn treatment. It is also used for gastric lavage in case of poisoning.
Name this preparation:
A. Potassium permanganate
B. Chlorhexidinebigluconate
C. Hydrogen peroxide
D. Ethyl alcohol
E. Sodium bicarbonate

12. Chronic overdosage of glucocorticoids leads to the development of hyperglycemia. What process of carbohydrate metabolism is responsible for this effect?
A. Gluconeogenesis
B. Glycogenolysis
C. Aerobic glycolysis
D. Pentose-phosphate cycle
E. Glycogenesis

13. A patient has a disorder of airways patency at the level of small and middle bronchi. What changes in acid-base balance may take place?
A. Respiratory acidosis
B. Respiratory alkalosis
C. Metabolic acidosis
D. Metabolic alkalosis
E. Acid-base balance won't change

14. A 16-year-old girl consulted a dentist about the dark colour of teeth enamel. The family tree analysis revealed that this pathology is transmitted to all girls from father and to 50% of boys from mother. What type of inheritance are these peculiarities typical for?
A. Dominant, X-chromosome-linked
B. Recessive, X-chromosome-linked
C. Recessive, Y-chromosome-linked
D. Autosomal-dominant
E. Autosomal-recessive

15. A patient has exudative pleurisy. At what level should the pleural puncture along the posterior axillary line be taken?
A. IX intercostal space
B. VIII intercostal space
C. VII intercostal space
D. XI intercostal space
E. VI intercostal space

16. Sputum smears of a patient with chronic pulmonary disease were stained by the Ziehl-Neelsen method and analyzed in the bacteriological laboratory. Microscopy revealed red bacillus. What property of tuberculosis myobacteria was found?
A. Acid resistance
B. Alkali resistance
C. Alcohol resistance
D. Encapsulation
E. Spore-formation

17. Recovery from an infectious disease is accompanied by the neutralization of antigens by specific antibodies. What cells produce them?
A. Plasmocytes
B. Fibroblasts
C. Tissue basophils
D. Eosinophils
E. T-lymphocytes

18. A patient has the inflammation of the middle ear (otitis). At the same time he claims to have the disorder of gustatory sensation in the front part of the tongue. What nerve is damaged?
A. N.facialis
B. N.trigeminus
C. N.vestibulo-cochlearis
D. N.vagus
E. N.glossopharyngeus

19. A patient has lost the ability to recognize the objects by the typical for them sounds (clock, bell, music). What part of the brain is most likely damaged?
A. Lobus temporalis
B. Lobusoccipitalis
C. Lobusfrontalis
D. Lobusparietalis
E. Insula

20. Father bought some pork at the market. What disease may the members of his family catch supposed this meat didn't stand veterinary control?
A. Teniosis
B. Beef tapeworm infection
C. Hymenolepiasis
D. Echinococcosis
E. Fasciola hepatica

21. A 50-year-old woman had her tooth extracted. The tissue regenerated. Which of the following organella are the most active during tissue regeneration?
A. Ribosomes
B. Centrosomes
C. Postlysosomes
D. Agranular endoplasmic reticulum
E. Lysosomes

22. A patient who suffered from syphilis took a course of antibiotic therapy and fully recovered. Sometime later he was infected again with Treponema pallidum. What form of infection is it?
A. Reinfection
B. Recurrence
C. Secondary infection
D. Superinfection
E. Complication

23. The bacteriological laboratory has the task to sterilize nutrient mediums containing substances that convert under the temperature over 100°C (urea, carbohydrates). What method of sterilization should be used?
A. Fluid steam sterilization
B. Autoclaving
C. Boiling
D. Tindalization
E. Pasteurization

24. Microscopic analysis of tissue sampling from an affected area of the mucous membrane of the oral cavity revealed bacillus in the form of accumulations that looked like a pack of cigarettes. Ziehl-Neelsen staining gives them a red colour. What kind of pathogenic organism was most likely revealed in tissue sampling?
A. M.leprae
B. M.tuberculosis
C. A.bovis
D. A.israilii
E. M.avium

25. During phonocardiogram registration it was ascertained that the duration of the first heart sound twice exceeds the norm. It is most likely that the patient has the following organ affected:
A. Atrioventricular valves

B. Semilunar valves
C. Cardiomyocytes of heart atriums
D. Cardiomyocytes of ventricles
E. -

26. The activity of parotides reduces with age. The activity of what enzyme in saliva will be reducing?
A. Amylase
B. Lysozime
C. Phosphatase
D. Hexokinase
E. Maltase

27. In a histological specimen the gland adenomeres should be determined. They are formed by the cells with a central round nucleus and basophilic cytoplasma. Determine the type of adenomeres:
A. Serous
B. Mucous
C. Combined
D. Sebaceous
E. Seromucous

28. A woman with ischemic disease has been taking an antianginal medication that has the following properties: dilates coronary arteries, peripheral vessels (arterial and venous), reduces the need of myocardium in oxygen, improves endocardial blood circulation. Name this preparation:
A. Nitroglycerin
B. Validol
C. Papaverine
D. Dibasol
E. Aminophylline

29. A patient was taken to the hospital with a preliminary diagnosis of progressive muscular dystrophy. What substance will be excessively contained in urine and confirm this diagnosis?
A. Creatine
B. Pyruvate
C. Carnosine
D. Troponine
E. Hydroxiproline

30. A patient has liver cirrhosis. Analysis of what substance excreted with urine may characterize the state of antitoxic liver function?
A. Hippuric acid
B. Ammonian salts
C. Creatinine
D. Uric acid
E. Amino acids

31. A man consumes dry food. What salivary glands secrete most of all?
A. Parotides
B. Buccal
C. Submandibular
D. Sublingual
E. Palatine

32. A three-year-old child was admitted to the hospital with a foreign body in bronchi. What bronchus contains most likely a foreign body?
A. Right primary
B. Left primary
C. Right segmental
D. Left segmental
E. Lobular

33. Leukoses are treated with antimetabolite methotrexate. What vitamin is its antagonist?
A. Folic acid
B. Cyanocobalamin
C. Phyllochinone
D. Piridoxine
E. Rutin

34. A patient has urolithiasis that was complicated by a renal calculus passage. At what level of the ureter is it most likely to stop?
A. Between abdominal and pelvic part
B. In pelvis
C. In the middle abdominal part
D. 2 cm above flowing into the urinary

bladder
E. 5 cm above pelvic part

35. The human body cools in the water much faster than in the air. Due to what way of heat emission does it happen?
A. Thermal conduction
B. Convection
C. Heat radiation
D. Sweat evaporation
E. –

36. After implantation of a cardiac valve a young man constantly takes indirect anticoagulants. His state was complicated by hemorrhage. What substance content has decreased in blood?
A. Prothrombin
B. Haptoglobin
C. Heparin
D. Creatin
E. Ceruloplasmin

37. Patient with pigmentary xeroderma is characterized by anomalously high sensitivity to ultraviolet rays that causes skin cancer as a result of enzyme systems incapability to restore damages of hereditary apparatus of cells. What process abnormality is this pathology connected with?
A. DNA reparation
B. Genetic conversion
C. DNA recombination
D. Genetic complementation
E. DNA reduplication

38. Micro specimen analysis of the child's finger skin revealed that epidermis has signs of inadequate development. What embryonic leaf was damaged in the process of development?
A. Ectoderma
B. Mesoderma
C. Entoderma
D. Mezenchyma
E. Ectomezenchyma

39. After a surgical procedure a patient was developed an enteroparesis. What anticholinesterase medication should be prescribed in this case?
A. Proserin
B. Carbacholine
C. Aceclidine
D. Pilocarpine
E. Acetylcholine

40. After consumption of some tinned meat a patient had diplopia, acute headache, deglutition disorder, hard breathing, and muscle weakness. The diagnosis was botulism. What factor of pathogenicity are the clinic presentations of this disease connected with?
A. Exotoxin
B. Hemolysin
C. Endotoxin
D. Plasmocoagulase
E. Fibrinolysin

41. Excessive hairiness of auricles (hypertrichosis) is determined by a gene which is localized in Y chromosome. Father has this feature. What is the probability of the fact that the boy will be born with such an anomaly?
A. 100%
B. 0%
C. 25%
D. 35%
E. 75%

42. During the morphologic analysis of pulp floor three zones can be distinctly differentiated: the one of softened dentin, transparent dentin and replacing dentin. What stage of caries are these changes typical for?
A. Median caries
B. Stain stage
C. Superficial caries
D. Deep caries
E. Chronic caries

43. Histologic analysis of uterus mucous membrane revealed twisting glands, serrated and spinned, they were extended by stroma growth with the proliferation of its cells. Formulate a diagnosis:
A. Glandular hyperplasia of endometrium
B. Acute endometritis
C. Leiomyoma
D. Cystic mole
E. Placental polyp

44. A 10-year-old child lives in the region where fluorine content in water is above the mark. A dentist examined the child and found teeth damage in form of chalky and also pigmentary stains and stripes. What is the most probable diagnosis?
A. Fluorosis
B. Median caries
C. Wedge defects
D. Tooth erosion
E. Acidic necrosis of hard tooth tissues

45. A wide cleft between the incisors of both mother and father is the dominant feature. They are both homozygous. What genetic regularity will their children have?
A. Uniformity of first generation hybrids
B. Hybrid segregation by phenotype
C. Independent inheritance of feature
D. Non-linked inheritance
E. Linked inheritance

46. In an excitable cell the ion channels were blocked. It hasn't changed essentially the value of rest potential, but the cell lost its ability to generate AP (action potential). What channels were blocked?
A. Natrium
B. Potassium
C. Natrium and potassium
D. Chloric
E. Calcium

47. During the electronic microscopic analysis of the salivary gland the cell fragments were revealed which are surrounded by a membrane and contain condensed particles of nuclear substance and solitary organelles; the inflammatory reaction around these cells is absent. What process is meant?
A. Apoptosis
B. Karyorhexis
C. Coagulation necrosis
D. Karyopicnosis
E. Karyolysis

48. Autopsy of an 8-year-old boy who was ill with pharyngeal and tonsillar diphtheria and died one week after illness begin revealed myocardial changes in form of small -focal myocardiocyte necroses, stroma edema with slight lymphocytic infiltration. What type of myocarditis is it?
A. Alternative
B. Septic
C. Granulomatous
D. Interstitial
E. Focal-intermediate, exudative

49. The mother of a two-year-old child consulted a dentist. In the period of pregnancy she was non-systematically taking antibiotics to treat an infectious disease. The child's examination revealed incisor destruction, yellow enamel, the brown limbus of the dental cervix. What preparation was the mother taking during her pregnancy?
A. Doxycycline
B. Furosemide
C. Ampiox
D. Xanthinolnicotinate
E. Octadine

50. A patient with essential hypertension takes enalapril. What mechanism of action has this hypotensive medication?
A. Inhibitor of angiotensin-converting enzyme
B. Antagonist of angiotensin II
C. Inhibitor of phosphodiesterase
D. Inhibitor of cyclooxygenase
E. Ca^{++} channel-blocking agent

51. After a psycho-emotional stress a 48-year-old patient had a sudden attack of acute heart pain with irradiation to the left hand. Nitroglycerine suppressed pain in 10 minutes. What pathogenetic mechanism is principal for the pain development?
A. Spasm of coronary vessels
B. Dilatation of peripheral vessels
C. Coronary vessel occlusion
D. Embarrassment of coronary vessels
E. Increased need for myocardium in oxygen

52. A victim of a road accident has an abruption of a part of the mandibular angle, displacement of fragment backwards and upwards. What ligament is responsible for this displacement?
A. Styloid-mandibular
B. Intraarticular
C. Lateral
D. Sphenoid-mandibular
E. Pterygoid-mandibular

53. A boxer who got a punch in the region of temporomandibular joint has a traumatic dislocation of mandible. Displacement of what articular surfaces will overstep the limits of the physiological norm?
A. Head of mandible and mandibular fossa
B. Coronoid process and pterygoid fossa
C. Coronoid process and submandibular fossa
D. Head of mandible and submandibular fossa
E. Neck of mandible and submandibular fossa

54. During the post-synthetic period of the mitotic cycle the synthesis of tubulin proteins was disturbed. These proteins take part in the construction of the division spindle. It can lead to the disturbance of:
A. Chromosome disjunction
B. Spiralization of chromosomes
C. Cytokinesis
D. Despiralization of chromosomes
E. Mitosis duration

55. A patient has pure culture of diphtheria corynebacteria. What immunological reaction should be used to determine bacteria toxigenicity?
A. Precipitation in agar
B. Agglutination
C. Complement binding
D. Inhibition of hemagglutination
E. Indirect hemagglutination

56. X-ray examination revealed an accumulation of suppuration in the maxillary sinus. Into what nasal meatus excretes the suppuration?
A. Median nasal
B. Nasopharyngeal
C. Inferior nasal
D. Superior nasal
E. Common nasal

57. In the course of combined therapy a patient with chronic cardiac insufficiency was taking digitoxin and furosemide. As a result, he had extreme muscular weakness. What electrolyte imbalances may be revealed in his blood?
A. Hypokaliemia
B. Hyperkaliemia
C. Hypocalcemia
D. Hypercalcemia
E. –

58. During ablation of the nose wing lypoma a dentist injured a vessel, which caused a saphenous hematoma. What vessel was damaged?
A. A .facialis
B. A .maxillaris
C. A.supraorbitalis
D. A.infraorbitalis
E. A.angularis

59. In the vermiform appendix there was found a white helminth, 40 mm long with a thin filiform forward end. Ecscrements con-

thin filiform forward end. Ecscrements contained oval eggs with plugs at the poles. Determine the kind of helminth:
A. Whipworm
B. Seat worm
C. Ascarid
D. Hookworm
E. Threadworm

60. In course of an experiment the peripheral fragment of a cut vagus nerve on the dog's neck was being stimulated. There was the following change in cardiac activity:
A. Decrease of beat frequency
B. Increase of beat frequency and force
C. Increase of myocardium excitability
D. Increased speed of excitement conduction through the myocardium
E. Increase of beat force

61. Climbing the mountains at a height of 5000 m climbers started complaining of breath shortness, palpitation, vertigo, ring in the ears. What pathogenetic factor determines the development of these occurrences?
A. Hypoxemia
B. Hypokalemia
C. Decreased oxygen capacity of the blood
D. Lactacidemia
E. Hypernatremia

62. The microscopic analysis of bronchial biopsy revealed a tumor that consisted of circumscribed accumulations of atypical cells of multilayer plane epithelium, here and there with typical "pearls". What is the most likely diagnosis?
A. Epidermoid cancer with keratinization
B. Epidermoid cancer without keratinization
C. Solid carcinoma
D. Mucous carcinoma
E. Scirrhus

63. After a hemorrhage into the brainstem a patient has lost reflex of miosis as a reaction to increase of illumination. What structure was damaged?
A. Vegetative nuclei of oculomotor nerve
B. Lateral reticular nuclei
C. Medial reticular nuclei
D. Red nuclei
E. Black substance

64. A patient had a trauma that led to the injury of the front spinal roots. Denote the damaged structures:
A. Axons of motoneurons and lateral horn neurons
B. Central processes of spinal ganglion neurons
C. Peripheral processes of spinal ganglion neurons
D. Axons of lateral horn neurons
E. Axons of motoneurons

65. An infectious diseases hospital admitted a veterinarian with assumed brucellosis. What serologic test can confirm this diagnosis?
A. Wright agglutination reaction
B. Widal agglutination reaction
C. Ascoli precipitation reaction
D. Weigl agglutination reaction
E. Wassermann reaction of complement binding

66. A patient has an injury in the right lateral area of the belly. What part of the large intestine is most likely injured?
A. Ascending colon
B. Transverse colon
C. Descending colon
D. Sigmoid colon
E. Rectum

67. A 28-year-old pregnant woman had the enzymes in the cells of amniotic fluid analyzed. The analysis revealed an insufficient activity of 3-glucuronidase. What pathological process is it?
A. Mucopolysaccharidosis

B. Glycogenosis
C. Aglycogenosis
D. Collagenosis
E. Lipidosis

68. A laboratory received a material (extract of animal matter) from the region with cases of anthrax among animals. What serological reaction should be used to reveal antigens of the pathogenic organism in the given material?
A. Thermo precipitation
B. Complement binding
C. Indirect hemagglutination
D. Radio assay
E. Precipitations in agar

69. The chemical burn of the esophagus caused its local constriction as a result of scar formation. What cells of loose connective tissue take part in scar formation?
A. Mature specialized fibroblasts
B. Young fibroblasts
C. Fibrocytes
D. Myofibroblasts
E. Fibroclasts

70. In the course of an experiment the blood pressure of an animal had a stable rise by means of renal artery constriction. Hyper functioning of what renal cells cause this effect?
A. Juxtaglomerular cells
B. Podocytes
C. Endotheliocytes
D. Interstitial cells
E. Thick spot cells

71. A mother consulted a doctor about her one-year-old child, who has got six teeth to come out. How many teeth should the child of such age have?
A. 8
B. 10
C. 7
D. 12
E. 6

72. A man permanently lives high in the mountains. What changes in blood characteristics can be found in his organism?
A. Increase of erythrocytes number
B. Decrease of hemoglobin content
C. Erythroblasts in blood
D. Decrease of reticulocytes number
E. Decrease in the colour index of blood

73. A 7-year-old girl was taken to an infectious diseases hospital. She had complaints of high temperature, sore throat, general weakness. A doctor assumed diphtheria. What will be crucial proof of diagnosis after defining the pure culture of the pathogenic organism?
A. Toxigenicity test
B. Detection of volutin granules
C. Cystinase test
D. Hemolytic ability of the pathogenic organism
E. Phagolysability

74. While of oral cavity examination the dentist revealed the formation of the first big cheek teeth on the lower jaw of a child. How old is this child?
A. 6-7 years old
B. 4-5 years old
C. 8-9 years old
D. 10-11 years old
E. 12-13 years old

75. The myocytes cytoplasm contains a big number of dissolved metabolites of glucose oxidation. Name one of them that converts directly into lactate:
A. Pyruvate
B. Oxaloacetate
C. Glycerophosphate
D. Glucose-6-phosphate
E. Fructose-6-phosphate

76. A patient is being operated under inhalation narcosis with nitrous oxide. It is known that it has evident lipophilic proper-

ties. What mechanism is responsible for transporting this preparation through biological membranes?
A. Passive diffusion
B. Active transport
C. Facilitated diffusion
D. Filtration
E. Pinocytosis

77. A patient has a transverse laceration of the spinal cord below the VI thoracal segment. How will it change the character of breathing?
A. It won't change essentially
B. It will stop
C. It will become rarer
D. It will become deeper
E. It will become more frequent

78. A one-year-old child has enlarged head and belly, retarded cutting of teeth, destruction of enamel structure. What hypovitaminosis causes these changes?
A. Hypovitaminosis D
B. Hypovitaminosis C
C. Hypovitaminosis A
D. Hypovitaminosis B_1
E. Hypovitaminosis B_2

79. During the examination of the patient's oral cavity a dentist noticed a slight overbite of mandibular teeth by maxillary incisors. What occlusion belongs to such a position of teeth?
A. Orthognathic occlusion
B. Prognathism
C. Biprognathic occlusion
D. Orthogenic occlusion
E. Closed occlusion

80. A patient consulted a dental surgeon about an injury of the submandibular triangle. During the wound cleansing the surgeon found that the artery leading to the soft palate is damaged. What artery is damaged?
A. A.palatinaascendens
B. A.palatinadescendens
C. A.sphenopalatina
D. A.pharingeaascendens
E. A.facialis

81. A patient with acute rhinitis has hyperemia and excessive mucus formation in the nasal cavity. What epithelial cells of the mucous membrane have the intensified activity?
A. Goblet cells
B. Ciliated cells
C. Microvillus cells
D. Basal cells
E. Endocrine cells

82. A patient complains of having urination disorder. He is diagnosed with the hypertrophy of prostate gland. What part of the gland is damaged?
A. Median lobe
B. Left lobe
C. Right lobe
D. Base
E. Apex

83. A 56-year-old man was taken to the hospital with complaints of general weakness, pain and burning in the region of the tongue, extremity numbness. In the past he had resection of cardiac part of the ventricle. Blood test: Hb- 80 g/L; RBC-$2{,}010^{12}$/L; colour index of blood- 1,2;leukocytes - $3{,}5\ 10^9$/L. What type of anemia is it?
A. B12 folic-deficient
B. Hemolytic
C. Post hemorrhagic
D. Aplastic
E. Iron-deficient

84. Autopsy of a 5-year-old child revealed that pia maters of the brain are extremely plethoric, nebulous, have a look of yellowish-green "bonnet". Microscopic analysis: pia mater of the brain is much thickened, plethoric, impregnated with purulent exudate containing fibrin. What disease is

meant?
A. Meningococcosis
B. Tuberculosis
C. Anthrax
D. Influenza
E. Measles

85. A 65-year-old patient suddenly died. She suffered from thrombophlebitis of deep veins of the shin. The autopsy revealed: trunk and bifurcation of pulmonary artery contain red loose masses with a dull corrugated surface. What pathological process did the morbid anatomist reveal in the pulmonary artery?
A. Thromboembolism
B. Thrombosis
C. Tissue embolism
D. Foreign body embolism
E. Fat embolism

86. A 23-year patient was admitted to the hospital in grave condition with craniocerebral trauma. His respiration is characterized by a spasmodic long inspiration interrupted by a short expiration. What respiration type is it typical for?
A. Apneustic
B. Gasping
C. Kussmaul respiration
D. Cheyne-Stokes respiration
E. Biot's respiration

87. After recovering from epidemic parotiditis a patient began to put off weight, he was permanently thirsty, drank a lot of water, and had frequent urination, voracious appetite. Now he has complaints of skin itch, weakness, furunculosis. His blood contains: glucose -16 mmol/L, ketone bodies -100 mcmol/L; glucosuria. What disease has developed?
A. Insulin-dependent diabetes
B. Insulin-independent diabetes
C. Steroid diabetes
D. Diabetes insipidus
E. Malnutrition diabetes

88. A patient arrived at the oral surgery department with dislocation of temporomandibular joint and injury of its main ligament. Name this ligament:
A. Lateral
B. Mandibular
C. Styloid-mandibular
D. Pterygoid-mandibular
E. Medial

89. Autopsy of a man who died from ethylene glycol poisoning revealed that his kidneys are a little bit enlarged, edematic; their capsule can be easily removed. The cortical substance is broad and light-grey. The medullary substance is dark-red. What pathology had this man?
A. Necrotic nephrosis
B. Acute pyelonephritis
C. Acute glomerulonephritis
D. Acute tubular-interstitial nephritis
E. Lipoid nephrosis

90. A patient has an asymmetric face; it is especially noticeable during active muscle contraction. What nerve may be damaged?
A. Facial (motor unit)
B. Trigeminal, I branch
C. Trigeminal, II branch
D. Trigeminal, III branch
E. Sublingual

91. Microscopic analysis of a specimen revealed an organ of the nervous system that consists of pseudo unipolar neurons covered with glial and connective tissue membranes. Determine this organ:
A. Spinal ganglion
B. Vegetative ganglion
C. Spinal cord
D. Cerebellum
E. Cortex of cerebrum

92. During the experimental analysis of chondrohistogenesis a sclerotome was damaged. What cells will it make impossible to differentiate?

differentiate?
A. Chondroblasts
B. Smooth myocytes
C. Myoblasts
D. Fibroblasts
E. Epidermocytes

93. Chronic rhinitis was complicated by inflammation of the frontal sinus. What nasal meatus did the infection get into this sinus through?
A. Median
B. Inferior
C. Common
D. Superior
E. Nasopharyngeal

94. A man who took part in disaster-management at a nuclear power plant had hemorrhagic syndrome at the same time with acute radiation sickness. What is the most important thing for the pathogenesis of this syndrome?
A. Thrombocytopenia
B. Destructed structure of vessel walls
C. High activity of fibrinolysis factors
D. High activity of anticoagulative blood system
E. Low activity of anticoagulative blood system

95. 5 minutes after a car accident examination of a 35-year-old man revealed massive injury of lower extremities without serious external loss of blood. The victim is excited. What component of the pathogenesis of traumatic shock is basic and requires urgent correction?
A. Pain
B. Acute renal insufficiency
C. Intoxication
D. Cardiac function disorder
E. Internal loss of plasma

96. A 5-year-old child was admitted to the ENT-department with suppurative inflammation of the middle ear (tympanitis). It began with the inflammation of nasopharynx. What canal of temporal bone did the infection get into the tympanic cavity through?
A. Musculotubal canal
B. Small canal of chorda tympani
C. Caroticotympanic foramina
D. Small tympanic canal
E. Carotid canal

97. A patient consulted a doctor about the intensive skin itch, especially between fingers, in axillary creases, in the inferior part of the belly. During the skin examination there were found twisting whitish tracts with speckles at the end of them. What disease are these clinical presentations typical for?
A. Scabies
B. Pediculosis
C. Dermatotropic leishmaniosis
D. Demodicosis
E. Miasis

98. In the course of an experiment posterior roots of the spinal cord of an animal were cut. What changes will take place in the innervation zone?
A. Loss of sensation
B. Loss of motor functions
C. Decline of muscle tone
D. Raise of muscle tone
E. Loss of sensation and motor functions

99. The regeneration process of damaged skeletal muscles is very slow. What elements of musculoskeletal fiber take part in the process of regeneration?
A. Myosatellitocytes
B. Myoblasts
C. Smooth myocytes
D. Myofibroblasts
E. Myoepithelial cells

100. While the examination of the patient's oral cavity the dentist found xerostomia, numerous erosions. What vitamin deficit

caused this effect?
A. Vitamin A
B. Vitamin K
C. Vitamin P
D. Vitamin H
E. Vitamin PP

101. Two days after myocardial infarction a patient had a sudden systolic pressure decrease up to 60 mm, tachycardia up to 140/ min, dyspnea; the patient lost consciousness. What mechanism is the principal for the shock pathogenesis?
A. Decrease of cardiac volume
B. Intoxication
C. Decrease of circulating blood volume
D. Paroxysmal tachycardia
E. Anaphylactic reaction

102. A patient with a disorder of cerebral circulation has problems with deglutition. What part of the cerebrum was damaged?
A. Brainstem
B. Cervical part of spinal cord
C. Forebrain
D. Interbrain
E. Midbrain

103. There is a 9-year-old boy in the endocrinology department, who has already had a few fractures of extremities caused by the fragility of bones. Malfunction of what endocrine glands (gland) takes place?
A. Parathyroid glands
B. Thyroid gland
C. Thymus
D. Adrenal glands
E. Epiphysis

104. A patient has an acute painfulness of face skin. What nerve is damaged?
A. Trifacial
B. Facial
C. Oculomotor
D. Vagus
E. Glossopharyngeal

105. After a long-lasting and grave illness the blood pressure of a patient fell up to 60/40 mm; he has tachycardia, dyspnea, and black-out. How can this state be defined?
A. Preagony
B. Agony
C. Shock
D. Apparent death
E. –

106. A 46-year-old patient was admitted to the hematological department. It was found that he had a disorder of granulocytopoesis and thrombocytogenesis processes. In what organ does this pathological process take place?
A. Red bone marrow
B. Thymus
C. Spleen
D. Lymphatic ganglion
E. Palatine tonsil

107. A man left a conditioned premise and went outside. The outside temperature was $+40^{o}C$, the air moisture – 60%. What way of heat emission will be mostly involved in this case?
A. Sweat evaporation
B. Convection
C. Radiation
D. Conduction
E. –

108. A patient with chronic glomerulonephritis has a disorder of incretory function of kidneys. What blood elements deficit will result from it?
A. Erythrocytes
B. Leukocytes
C. Thrombocytes
D. Leukocytes and thrombocytes
E. Erythrocytes and leukocytes

109. A 4-year-old child had the Mantoux test. 60 hours after tuberculin introduction a focal skin hardening and redness 15 mm in

diameter appeared. It was regarded as a positive test. What type of hypersensitivity reaction is this test based upon?
A. Delayed-type hypersensitivity
B. Immune complex-mediated hypersensitivity
C. Complement-mediated cytotoxic hypersensitivity
D. Immediate hypersensitivity
E. –

110. To what total ATP quantity is the full glucose oxidation and its linking with phosphorylation equivalent?
A. 38
B. 8
C. 12
D. 52
E. 58

111. The students studied peculiarities of genetic code and found out that there are amino acids corresponded by 6 codons, 5 amino acids - 4 different codons. Other amino acids are codified by three or two codons and only two amino acids are codified by one codon. What peculiarity of genetic code did the students find out?
A. Redundancy
B. Versatility
C. Collinearity
D. Unidirectionality
E. Triplety

112. The contents of vesicles from the mucous tunic of a man who has smallpox variola were sent to the virusologic laboratory. What will be revealed during the microscopy of smears?
A. Paschen corpuscles
B. Babesh-Negri corpuscles
C. Guarnieri's corpuscles
D. Babesh-Ernst corpuscles
E. Syncytium

113. A 53-year-old patient consulted a doctor about a white patch on the mucous membrane of the tongue. This patch sticks out from the mucous membrane, its surface is cracked. Microscopic analysis reveals the thickening of multilayer epithelium, parakeratosis and acanthosis. What is the most probable diagnosis?
A. Leukoplakia
B. Geographic tongue
C. Epidermoid cancer
D. Papilloma
E. Median rhomboid glossitis

114. In a specimen that was coloured by the method of silver impregnation some piriform cells with 2-3evident dendrites were found. What structure is being analyzed?
A. Cerebellar cortex
B. Spiral organ of middle ear
C. Retina
D. Cerebral cortex
E. Spinal ganglion

115. A man has been holding his breath for 60 seconds. After that the respiratory minute volume has increased up to 12 L. What blood change is the main reason for the increase of respiratory minute volume?
A. Increase of p $C0_2$
B. Decrease of p O_2
C. Increase of p O_2
D. Decrease of p $C0_2$
E. Increase of pH

116. Microscopic analysis of tissue sampling from the patient's skin reveals granulomas that consist of epithelioid cells surrounded mostly by T-lymphocytes. Among epithelioid cells there are solitary giant multinuclear cells of Pirogov-Langhans type. In the centre of some granulomas there are areas of caseous necrosis. Blood vessels are absent. What disease are the described granulomas typical for?
A. Tuberculosis
B. Syphilis
C. Leprosy
D. Rhinoscleroma

E. Glanders

117. A patient was taken to the hospital with complaints of headache, high temperature, frequent stool, stomach pain with tenesmus. The doctor made the clinical diagnosis of dysentery and sent the material (excrements) to the bacteriological laboratory for analysis. What diagnostic method should the laboratory doctor use to confirm or to disprove the clinical diagnosis?
A. Bacteriological
B. Biological
C. Bacterioscopic
D. Serological
E. Allergic

118. A patient who has been ill with tuberculosis for a long time has an intracellular mycobacteria disposition. What preparation must be included in the complex therapy of tuberculosis?
A. Isoniazid
B. Rifampicin
C. Ethionamide
D. Sodium para-aminosalicylate
E. Ethambutol

119. The deficit of vitamin A causes the disorder of twilight vision. What cells is the photoreceptor function typical for?
A. Rod neurosensory cells
B. Horizontal neurocytes
C. Conic neurosensory cells
D. Bipolar neurons
E. Ganglionic nerve cells

120. A 50-year-old patient with ischemic disease was prescribed antiaggregant preparation. The patient was taking overdoses of this preparation. It resulted in nausea, vomiting, stomach pain during fasting. What preparation was the patient prescribed?
A. Acetylsalicylic acid
B. Parmidine
C. Ticlide
D. Dipiridamol
E. Pentoxyphilline

121. A child complains of having an itch in the occipital and temporal region of the head. After examination his mother found superficial ulcers as a result of scratching and white nits in the hair. Name the pathogenic organism:
A. Head louse
B. Body louse
C. Human flea
D. Screwworm fly
E. Pubic louse

122. A patient has a slowly healing fracture. What medicine can be used to accelerate the formation of a connective tissue matrix?
A. Methyluracil
B. Prednisolone
C. Cyclophosphan
D. Methotrexate
E. Cyclosporine

123. A patient with systemic scleroderma has intensified collagen destruction. What amino acid will be intensively excreted with urine and reflect processes of collagen destruction?
A. Oxyproline
B. Alanine
C. Tryptophan
D. Serine
E. Phenylalanine

124. A patient with inflammation of the trigeminal nerve has been having progressive paradontitis for some years. What factor is the most important for parodontitis development?
A. Neurodistrophic disorders
B. Low activity of leukocyte elastase
C. Poor formation of immunoglobulins
D. Increased tone of the vagus nerve
E. Low activity of the kallikrein-kinin system

125. During the histological lung analysis of a man who died from cardiac insufficiency the inflammation focuses were revealed. Alveoli were full of light-pink fluid, here and there with pinkish fibers that formed a close-meshed reticulum with a small number of lymphocytes. What type of exudate is present in the lungs?
A. Serofibrinous
B. Hemorrhagic
C. Serous
D. Purulent
E. Fibrinous

126. A lot of pyoinflammatory processes in the oral cavity are caused by anaerobes. What nutrient medium can be used for control of wound textile contamination by anaerobes?
A. Kitt-Tarozzi
B. Endo
C. Roux
D. Sabouraud
E. Ploskirev's

127. During the preparation of a patient for a heart operation the doctors measured blood pressure in heart chambers. In one of them the pressure was changing from 0 to 120 mm during one cardiac cycle. Name the heart chamber:
A. Left ventricle
B. Right ventricle
C. Right atrium
D. Left atrium
E. –

128. A purulent wound was treated with a solution that had an antiseptic effect and contributed to the mechanical wound cleansing. What solution was used?
A. Hydrogen peroxide
B. Potassium permanganate
C. Alcoholic iodine
D. Ethacrydine lactate
E. Brilliant green

129. A 1,5-year-old child was taken to the hospital. The examination revealed dementia, disorder of motor functions regulation, hypopigmentation of skin, and a high rate of phenylalanine in the blood. What is the most probable diagnosis?
A. Phenylketonuria
B. Galactosemia
C. Tyrosinosis
D. Down's syndrome
E. Mucoviscidosis

130. A sportsman was recommended to take preparation with carnitine to improve his achievements. What process is activated by carnitine to the most extent?
A. Transporting of fatty acids to the mitochondrions
B. Synthesis of steroid hormones
C. Synthesis of ketone bodies
D. Lypid synthesis
E. Tissue respiration

131. The symptoms of the regeneration process (callus) on the place of fracture were revealed at the histologic specimen of a tubular bone. What tissue forms this structure?
A. Fibrous bone tissue
B. Loose connective tissue
C. Reticular tissue
D. Epithelial tissue
E. Lamellar bone tissue

132. Dystrophic changes of heart are accompanied by a dilatation of cardiac cavities; the decrease of heart beat force, increased volume of blood that remains in the cardiac cavity after systole; veins are overfilled. What state is this presentation typical for?
A. Myogenic dilatation
B. Tonogenic dilatation
C. Emergency phase of myocardial hypertrophy
D. Cardiosclerosis stage
E. Cardiac tamponade

133. In the course of an experiment a nerve is being stimulated by electric impulses. It leads to excretion of some quantity of thick viscous saliva by sublingual and submandibular glands. What nerve is being stimulated?
A. N.sympathicus
B. N.glossopharyngeus
C. N.facialis
D. N.trigeminus
E. N.vagus

134. A man had an acute onset of disease, he complained of chill, rise of temperature up to 40oC, headache, cough, dyspnea. On the fifth day of illness he died. Autopsy revealed: his lungs were enlarged; they had a look of "coal-miner's lungs". What illness is such a postmortem diagnosis typical for?
A. Influenza
B. Adenovirus infection
C. Croupous pneumonia
D. Respiratory syncytial infection
E. Multiple bronchiectasis

135. A woman after labor lost 20 kg of body weight, her hair and teeth fall out, she has muscle atrophy (hypophysial cachexia). Synthesis of what hypophysis hormone is disturbed?
A. Somatotropic
B. Corticotrophic
C. Thyreotropic
D. Gonadotropic
E. Prolactin

136. What vitamin deficit causes the simultaneous disorder of reproductive function and dystrophy of skeletal musculature?
A. Vitamin E
B. Vitamin A
C. Vitamin K
D. Vitamin D
E. Vitamin B1

137. A patient with the diminished excretory function of kidneys has bad breath. What substance which is excessively excreted by salivary glands is the main cause of this occurrence?
A. Urea
B. Alpha-amylase
C. Lysozyme
D. Phosphatase
E. Mucin

138. A patient was attacked by bees. He was taken to the hospital with Quincke's edema. What antihistaminic medication without the sedative effect should be prescribed to the patient?
A. Diasoline
B. Suprastine
C. Phencarol
D. Tavegil
E. Diphenhydramine hydrochloride

139. A patient with complaints of dizziness, worsening of visual acuity, sickness, salivation and spasmodic stomachaches was taken to the admission department. The diagnosis was poisoning with organophosphorous compounds. What preparations should be included in complex therapy?
A. Atropine sulfate and dipiroxim
B. Sodium thiosulfate and bemegride
C. Tetacin-calcium and unitiol
D. Nalorphine hydrochloride and bemegide
E. Glucose and bemegride

140. During the embryogenesis of the oral cavity the development of dental enamel was disturbed. What source of dental development was damaged?
A. Epithelium
B. Mesenchyma
C. Mesoderma
D. Dental saccule
E. Dental papilla

141. In course of an experiment chorda tympani of an animal were being stimulated by electric current, as a result the parotid

duct excreted:
A. A lot of fluid saliva
B. A small quantity of fluid saliva
C. Saliva wasn't excreted
D. A small quantity of viscous saliva
E. A lot of viscous saliva

142. From the purulent exudate of a patient with odontogenicphlegmon a pure culture of Gram (+) microorganisms was segregated. This culture was lecithinously active, coagulated plasma of a rabbit, decomposed mannitol under anaerobe conditions. What microorganism may have contributed to the origin of suppurative complication?
A. S.aureus
B. S.epidermidis
C. S.pyogenes
D. S.viridans
E. S.mutans

143. After tooth extraction the blood pressure of a patient fell dramatically, the patient lost consciousness. Collaptoid state was diagnosed. What drug should be used?
A. Cordiamin
B. Strophanthine
C. Isadrin
D. Sustac
E. Nitroglycerine

144. Before teeth come out first on their roots appears a solid tissue that looks like membrane reticulated bone. What tissue is it?
A. Cement
B. Dentin
C. Enamel
D. Loose fibrous connective tissue
E. Dense fibrous connective tissue

145. A patient with chronic hypoglycemia had adrenaline introduction. After introduction blood test hasn't changed essentially. A doctor assumed liver pathology. What liver function may have been changed?
A. Function of glycogen depositing
B. Function of cholesterin production
C. Ketogenic function
D. Glycolytic function
E. Excretory function

146. In a cell the mutation of the first exon of structural gene took place. The number of nucleotide pairs has decreased - 250 pairs instead of 290. Determine the type of mutation:
A. Deletion
B. Inversion
C. Duplication
D. Translocation
E. Nonsense-mutation

147. A newborn child has microcephalia. Doctors believe that it is the result of the mother's taking actinomycin D during pregnancy. What embryonal leaf was influenced by this teratogen?
A. Ectoderma
B. All leaves
C. Entoderma
D. Mesoderma
E. Entoderma and mesoderma

148. A patient complains of painful cracks in mouth angles. What sulfanilamide can be recommended for local treatment of angular stomatitis?
A. Streptocide liniment
B. Synthomycine liniment
C. Prednisolone ointment
D. Butadione ointment
E. Tetracycline ointment

149. Microscopic analysis of brain base vessels of a patient who died of ischemic stroke revealed that intima of cerebral vessels is irregular, with a moderate quantity of yellow stains and yellowish-whitish patches that narrow lumen. What is the most probable diagnosis?
A. Atherosclerosis
B. Primary hypertension
C. Diabetes mellitus

D. Rheumatism
E. Nodular periarteritis

150. Unskilled people usually have muscle pain after sprints as a result of lactate accumulation. What biochemical process may it be connected with?
A. Glycolisis
B. Gluconeogenesis
C. Pentose-phosphate cycle
D. Lypogenesis
E. Glycogenesis

151. A patient with kidney disease has high blood pressure, especially the diastolic one. Hypersecretion of what biologically active substance causes elevated blood pressure?
A. Renin
B. Adrenaline
C. Noradrenaline
D. Vasopressin
E. Catecholamines

152. A patient complains of aching gums and maxillary teeth. What nerve is inflamed?
A. II branch of the V pair
B. III branch of the V pair
C. I branch of the V pair
D. Sublingual
E. Accessory

153. Skin samples of a patient with bronchial asthma revealed allergen sensitization of poplar fuzz. What factor of the immune system plays the main part in the development of this immune pathological state?
A. IgE
B. IgD
C. IgM
D. Sensitized T-lymphocytes
E. –

154. Decreased ratio of adenylic nucleotides ATP/ADP results in intensified glycolysis inparodentium tissues under hypoxia conditions. What reaction is activated in this case?
A. Phosphofructokinase
B. Aldolase
C. Triosophosphateisomerase
D. Enolase
E. Lactate dehydrogenase

155. A 17-year-old student pressed out a pustule in the medial angle of the eye. In 2 days she was taken to the institute of neurosurgery with thrombosis of the cavernous sinus. Through what vein did the infection get into this sinus?
A. V.angularis
B. V.maxillaris
C. V.profundafaciei
D. V.transversafaciei
E. V.diploicaefrontalis

156. A 57-year-old patient with diabetes mellitus was developed ketoacidosis. The biochemical base of this condition is a smaller extent of acetyl-CoA utilization. What cell compound deficit causes this effect?
A. Oxaloacetate
B. 2-oxoglutarate
C. Glutamate
D. Aspartate
E. Succinate

157. A 20-year-old patient complains of excessive thirst and urinary excretion up to 10 L a day. The level of glucose in the blood is normal; there is no glucose in urine. What hormone deficit can cause such changes?
A. Vasopressin
B. Oxytocin
C. Insulin
D. Triiodothyronine
E. Cortisol

158. After poisoning with an unknown drug a 37-year-old patient has stereotypical face muscle contractions that imitate blinking and squinting. What form of motor function

disorder of the nervous system is it?
A. Hyperkinesia
B. Hypokinesia
C. Akinesia
D. Ataxy
E. –

159. In a histological specimen of the adrenal cortex there are petite polygonal cells that form roundish clusters and contain some lipidic inclusions. What part of the adrenal is presented in this histological specimen?
A. Glomerular zone
B. Intermedial zone
C. Fasciolar zone
D. Reticular zone
E. –

160. A woman in grave condition was admitted to a hospital with the following diagnosis: hemorrhagic stroke in the region of the frontal part of the right cerebral hemisphere. The damage of what artery caused most likely this condition?
A. A.cerebri anterior
B. A.cerebri posterior
C. A.communicans anterior
D. A.cerebri media
E. A .communicans posterior

161. In compliance with the clinical presentations a man was prescribed pyridoxal phosphate. What processes are corrected by this preparation?
A. Transamination and decarboxylation of amino acids
B. Oxidative decarboxylation of keto acids
C. Desamination of purine nucleotides
D. Synthesis of purine and pyrimidine bases
E. Protein synthesis

162. During the tooth development the enamel organ has prismatic cells with hexagonal intersection; the nucleus is situated in the central part of the cell. What cells are meant?
A. Preenameloblasts
B. Exterior enameloblasts
C. Cambial cells
D. Enamel pulp cells
E. Preodontoblasts

163. The impact of oxytocin on the uterus wall helps to stop uterine bleeding after labor. What membrane of this organ reacts to the effect of this hormone?
A. Myometrium
B. Endometrium
C. Perimetrium
D. Parametrium
E. Submucous membrane

164. A man has a disorder of absorption of fat hydrolysates. What components deficit in the cavity of the small intestine may cause this effect?
A. Bile acids
B. Bile pigments
C. Lipolytic enzymes
D. Sodium ions
E. Liposoluble vitamins

165. Autopsy of a woman who died of tumorous dissemination of mucinous cystadenocarcinoma and before that had to stay in bed for a long time revealed big necrotic areas of skin and soft subjacent tissues in the sacral region. What form of necrosis is the case?
A. Pressure sore
B. Infarction
C. Sequester
D. Caseous necrosis
E. Zenker's necrosis

166. The preparation complex for periodontitis treatment includes the medicine from the group of water-soluble vitamins, bioflavonoid derivative, which is prescribed together with ascorbic acid. This preparation has anti-oxidative properties, decreases gingival hemorrhage. What preparation is

meant?
A. Rutin
B. Calcium pantothenate
C. Calcium pangamate
D. Cyanocobalamin
E. Folic acid

167. A patient with insulin-dependent diabetes had an insulin injection. Sometime later he felt weakness, irritability, excessive sweating. What is the main reason for these disorders?
A. Carbohydrate starvation of brain
B. Intensified glycogenolysis
C. Intensified ketogenesis
D. Intensified lipogenesis
E. Reduced glyconeogenesis

168. After an operation a patient's sensitivity of front and lateral surface of the neck has reduced. What nerve is damaged?
A. N.transversuscolli
B. N.auricularismagnus
C. Nn.supraclaviculares
D. N.occipitalisminos
E. N.phrenicus

169. A patient has been taking glucocorticoids for a long time. Drug withdrawal caused an acute attack of his disease, blood pressure reduction, weakness. What are these occurrences connected with?
A. Adrenal glands insufficiency
B. Drug habituation
C. Sensibilization
D. Hyperproduction of corticotroph hormone
E. Cumulation

170. A 36-year-old man with craniocerebral trauma has diminished breath sounds, thready pulse, reflexes are absent. What route of pyracetam introduction is the most suitable in this case?
A. Intravenous
B. Rectal
C. Subcutaneous
D. Oral
E. Inhaling

171. A 28-year-old patient was diagnosed: acute inflammation of the mucous membrane of the nasolacrimal duct. It is known from his history that after influenza he had been having nasal excretions for 10 days. From what part of the nasal cavity could the infection get into the nasolacrimal duct?
A. Inferior nasal meatus
B. Median nasal meatus
C. Superior nasal meatus
D. Vestibule of nose
E. Frontal sinus

172. A patient with chronic alcoholism has symptoms of polyneuritis and cardiac insufficiency. What vitamin preparation should be prescribed to this patient?
A. Thiamine
B. Ergocalciferol
C. Retinol
D. Rutin
E. Phylloquinone

173. A patient has myocardial infarction with thrombosis of the left coronary artery. What pharmacological preparation group should be used to reestablish blood flow?
A. Fibrinolysis activators
B. Narcotic analgesics
C. 3-adrenergic blockers
D. Angiotensin-converting enzyme inhibitors
E. Glucocorticoids

174. A woman has ovary hyperemia, an increase of hemato follicular barrier permeability with edema development, infiltration of follicle wall by segmentonucleai leukocytes. The volume of the follicle is big, its wall is thinned. What period of sex cycle does the described picture correspond with?
A. Preovulatory stage
B. Ovulation
C. Menstrual period

D. Postmenstrual period
E. Relative rest period

175. What substance makes saliva viscous and mucous, has a protective function, protects the mucous membrane of the oral cavity from mechanical damage?
A. Mucin
B. Glucose
C. Kallikrein
D. Amylase
E. Lysozyme

176. A patient has a sudden decrease in Ca2+ content in the blood. What hormone secretion will increase?
A. Parathormone
B. Thyrocalcitonin
C. Aldosterone
D. Vasopressin
E. Somatotropin

177. A 7-year-old child had an acute onset of disease. The pediatrician stated that the mucous membrane of fauces is hyperemic and covered with a lot of mucus. The mucous membrane of cheeks has whitish stains. The next day the child's skin of face, neck, body was covered with a coarsely-papular rash. What disease may be presumed?
A. Measles
B. Scarlet fever
C. Diphtheria
D. Meningococcemia
E. Allergic dermatitis

178. Histologic examination revealed in all layers of appendix a big number of polymortho nuclear leukocytes; hyperemia, stases. What disease are these symptoms typical for?
A. Phlegmonous appendicitis
B. Gangrenous appendicitis
C. Superficial appendicitis
D. Simple appendicitis
E. Chronic appendicitis

179. A patient with acute myocarditis has the clinic presentations of cardiogenic shock. What pathogenetic mechanism plays the main part in shock development?
A. Disorder of pumping ability of heart
B. Depositing of blood in veins
C. Decrease of diastolic flow to the heart
D. Decrease of vascular tone
E. Increase of vascular tone

180. After honey consumption a teenager had urticaria accompanied by leukocytosis. What type of leukocytosis is it in this case?
A. Eosinophilic leukocytosis
B. Lymphocytosis
C. Monocytosis
D. Basophylic leukocytosis
E. Neutrophilic leukocytosis

181. Autopsy of a man who died of typhoid fever revealed ulcers along the ileum. These ulcers have even sides, clean fundus formed by muscle layer or even by the serous tunic of an intestine. What stage of disease does the described presentation correspond with?
A. Stage of "clean" ulcers
B. Stage of medullary swelling
C. Stage of necrosis
D. Stage of "dirty" ulcers
E. Stage of ulcer healing

182. A tissue sample of soft palate arches that was taken because a tumor was suspected (microscopic analysis revealed an ulcer with dense fundus) revealed mucous membrane necrosis, the submucous layer was infiltrated by lymphocytes, epithelioid cells, plasmocytes, solitary neutrophils. There was also evident endovasculitis and perivasculitis. What disease are these changes typical for?
A. Primary syphilis
B. Aphthous stomatitis
C. Ulcerative stomatitis
D. Vensan's ulcerative-necrotic stomatitis
E. Faucialdiphtheria

E. Faucialdiphtheria

183. A patient with cancer of the back of the tongue had intensive bleeding as a result of the tumor spread to the dorsal artery of the tongue. What vessel should be ligated to stop bleeding?
A. Lingual artery
B. Dorsal artery of tongue
C. Deep artery of tongue
D. Facial artery
E. Ascending pharyngeal artery

184. In the course of embryogenesis maxillary and mandibular processes grew together with a delay. What development anomalies should be expected in this case?
A. Macrostomia
B. Microstomia
C. Cleft palate
D. Gothic palate
E. Cleft of superior lip

185. A 7-year-old child was taken to the infectious disease hospital with complaints of acute pain during swallowing, the temperature rises up to 39°C, neck edema. Objective signs: tonsils are enlarged, their mucous membrane is plethoric and covered with a big number of whitish yellowish films that are closely adjacent to the mucous membrane. After the removal of these films the deep bleeding defect remains. What type of inflammation is it?
A. Diphtheritic
B. Purulent
C. Serous
D. Croupous
E. Hemorrhagic

186. During the examination of a two-month boy a pediatrician noticed that the child's cry sounds like cat's mewing; he revealed also microcephalia and valvular defect. By means of the cytogenetic method he determined the child's karyotype - 46 XY, 5p-. At what stage of mitosis was the patient's karyotype analyzed?
A. Metaphase
B. Prometaphase
C. Prophase
D. Anaphase
E. Telophase

187. A 40-year-old man who took part in disaster-management at a nuclear power plant fell sick with paradontitis. What etiological agent is the most important for the development of this pathology?
A. Emotional stress
B. Iron deficit
C. Malnutrition
D. Increased load of dentoalveolar apparatus
E. Streptococcus

188. Damage of one of the reactors at a nuclear power plant resulted in running out of radioactive products. People who were present in the high-radiation area got approximately 250-300 R. They were urgently taken to the hospital. What blood changes will be typical for this period?
A. Lymphopenia
B. Leukopenia
C. Anemia
D. Thrombocytopenia
E. Neutropenia

189. A 22-year-old woman has enlarged lymphatic ganglions. Histological analysis of a ganglion revealed lymphocytes, histiocytes, reticular cells, small and great Hodgkin's cells, multinuclear Reed-Sternberg cells, solitary foci of caseous necrosis. What disease are these changes typical for?
A. Lymphogranulematosis
B. Lymphosarcoma
C. Chronic leukemia
D. Acute leukemia
E. Cancer metastasis

190. A patient started bleeding after tooth extraction. What action is necessary in this

case?
A. Adrenalin locally
B. Thrombin injection
C. Fibrinogen injection
D. Vicasol orally
E. Neodicumarine orally

191. ESR of a patient with pneumonia is 48 mm/h. What caused such changes?
A. Hypergammaglobulinemia
B. Hyperalbuminemia
C. Hypogammaglobulinemia
D. Hypoproteinemia
E. Erythrocytosis

192. Examination of a patient with hepatolenticular degeneration revealed that the synthesis of ceruloplasmin protein has a defect. What organelles is this defect connected with?
A. Granular endoplasmic reticulum
B. Agranular endoplasmic reticulum
C. Mitochondrions
D. Golgi complex
E. Lysosomes

193. A 30-year-old patient who was taken to the hospital with diagnosis acute glomerulonephritis has proteinuria. What disorder caused this occurrence?
A. Increased permeability of renal filter
B. Delayed excretion of nitrogen metabolism products
C. Decreased oncotic pressure of blood plasma
D. Increase of hydrostatic blood pressure in capillaries
E. Decreased number of functioning nephrons

194. The body temperature of a patient with an infectious disease rises once in two days up to 39,5-40,5^{0}C and stays so for about an hour and then drops to the initial level. What type of fever is it?
A. Intermittent
B. Continued
C. Remittent
D. Hectic
E. Atypical

195. A patient's preliminary diagnosis is toxoplasmosis. What material was used for diagnostics of this disease?
A. Blood
B. Feces
C. Urine
D. Duodenal contents
E. Sputum

196. To make a functional complete denture the left superior canine of a patient should be extracted. After the infraorbital anesthesia the patient got a rapidly growing hematoma in the front part of the face. It was found that the injured artery is a branch of:
A. A.maxillaris
B. A.alveolaris inferior
C. A.temporalis superficialis
D. A.ophthalmica
E. A.labialis superior

197. A 25-year-old patient had in the dentist's room a sudden attack of bronchial asthma. The doctor gave him salbutamol in the form of inhalation. What is the mechanism of action of this preparation?
A. Stimulates β2-adrenoreceptors
B. Stimulates α1-adrenoreceptors
C. Blocks H1 -histamine receptors
D. Blocks phosphodiesterase
E. Blocks M-cholinergic receptors

198. The pigmentation intensity of human skin is controlled by a few independent dominant genes. It is known that pigmentation is the more intensive, the bigger quantity of these genes. What is the type of interaction between these genes?
A. Polymery
B. Pleiotropy
C. Epistasis
D. Codominancy

E. Complementarity

199. A patient with focal tuberculosis of the superior lobe of his right lung takes isoniazid as a part of combined therapy. After a time he started complaining of muscular weakness, a decrease of skin sensitivity, sight and movement coordination disorder. What vitamin preparation will be the right for the elimination of these occurrences?
A. Vitamin B_6
B. Vitamin A
C. Vitamin D
D. Vitamin B_{12}
E. Vitamin C

200. A patient who takes tetracyclin was recommended not to consume dairy products. Why did the doctor give him such a recommendation?
A. They inhibit antibiotic absorption
B. Dairy products don't assimilate
C. They increase the risk of dysbacteriosis
D. Antibiotic toxicity increases
E. Gastrointestinal digestion may be disturbed

1. During many infectious diseases patient's blood may contain antigens of pathogens. What reaction should be applied provided that antigenemia is at a low level?
A. Enzyme-linked immunosorbent assay
B. Agglutination reaction
C. Reaction of indirect hemagglutination
D. Reaction of latex-agglutination
E. Immunoelectrophoresis

2. A man lost consciousness in a car with a running engine where he had been waiting for a friend for a long time. What hemoglobin compound can be found in the blood of the patient?
A. Carboxyhemoglobin
B. Deoxyhemoglobin
C. Carbhemoglobin
D. Methemoglobin
E. Oxyhemoglobin

3. A 12-year-old boy came home from school and started complaining of a headache, sickness, chill, periodical muscle pain, appetite loss, and flabbiness. What period of illness are these symptoms typical for?
A. Prodromal
B. Latent
C. Incubative
D. High point of illness
E. End of illness

4. A patient has hypocalcaemia. What hormone deficiency may be its cause?
A. Parathormone
B. Thyrocalcitonin
C. Aldosterone
D. Corticotropin
E. Corticoliberin

5. In compliance with the clinical presentations a man was prescribed pyridoxal phosphate. What processes are corrected by this preparation?
A. Transamination and decarboxylation of amino acids
B. Oxidative decarboxylation of keto acids
C. Desamination of purine nucleotides
D. Synthesis of purine and pyrimidine bases
E. Protein synthesis

6. A patient complains of headache, heavy breathing. X-ray examination confirmed the diagnosis - frontitis. What nasal meatus may contain purulent discharge?
A. Middle
B. Superior
C. Inferior
D. Common
E. Above the superior nasal concha

7. Examination of a 42-year-old patient who suffers from parodontosis revealed roundish calcified formations 2-3 mm in diameter in the coronal pulp. Name these formations:
A. Denticles
B. Interglobular spaces
C. Sclerosed (transparent) dentin
D. Dead dentin
E. Intertubular dentin

8. A patient has the following changes: a disorder of twilight vision, drying out of conjunctiva and cornea. Such disorders may be caused by the deficiency of vitamin:
A. Vitamin A
B. Vitamin B
C. Vitamin C
D. Vitamin D
E. Vitamin B12

9. Parodontitis is accompanied by activation of proteolysis in parodentium tissues. Increase of what oral fluid's component is the evidence of proteolysis activation?
A. Amino acids
B. Organic acids
C. Glucose
D. Biogenic amines
E. Cholesterol

10. A patient has been taking glucocorticoids for a long time. Drug withdrawal caused an acute attack of his disease, blood pressure reduction, and weakness. What are these occurrences connected with?
A. Adrenal glands insufficiency
B. Drug habituation
C. Sensibilization
D. Hyperproduction of corticotroph hormone
E. Cumulation

11. A patient with an acute condition of the duodenal ulcer was admitted to the hospital. Gastric juice analysis has shown an increase in secretory and acid-producing function of the stomach. Choose a medication that will reduce secretory function due to blockade of H2-receptors:
A. Ranitidine
B. Belladonna bell extraction
C. Atropine
D. Methacin
E. Platyphyllin

12. A patient has hyperkaliemia and hyponatremia. Reduced secretion of what hormone may cause such changes?
A. Aldosterone
B. Vasopressin
C. Cortosol
D. Parathormone
E. Natriuretic hormone

13. Immune-enzyme reaction revealed in blood serum HBs-antigen. What disease is this antigen associated with?
A. Viral hepatitis type B
B. Viral hepatitis type A
C. AIDS
D. Tuberculosis
E. Syphilis

14. A patient with clinical presentations of primary immunodeficiency displays disturbance of antigen-presenting function by immune competent cells. What cells may have a structural defect?
A. Macrophages, monocytes
B. T-lymphocytes
C. B-lymphocytes
D. Fibroblasts
E. 0-lymphocytes

15. A 69-year-old patient has got an abscess of the frontal lobe as a result of a purulent infection in the nasal cavity. What anatomical formation did the infection penetrate through?
A. Foraminaecribrosae
B. Foramen ovale
C. Foramen ethmoidalae posterior
D. Foramen sphenopalatinum
E. Foramen rotundum

16. A patient complains of rapid fatigability. Objectively: he staggers and overbalances in the upright position with closed eyes. Skeleton muscular tonus is decreased. What brain structure is most likely to be damaged?
A. Cerebellum
B. Thalamus
C. Hypothalamus
D. Precentral gyrus of cerebrum cortex
E. Basal ganglions

17. During the histologic lung analysis of a man who died from cardiac insufficiency the inflammation focuses were revealed. Alveoli were full of light-pink fluid, here and there with pinkish fibers that formed a close-meshed reticulum with a small number of lymphocytes. What type of exudate is present in the lungs?
A. Serofibrinous
B. Hemorrhagic
C. Serous
D. Purulent
E. Fibrinous

18. A 38-year-old patient died during the intractable attack of bronchial asthma. Histological examination revealed mucus accu-

mulations in bronchi's lumen, a lot of mast cells (labrocytes) in bronchi's wall, some of these cells are degranulated, there are also many eosinophils. Name pathogenesis of these changes in bronchi:
A. Atopy, anaphylaxis
B. Cytotoxic, the cytolytic effect of antibodies
C. Immune complex mechanism
D. Cell-mediated cytolysis
E. Granulematosis

19. As a result of head trauma a 32-year-old man has damaged ampullas of semicircular ducts. What stimuli perception will be disturbed?
A. Angular acceleration
B. Vibration
C. Gravitation
D. Linear acceleration
E. Vibration and gravitation

20. A patient with diabetes mellitus had an insulin injection. It caused the loss of consciousness and convulsions. What was the result of biochemical blood analysis on glucose content?
A. 2,5 mmole/l
B. 3,3 mmole/l
C. 8,0 mmole/l
D. 10 mmole/l
E. 5,5 mmole/l

21. Cerebral hemorrhage caused serious disturbance of taste sensibility. What brain structure is most likely to be damaged?
A. Postcentral gyrus
B. Hippocampus
C. Hypothalamus
D. Substantia nigra
E. Amygdaloid body

22. In crisis period a 14-year-old child ill with diphtheria has AP- 70/50 mm Hg accompanied by abrupt fall in temperature and tachycardia. What form of vascular tone disturbance is it?
A. Acute hypotension
B. Chronic hypotension
C. Vegetovascular dystonia
D. Essential arterial hypotension
E. -

23. Poisoning with mercuric dichloride caused acute renal insufficiency that included 4 stages: 1) the initial one, 2) the stage of oligoanuria, 4) the stage of recovery. What is the third stage of acute renal insufficiency?
A. Polyuretic
B. Metabolic
C. Hemodynamic
D. Ischemic
E. Pathochemic

24. A 5-year-old child suffers from the neck deformity. Clinical examination revealed such symptoms: apparent flexion of the head to the left, his face is turned right, passive movements of the head to the right are restricted. What muscle's development was disturbed in this case?
A. Sternocleidomastoid
B. Trapezius
C. Splenius muscle of head
D. Sternosublingual
E. Long muscle of head

25. Toxic pulmonary edema was reproduced on a laboratory rat by means of ammonium chloride solution. What is the leading pathogenetic factor of this edema?
A. Increased permeability of capillaries
B. Increase of venous outflow
C. Decrease of colloid osmotic pressure
D. Disorder of neural and humoral regulation
E. Increase of lymph outflow

26. A woman after labor lost 20 kg of body weight, her hair and teeth fall out, she has muscle atrophy (hypophysial cachexia). Synthesis of what hypophysis hormone is disturbed?

A. Somatotropic
B. Corticotrophic
C. Thyreotropic
D. Gonadotropic
E. Prolactin

27. A mother consulted the doctor about her one-year-old child, who has got six teeth to come out. How many teeth should the child of such age have?
A. 8
B. 10
C. 7
D. 12
E. 6

28. In the course of an experiment the peripheral segment of the vagus nerve of an animal was stimulated. The following changes in heart activity were observed:
A. Reduced heart rate
B. Increase of frequency and force of the heartbeat
C. Increased excitability of myocardium
D. Increased conduction of excitement through the myocardium
E. Increased force of the heartbeat

29. A chemical burn of the esophagus caused its local constriction as a result of scar formation. What cells of loose connective tissue take part in scar formation?
A. Mature specialized fibroblasts
B. Immature nonspecialized fibroblasts
C. Fibrocytes
D. Myofibroblasts
E. Fibroclasts

30. Examination of a pregnant woman who has been taking alcohol revealed disturbed anlage of ectoderma during fetal life. What derivatives of this leaf have defects?
A. Neural tube
B. Kidneys
C. Bowels epithelium
D. Liver
E. Sexual glands

31. In the course of embryogenesis maxillary and mandibular processes grew together with a delay. What development anomalies should be expected in this case?
A. Macrostomia
B. Microstomia
C. Cleft palate
D. Gothic palate
E. Cleft of superior lip

32. A patient with adenoma of the glomerular zone of the adrenal cortex (Conn's disease) has arterial hypertension, convulsions, polyuria. What is the main link in the pathogenesis of these disorders?
A. Aldosterone hypersecretion
B. Aldosterone hyposecretion
C. Catecholamine hypersecretion
D. Glucocorticoid hypersecretion
E. Glucocorticoid hyposecretion

33. The implantation process has two stages: adhesion and invasion. The morphological manifestation of blastocyte adhesion is:
A. Attachment of blastocyte to the endometrium
B. Destruction of endometrium epithelium
C. Destruction of connective tissue of the endometrium
D. Destruction of endometrium vessels
E. Formation of lacunes

34. A newborn child ill with pylorostenosis has frequent vomiting accompanied by apathy, weakness, muscular hypertonia, sometimes convulsions. What form of acid-base balance disorder has developed?
A. Nongaseous alkalosis
B. Gaseous alkalosis
C. Gaseous acidosis
D. Metabolic acidosis
E. Excretory acidosis

35. In the course of an experiment a nerve is being stimulated by electric impulses. It leads to excretion of some quantity of thick viscous saliva by sublingual and subman-

dibular glands. What nerve is being stimulated?
A. N.sympathicus
B. N.glossopharyngeus
C. N.facialis
D. N.trigeminus
E. N.vagus

36. Laboratory rats that have been fed only with carbohydrate food for a long time display water accumulation in the tissues. What pathogenetic mechanism is the main cause of edema in this case?
A. Hypooncotic
B. Membranogenic
C. Disregulatory
D. Lymphogenic
E. Hyperosmolar

37. The body temperature of a patient with an infectious disease rises once in two days up to 39,5-40,5°C and stays so for about an hour and then drops to the initial level. What type of fever is it?
A. Intermittent
B. Continued
C. Remittent
D. Hectic
E. Atypical

38. Examination of 6-day-old infant revealed phenylpyruvate and phenylacetate excess in his urine. What amino acid metabolism is disturbed in the child's organism?
A. Phenylalanine
B. Tryptophan
C. Methionine
D. Histidine
E. Arginine

39. Professional dentists belong to the risk group concerning professional infection with viral hepatitis type B. Name an effective method for active prevention of this disease among the dentists:
A. Vaccination with recombinant vaccine
B. Secure sterilization of medical instruments
C. Working with gum gloves on
D. Introduction of specific immunoglobulin
E. Introduction of interferonogenes

40. In the course of gastric endoscopy the biopsy material of the mucous membrane was taken. Its histological examination revealed the following: the mucous membrane is intact, thickened, edematic, hyperemic, with small drop-like hemorrhages, coated with thick mucus. Name the form of acute gastritis:
A. Catarrhal
B. Erosive
C. Fibrinous
D. Purulent
E. Necrotic

41. A 28-year-old man with a cut wound of frontal skin was admitted to the hospital. A vessel that supplies blood to the frontal part of the head was ligated to stop bleeding. What vessel was ligated?
A. A.supraorbitalis
B. A.infraorbitalis
C. A.angularis
D. A.dorsalisnasi
E. A.temporalissuperficialis

42. After traumatic tooth extraction a patient complains of severe dull pain without accurate localization in his gum, body temperature rises up to 37,5°C. He was diagnosed with alveolitis. What type of pain does the patient have?
A. Protopathic
B. Epicritic
C. Visceral
D. Referred
E. Phantom

43. The influence of negative factors upon an organism results in the thymus change that is accompanied by mass loss of thymocytes, their drive out to the peripheral or-

gans, proliferation of epithelioreticulocytes. How is this phenomenon called?
A. Accidental thymus involution
B. Age thymus involution
C. Thymus hypotrophy
D. Thymus dystrophy
E. Thymus atrophy

44. A woman with ischemic heart disease has been taking an antianginal medication that has the following properties: dilates coronary arteries, peripheral vessels (arterial and venous), reduces the need of myocardium in oxygen, improves endocardial blood circulation. Name this preparation:
A. Nitroglycerin
B. Validol
C. Papaverine
D. Dibasol
E. Aminophylline

45. Histological examination of the thyroid gland of a man who died from cardiac insufficiency accompanied by hypothyroidism revealed diffuse infiltration of the gland by lymphocytes and plasmocytes with the formation of lymphoid follicles, as well as atrophy of parenchyma and growth of connective tissue. What is the most probable diagnosis?
A. Autoimmune Hashimoto's thyroiditis
B. Adenoma of the thyroid gland
C. Purulent thyroiditis
D. Thyrotoxic goiter
E. -

46. A surgeon is going to take lympha from the patient's thoracic duct in the point of its flowing into the venous channel. Where exactly a cannula should be inserted?
A. Left venous angle
B. Right venous angle
C. Point of formation of inferior vena cava
D. Point of formation of superior vena cava
E. Point of formation of portal vein

47. A patient with streptococcal gingival infection was prescribed a medication that contains a beta-lactam ring in its structure. What preparation belongs to this group?
A. Benzylpenicillin
B. Rifampicin
C. Erythromycin
D. Streptomycin sulfate
E. Chloramphenicol

48. A patient has increased content of uric acid in his blood that is clinically presented by pain syndrome as a result of urate deposition in the joints. What process does this acid result from?
A. Lysis of purine nucleotides
B. Lysis of pyrimidine nucleotides
C. Heme catabolism
D. Proteolysis
E. Reutilization of purine bases

49. A doctor examined a patient with recurrent aphthous stomatitis with concominant candidosis and decided to eliminate the possibility of HIV-infection. What examination can help to clear the situation up and make a provisional diagnosis?
A. Immune-enzyme analysis
B. Gel precipitation reaction
C. Reaction of hemagglutination inhibition
D. Reaction of hemagglutination
E. Phase-contrast microscopy

50. In an excitable cell the ion channels were blocked. It hasn't changed essentially the value of rest potential, but the cell lost its ability to generate AP (action potential). What channels were blocked?
A. Natrium
B. Potassium
C. Natrium and potassium
D. Chloric
E. Calcium

51. A surgeon should reach the omental bursa to perform an operation on the abdominal cavity. How can he reach this part

of the peritoneal cavity without affecting the integrity of lesser omentum?
A. Through the epiploic foramen
B. Through the right paracolic sulcus
C. Through the left paracolic sulcus
D. Through the right mesenteric sinus
E. Through the left mesenteric sinus

52. A stomatologist examined first-grade pupils and revealed that one of the children had yellowish brown teeth, two of them were split. Heretofore the pupil was treated with "some pills" on account of pneumonia. What medication could have had such a negative effect upon teeth?
A. Doxycycline
B. Oxacillin
C. Erythromycin
D. Ampicillin
E. Biseptol

53. A patient with pneumosclerosis has pulmonary hypertension and cardiac insufficiency of the right ventricle with ascites and edemata. What is the main pathogenetic mechanism of edemata development?
A. Rise of hydrostatic blood pressure in veins
B. Rise of oncotic pressure of the intracellular fluid
C. Reduction of oncotic blood pressure
D. Increased permeability of vessel walls
E. -

54. During phonocardiogram registration it was ascertained that the duration of the first heart sound twice exceeds the norm. It is most likely that the patient has the following organ affected:
A. Atrioventricular valves
B. Semilunar valves
C. Cardiomyocytes of heart atriums
D. Cardiomyocytes of ventricles
E. Cardiomyocytes of atriums

55. A 30-year-old man was exposed to irradiation with about 3 Gy. What blood change will be evident in 8 hours after irradiation?
A. Lymphopenia
B. Leukopenia
C. Granulocytopenia
D. Thrombocytopenia
E. Anemia

56. A 2-year-old child suffers from intestinal dysbacteriosis that lead to the development of hemorrhagic syndrome. The most probable cause of hemorrhage is:
A. Vitamin K deficiency
B. Activation of tissue thromboplastin
C. Hypovitaminosis PP
D. Fibrinogen deficiency
E. Hypocalcemia

57. A 30-year-old patient who was taken to the hospital with diagnosis acute glomerulonephritis has proteinuria. What disorder caused this occurrence?
A. Increased permeability of renal filter
B. Delayed excretion of nitrogen metabolism products
C. Decreased oncotic pressure of blood plasma
D. Increase of hydrostatic blood pressure in capillaries
E. Decreased number of functioning nephrons

58. Examination of a 7-year-old child revealed the following symptoms: small height, broad roundish face, closely placed eyes with narrow palpebral fissures, half-open mouth. Valvular defect has been also diagnosed. These clinical presentations are most likely typical for Down's syndrome. Name the cause of such pathology:
A. Trisomy of the 21st chromosome
B. Trisomy of the 13th chromosome
C. X-chromosome trisonomy
D. Partial monosomy
E. Nondisjunction of sexual chromosomes

59. A newborn child has microcephalia.

Doctors consider that this is the result of mother's taking actinomycin D during the pregnancy. What embryonal leaf was influenced by this teratogen?
A. Ectoderma
B. All leaves
C. Entoderma
D. Mesoderma
E. Entoderma and mesoderma

60. Name the drug group that can reduce the need of myocardium for oxygen, decrease the force of the heartbeat and inhibit lipolysis:
A. β-adrenoceptor blockers
B. α-adrenoceptor blockers
C. Sympatholytics
D. Selective β-adrenoceptor agonists
E. α-adrenoceptor agonists

61. A 35-year-old patient came to the admission department with complaints of pain and edema in the region of the floor of the oral cavity. After examination he was diagnosed with inflammation in the region of the excretory duct of the submandibular gland. Where does this duct open into?
A. Carunculasublingualis
B. Vestibulumoris
C. Foramen caecum linguae
D. Plica fimbriata
E. Recesusgingivalis

62. Father bought some pork at the market. What disease may catch members of his family provided that this meat didn't pass the veterinary control?
A. Pork tapeworm infection
B. Beef tapeworm infection
C. Hymenolepiasis
D. Echinococcosis
E. Liver fluke infection

63. A patient who suffers from chronic renal insufficiency fell ill with osteoporosis. Disturbed synthesis of what mineral metabolism's regulator is the cause of osteoporosis?
A. Formation of 1, 25(OH)2D3
B. Proline hydroxylation
C. Lysine hydroxylation
D. Glutamate carboxylation
E. Cortisol hydroxylation

64. In a histological specimen of the adrenal cortex there are petite polygonal cells that form roundish clusters and contain some lipidic inclusions. What part of the adrenal is presented in this histological specimen?
A. Glomerular zone
B. Intermedial zone
C. Fasciolar zone
D. Reticular zone
E. -

65. Post-mortem examination of a 5-year-old boy who died from acute pulmonary and cardiac insufficiency revealed the following: sero hemorrhagic tracheobronchitis with some necrotic areas of the mucous membrane, multiple foci of hemorrhagic pneumonia in the lungs. What disease is in question?
A. Influenza
B. Measles
C. Scarlet fever
D. Diphtheria
E. Croupous pneumonia

66. Chronic overdosage of glucocorticoids leads to the development of hyperglycemia. What process of carbohydrate metabolism is responsible for this effect?
A. Gluconeogenesis
B. Glycogenolysis
C. Aerobic glycolysis
D. Pentose-phosphate cycle
E. Glycogenesis

67. What antihelmintic medication is used for stimulation of the immune system in case of chronic generalized periodontitis?
A. Levamisole

B. Piperidineadipinate
C. Pumpkin seeds
D. Pyranthel
E. Chloxil

68. A patient ill with jaundice has increased content of conjugated bilirubin and bile acids in the blood, no stercobilinogen in the urine. What jaundice are these symptoms typical for?
A. Obstructive
B. Hepatic
C. Hepatocellular
D. Hemolytic
E. Cythemolytic

69. Histologic examination revealed a big number of polymorph nuclear leukocytes in all layers of the appendix; hyperemia, stases. What disease are these symptoms typical for?
A. Phlegmonous appendicitis
B. Gangrenous appendicitis
C. Superficial appendicitis
D. Simple appendicitis
E. Chronic appendicitis

70. A boxer who got a punch in the region of temporomandibular joint has a traumatic dislocation of mandible. Displacement of what articular surfaces will overstep the limits of the physiological norm?
A. Head of mandible and mandibular fossa
B. Coronoid process and pterygoid fossa
C. Coronoid process and submandibular fossa
D. Head of mandible and submandibular fossa
E. Neck of mandible and submandibular fossa

71. What substance makes saliva viscous and mucous, has a protective function, protects the mucous membrane of the oral cavity from mechanical damage?
A. Mucin
B. Glucose
C. Kallikrein
D. Amylase
E. Lysozyme

72. Examination of an ill child's blood revealed inherited hyperlipoproteinemia. The genetic defect of what enzyme synthesis causes this phenomenon?
A. Lipoprotein lipase
B. Glycosidase
C. Proteinase
D. Hemsynthetase
E. Phenylalanine hydroxylase

73. The trauma of the occipital region of the head resulted in a crack fracture in the region of the transverse sinus. What part of the occipital bone is damaged?
A. Squama
B. Left lateral
C. Right lateral
D. Proximal
E. Condyle

74. A 45-year-old patient was taken to the hospital by an emergency team with serious cranial trauma in shock condition. Objectively: unconscious, the skin is pale, body t 0- 35,0°C, low muscular tonus, reflexes are absent, the pulse is rapid and weak, AP-50/30 mm Hg. What clinical shock stage is it?
A. Terminal stage
B. Erectile stage
C. Excitement stage
D. Inhibition stage
E. Torpid stage

75. A child has disturbed enamel and dentine formation as a result of decreased content of calcium ions in his blood. What hormone deficiency may cause such changes?
A. Thyreocalcitonin
B. Somatotropin
C. Thyroxin
D. Parathormone
E. Triiodothyronine

E. Triiodothyronine

76. Histological examination of transverse enamel slice revealed linear banding in the form of concentric circles that point at an angle to the dentinoenamel junction. Name these structures:
A. Retsius' lines
B. Hunter-Schreger's lines
C. Enamel plates
D. Enamel fascicles
E. Enamel spindles

77. A man has a considerable disorder of protein, fat and carbohydrate digestion. Reduced secretion of what digestive juice is the most probable cause of this phenomenon?
A. Pancreatic juice
B. Saliva
C. Gastric juice
D. Bile
E. Intestinal juice

78. A patient had a trauma that led to the injury of the front spinal roots. Denote the damaged structures:
A. Axons of motoneurons and lateral horn neurons
B. Central processes of spinal ganglion neurons
C. Peripheral processes of spinal ganglion neurons
D. Axons of lateral horn neurons
E. Axons of motoneurons

79. To approach the thyroid gland from the transverse (collar) approach the suprasternal fascial space must be opened. What anatomical formation located in this space is dangerous to damage?
A. Venous jugular arch
B. Lymph nodes
C. Carotid artery
D. Subclavian artery
E. Internal jugular vein

80. A patient with thyrotoxicosis was prescribed a medication that inhibits enzyme systems taking part in the synthesis of thyroid gland hormones. What medication is it?
A. Mercazolile
B. Diiodotyrosine
C. Potassium iodide
D. Thyreoidine
E. Radioactive iodine

81. The examination of a 16-year-old boy revealed enlarged submandibular and cervical lymph nodes. The boy was subjected to biopsy. Microscopic examination of lymph nodes revealed: the typical structure is obliterated, the cell population is heterogenous, there are big cells with multilobed nuclei, multiple big mononuclear cells, eosinophilic and neutrophilic leukocytes, lymphocytes, besides that, there are necrotic areas and foci of sclerosis. What is the most probable diagnosis?
A. Lymphogranulomatosis
B. Lymph node hyperplasia
C. Granulomatous lymphadenitis
D. Suppurative lymphadenitis
E. Non-Hodgkin's lymphoma

82. A woman has hyperemic ovary, increased permeability of hematofollicular barrier with the following development of edema, infiltration of follicle wall by segmentonuclear leukocytes. The follicle volume is large, its wall is thinned. What period of sexual cycle do these presentations correspond with?
A. Preovulatory stage
B. Ovulation
C. Menstrual period
D. Postmenstrual period
E. Period of relative rest

83. A man has the trauma of the greater pectoral muscle. What index' decrease will it cause?
A. Inspiratory reserve volume

B. Expiratory reserve volume
C. Respiratory volume
D. Residual volume
E. Functional residual lung capacity

84. There is a 9-year-old boy in the endocrinological department, who has already had a few fractures of extremities caused by the fragility of bones. Malfunction of what endocrine glands (gland) takes place?
A. Parathyroid glands
B. Thyroid gland
C. Thymus
D. Adrenal glands
E. Epiphysis

85. A group of students has representatives of different races. One of the students has straight black hair and overhanging skin fold of superior eyelid - epicanthus. What race does this student most probably represent?
A. Mongoloid
B. Negroid
C. Europeoid
D. Australoid
E. Ethiopian

86. Myocyte cytoplasm contains a big number of dissolved metabolites of glucose oxidation. Name one of them that turns directly into lactate:
A. Pyruvate
B. Oxaloacetate
C. Glycerophosphate
D. Glucose 6-phosphate
E. Fructose 6-phosphate

87. Premature infants have a syndrome of respiratory failure. Failure of what aerohematic barrier component underlies this pathology?
A. Surfactant
B. Capillary endothelium
C. Basal membrane of endothelium
D. Basal membrane of alveolocytes
E. Alveolocytes

88. In the vermiform appendix there was found a white helminth, 40 mm long with a thin filiform forward end. Ecscrements contained oval eggs with plugs at the poles. Determine the kind of helminth:
A. Whipworm
B. Seat worm
C. Ascarid
D. Hookworm
E. Threadworm

89. A 3-year-old child was admitted to the hospital with otitis. Pus is probable to spread from the tympanic cavity. Where can the pus get into?
A. Into mastoid antrum
B. Into internal ear
C. Into auditory tube
D. Into external acoustic duct
E. Into posterior cranial fossa

90. A 42-year-old woman diagnosed with diabetes mellitus was admitted to the endocrinological department with complaints of thirst, excessive appetite. What pathological components are revealed In the course of laboratory examination of the patient's urine?
A. Glucose, ketone bodies
B. Protein, amino acids
C. Protein, creatine
D. Bilirubin, urobilin
E. Blood

91. The symptoms of the regeneration process (callus) on the place of fracture were revealed in the histologic specimen of a tubular bone. What tissue forms this structure?
A. Fibrous bone tissue
B. Loose connective tissue
C. Reticular tissue
D. Epithelial tissue
E. Lamellar bone tissue

92. Rate of excitement conduction was studied on different sites of an isolated

heart. Where was the lowest rate registered?
A. In atrioventricular node
B. In His' bundle
C. In Purkinje's fibers
D. In atria's myocardium
E. In ventricle's myocardium

93. Medical examination of some youths revealed in their axillary regions grey insects 1,0-1,5 mm large, with the short broad body covered with hair. What insects were revealed?
A. Pubic louse
B. Flea
C. Head louse
D. Bed bug
E. Itch mite

94. A patient with myocardium infarction was prescribed an analgetic in order to stop pain syndrome. The patient felt better but overdose caused weakness, myosis, respiratory depression. What medication was prescribed?
A. Morphine
B. Baralgine
C. Sedalgine
D. Ibuprofen
E. Paracetamol

95. A patient fell into the ice hole, was chilled in the wind and taken ill. Body temperature rose up to 39,7°C and fluctuated from 39,0°C to 39,8°C. Name the type of patient's temperature profile:
A. Febris continua
B. Febrisrecurrens
C. Febrishectica
D. Febrisintermittens
E. Febrisremittens

96. A woman in grave condition was admitted to a hospital with the diagnosis of the hemorrhagic stroke in the region of the frontal part of the right cerebral hemisphere. The damage of what artery most likely caused this condition?
A. A.cerebri anterior
B. A.cerebri posterior
C. A.communicans anterior
D. A.cerebri media
E. A .communicans posterior

97. By producing a number of hormones placenta plays a part in the temporary endocrine gland. What hormone may be detected in woman's blood on the third or the fourth day after the beginning of implantation, that is used in medicine for early pregnancy detection?
A. Chorionic gonadotropin
B. Somatostatin
C. Progesterone
D. Vasopressin
E. Oxytocin

98. Examination of coronary arteries revealed atherosclerotic plaques with calcification that close the lumen by 1/3. The muscle contains multiple small whitish layers of connective tissue. What process was revealed in the myocardium?
A. Diffuse cardiosclerosis
B. Tiger heart
C. Postinfarction cardiosclerosis
D. Myocarditis
E. Myocardium infarction

99. A surgeon cleansed his hands with 70% solution of ethyl alcohol before an operation. What is the main mechanism of preparation's antiseptic effect upon microorganisms?
A. Dehydration of protoplasm proteins
B. Blockade of sulfhydric groups of enzyme systems
C. Oxidation of organic protoplasm components
D. Interaction with amino groups of protoplasm proteins
E. Interaction with hydroxyl enzyme groups

100. During the ether narcosis a patient had evident bradycardia with the threat of cardiac arrest. What medication should be used to accelerate heartbeat under the condition of narcosis that shouldn't be interrupted?
A. Atropine
B. Caffeine
C. Adrenaline
D. Camphor
E. Isadrine

101. While passing an exam a student gets dry mouth. It is caused by the realization of such reflexes:
A. Conditioned sympathetic
B. Conditioned and unconditioned sympathetic
C. Conditioned parasympathetic
D. Unconditioned parasympathetic
E. Unconditioned sympathetic and parasympathetic

102. It is required to set an experiment on an isolated excitable cell and to achieve an increase of membrane rest potential (hyperpolarization). What ion channels should be activated to achieve such a result?
A. Potassium
B. Sodium
C. Potassium and sodium
D. Calcium
E. Sodium and calcium

103. A patient is diagnosed with alkaptonuria. Name a defect enzyme that causes this pathology:
A. Oxidase of homogentisic acid
B. Phenylalanine hydroxylase
C. Glutamate dehydrogenase
D. Pyruvate dehydrogenase
E. Dioxyphenylalanine decarboxylase

104. On the 5th day of illness a 12-year-old child who was treated in the infectious department on account of influenza felt a severe headache, sickness, dizziness, got meningeal signs. The child died 24 hours later from increasing brain edema. Dissection of the cranial cavity revealed that piamaters of the brain are edematic, plethoric, saturated diffusively with bright red liquid. Convolutions and sulci of the brain are flattened. What influenza complication is in question?
A. Hemorrhagic meningitis
B. Cerebral hemorrhage
C. Venous hyperemia of brain membranes
D. Suppurative leptomeningitis
E. Serous meningitis

105. Very big teeth are a Y-linked sign. Mother's teeth are of normal size and her son's teeth are very big. Probability of father's having very large teeth is:
A. 100%
B. 75%
C. 50%
D. 25%
E. 12,5%

106. Rabbits lived on food with the addition of cholesterol. Five months later the atherosclerotic aorta changes were revealed. Name the main cause of atherogenesis in this case:
A. Exogenous hypercholesterolemia
B. Overeating
C. Hypodynamia
D. Endogenous hypercholesterolemia
E. -

107. A patient had his tooth extracted. The lingual surface of this tooth was smaller than the buccal one. The masticatory surface has an oval form. Deep transverse sulcus separates buccal and lingual tubercles. The root is strongly compressed in mesiodistal direction and has longitudinal sulci on its approximal surfaces, it is bifurcated. What tooth was extracted?
A. First upper premolar
B. Upper canine
C. Lower canine
D. First lower premolar

E. Second upper premolar

108. A patient has an acute painfulness of face skin. What nerve is damaged?
A. Trifacial
B. Facial
C. Oculomotor
D. Vagus
E. Glossopharyngeal

109. A 30-year-old patient consulted a doctor about having diarrhea and stomach aches for 5 days, the temperature rises up to 37,5°C with chills. The day before the patient was in a forest and drank some water from an open pond. He was diagnosed with amebic dysentery that was bacteriologically confirmed. Name the medication for the treatment of this disease:
A. Metronidazole
B. Furazolidone
C. Chloramphenicol
D. Phthalazole
E. Emethine hydrochloride

110. In a genetical laboratory in the course of work with DNA molecules of white rats of Wistar's line a nucleotide was substituted for another one. At that only one amino acid was substituted in the peptide. This result is caused by the following mutation:
A. Transversion
B. Deletion
C. Duplication
D. Displacement of the reading frame
E. Translocation

111. Microscopic analysis of human heart cells revealed some oval organelles, their tunic being formed by two membranes: the external one is smooth, and the internal one forms crista. The biochemical analysis determined the presence of the ATP-synthetase enzyme. What organelles were analyzed?
A. Mitochondrions
B. Lysosomes
C. Ribosomes
D. Endoplasmic reticulum
E. Centrosomes

112. A patient with primary nephrotic syndrome has the following content of whole protein: 40 g/l. What factor caused hypoproteinemia?
A. Proteinuria
B. Transition of protein from vessels to tissues
C. Reduced protein synthesis in liver
D. Increased proteolysis
E. Disturbance of intestinal protein absorption

113. Autopsy of a woman with cerebral atherosclerosis revealed in the left cerebral hemisphere a certain focus that is presented by flabby, anhistic, greyish and yellowish tissue with indistinct edges. What pathological process is the case?
A. Ischemic stroke
B. Multifocal tumor growth with cystic degeneration
C. Multiple foci of a fresh and old cerebral hemorrhage
D. Focal encephalitis
E. Senile encephalopathy

114. Histological specimen of an oral cavity organ shows that anterior surface is lined with multilayer flat non-keratinizing epithelium and posterior surface - with multirow ciliated epithelium. What organ is it?
A. Soft palate
B. Gum
C. Hard palate
D. Lip
E. Cheek

115. A patient who is ill with scurvy displays disturbed processes of connective tissue formation that lead to loosening and falling of teeth. The disturbed activity of what enzyme causes these symptoms?
A. Lisilhydroxylase

B. Glycosiltransferase
C. Elastase
D. Procollagenpeptidase of N-terminal peptide
E. Procollagenpeptidase of C-terminal peptide

116. A tissue sample of soft palate arches that was taken because a tumor was suspected (microscopic analysis revealed an ulcer with dense fundus) revealed mucous membrane necrosis, the submucous layer was infiltrated by lymphocytes, epithelioid cells, plasmocytes, solitary neutrophils. There was also evident endovasculitis and perivasculitis. What disease are these changes typical for?
A. Primary syphilis
B. Aphthous stomatitis
C. Ulcerative stomatitis
D. Vensan's ulcerative-necrotic stomatitis
E. Faucialdiphteria

117. A 25-year-old patient had in the dentist's room a sudden attack of bronchial asthma. The doctor gave him salbutamol in the form of inhalation. What is the mechanism of action of this preparation?
A. Stimulates 3-adrenoreceptors
B. Stimulates ^-adrenoreceptors
C. Blocks H1-histamine receptors
D. Blocks phosphodiesterase
E. Blocks M-cholinergic receptors

118. Examination of a child who hasn't got fresh fruit and vegetables during winter revealed numerous subcutaneous hemorrhages, gingivitis, carious cavities in teeth. What vitamin combination should be prescribed in this case?
A. Ascorbic acid and rutin
B. Thiamine and pyridoxine
C. Folic acid and cobalamin
D. Riboflavin and nicotinamide
E. Calciferol and ascorbic acid

119. A 28-year-old patient was diagnosed with acute inflammation of the mucous membrane of the nasolacrimal duct. It is known from the anamnesis that he had been having nasal discharges for 10 days after recovering from influenza. From what part of the nasal cavity could the infection penetrate nasolacrimal duct?
A. Inferior nasal meatus
B. Middle nasal meatus
C. Superior nasal meatus
D. Vestibule of nose
E. Frontal sinus

120. If a mountain-climber stays in the mountains for a long time, the quantity of erythrocytes increases from 5,0 • l012/l to 6,0 • 1012/l. What causes the stimulation of erythropoiesis?
A. Decrease of p O2 in arterial blood
B. Increase of p O2 in arterial blood
C. Decrease of p O2 in venous blood
D. Increase of p O2 in venous blood
E. Increase of p O2 in cells

121. Autopsy of a man who suffered from essential hypertension revealed a cavity with rust coloured walls in the cerebral substance. What preceded the appearance of these changes?
A. Hematoma
B. Diapedetic hemorrhages
C. Ischemic infarction
D. Plasmorrhagias
E. Abscess

122. A patient with suspected liver abscess was admitted to the surgical department. The patient had been staying for a long time on business in one of the African countries and fell repeatedly ill with acute gastrointestinal disorders. What protozoal disease may the patient be now ill with?
A. Amebiasis
B. Trypanosomosis
C. Leishmaniasis
D. Malaria
E. Toxoplasmosis

123. An 8-month-old child has a non-closed palate, a number of eye defects, microcephaly, the disorder of cardiovascular system. Cytogenetic analysis revealed 47 chromosomes with an additional 13thchromosome. What diagnosis can be made on the basis of clinical observations and cytogenetic examinations?
A. Patau's syndrome
B. Cat cry syndrome
C. Edwards' syndrome
D. Down's syndrome
E. Klinefelter's syndrome

124. A patient with stomatitis was prescribed medication of the sulfonamide group. What is the mechanism of its antibacterial effect?
A. Competitive antagonism with para-aminobenzoic acid
B. Synthesis disturbance of cell membrane proteins
C. Decrease of membrane permeability
D. Inhibition of sulfhydric groups of thiol enzymes
E. Protein coagulation

125. A 58-year-old woman had her uterus and all appendages completely removed. It resulted in the stoppage of urine excretion. Cystoscopy results: bladder doesn't contain any urine, urine doesn't come also from ureteric orifices. What part of the urinary excretion system was damaged during the operation?
A. Ureter
B. Uretra
C. Vesicaurinaria
D. Pelvis renalis
E. Ren

126. The examination of a patient who was exposed to the ionizing radiation revealed damage to wight pulp. What cells of white pulp undergo pathological changes?
A. Lymphocytes
B. Neutrophilic leukocytes
C. Basophilic leukocytes
D. Monocytes
E. Tissue basophils

127. An experimenter wants a dog to develop conditioned salivary reflex. What conditioned stimulus will be appropriate to use?
A. Moderately loud sound
B. Zwieback
C. Meat
D. Electric current
E. Very loud sound

128. The mucous membrane of the right palatine tonsil has a painless ulcer with smooth lacquer fundus and accurate edges of cartilaginous consistency. Microscopically: inflammatory infiltrate that consists of lymphocytes, plasmocytes, a small number of neutrophils and epithelioid cells; endovasculistis and perivasculitis. What disease is in question?
A. Syphilis
B. Actinomycosis
C. Tuberculosis
D. Pharyngeal diphtheria
E. Necrotic (Vincent's) tonsillitis

129. A 24-year-old patient consulted a doctor about pain below the lower jaw to the right of it. The dental surgeon found a stone in the submandibular gland. While removing it he prevented bleeding from the following artery:
A. A.facialis
B. A.submentalis
C. A.alveolaris inferior
D. A.labialis inferior
E. A.lingualis

130. A patient was taken to the hospital with complaints of headache, high temperature, frequent stool, stomach pain with tenesmus. The doctor made clinical diagnosis dysentery and sent the material (excrements) to the bacteriological laboratory for analysis. What diagnostic method

should the laboratory doctor use to confirm or to disprove the clinical diagnosis?
A. Bacteriological
B. Biological
C. Bacterioscopic
D. Serological
E. Allergic

131. Microscopic analysis of tissue sampling from the patient's skin reveals granulomas that consist of epithelioid cells surrounded mostly by T-lymphocytes. Among epithelioid cells there are solitary giant multinuclear cells of Pirogov-Langhans type. In the centre of some granulomas there are areas of caseous necrosis. Blood vessels are absent. What disease are the described granulomas typical for?
A. Tuberculosis
B. Syphilis
C. Leprosy
D. Rhinoscleroma
E. Glanders

132. A patient suffers from middle ear inflammation (otitis). He complains also of disordered test sensation in the anterior tongue part. What nerve is damaged?
A. N.facialis
B. N.trigeminus
C. N.vestibulo - cochlearis
D. N.vagus
E. N.glossopharyngeus

133. An electronic micrograph presents a cell that has nonucleole and nuclear membrane. Chromosomes have a free position, centrioles migrate to the poles. What phase of the cell cycle is it typical for?
A. Prophase
B. Anaphase
C. Metaphase
D. Telophase
E. Interphase

134. Formaldehyde solution was applied for disinfection of nonmetallic instruments of the surgical department. What chemical series does this antiseptic preparation belong to?
A. Aliphatic series
B. Aromatic series
C. Alcohols
D. Halogenated compounds
E. Detergents

135. A patient has a sudden decrease of Ca2+ content in the blood. What hormone secretion will increase?
A. Parathormone
B. Thyrocalcitonin
C. Aldosterone
D. Vasopressin
E. Somatotropin

136. Examination of a 32-year-old patient revealed disproportional skeleton size, enlargement of superciliary arches, nose, lips, tongue, jawbones, feet. What gland's function was disturbed?
A. Hypophysis
B. Epiphysis
C. Pancreas
D. Thyroid
E. Suprarenal

137. A 7-year-old girl was taken to an infectious diseases hospital. She had complaints of high temperature, sore throat, general weakness. A doctor assumed diphtheria. What will be crucial proof of diagnosis after defining the pure culture of a pathogenic organism?
A. Toxigenity test
B. Detection of volutine granules
C. Cystinase test
D. Hemolytic ability of a pathogenic organism
E. Phagolysability

138. While the examination of the patient's oral cavity the dentist found xerostomia, numerous erosions. What vitamin deficit caused this effect?

A. Vitamin A
B. Vitamin K
C. Vitamin P
D. Vitamin H
E. Vitamin PP

139. Microscopic analysis of tissue sampling from the affected area of the mucous membrane of the oral cavity revealed bacillus in the form of accumulations that looked like a pack of cigarettes. Ziehl-Neelsen staining gives them a red colour. What kind of pathogenic organism was most likely revealed in tissue sampling?
A. M.leprae
B. M.tuberculosis
C. A.bovis
D. A.israilii
E. M.avium

140. A patient has acute cardiac insufficiency resulting from essential hypertension. What medication will be the most appropriate in this case?
A. Corglycone
B. Digoxin
C. Cardiovalen
D. Caffeine
E. Cordiamin

141. A 10-year-old child was subjected to the Mantoux test (with tuberculin). 48 hours later a papule up to 8 mm in diameter appeared on the site of tuberculin injection. What type of hyperresponsiveness reaction has developed after tuberculin injection?
A. Hyperresponsiveness reaction type IV
B. Reaction of Arthus phenomenon type
C. Reaction of serum sickness type
D. Atopic reaction
E. Hyperresponsiveness reaction type II

142. After a surgical procedure a patient has got an enteroparesis. What anticholinesterase medication should be prescribed in this case?
A. Proserin
B. Carbacholine
C. Aceclidine
D. Pilocarpine
E. Acetylcholine

143. ESR of a patient with pneumonia is 48 mm/h. What caused such changes?
A. Hypergammaglobulinemia
B. Hyperalbuminemia
C. Hypogammaglobulinemia
D. Hypoproteinemia
E. Erythrocytosis

144. A 22-year-woman has enlarged lymphatic ganglions. Histological analysis of a ganglion revealed lymphocytes, histiocytes, reticular cells, small and great Hodgkin's cells, multinuclear Reed-Sternberg cells, solitary foci of caseous necrosis. What disease are these changes typical for?
A. Lymphogranulematosis
B. Lymphosarcoma
C. Chronic leukemia
D. Acute leukemia
E. Cancer metastasis

145. An unconscious patient was admitted to the hospital. Objectively: cold skin, miotic pupils, heavy breathing, Cheyne-Stokes periodicity, low arterial pressure, overfull urinary bladder. What caused the poisoning?
A. Narcotic analgetics
B. Tranquilizers
C. Nonnarcotic analgetics
D. Muscarinic receptor blockers
E. -

146. A patient was operated on account of abdominal injury with the application of tubocurarine. At the end of the operation, after the respiration had been restored, the patient got an injection of gentamicin. It caused a sudden respiratory standstill and relaxation of skeletal muscles. What effect underlies this phenomenon?
A. Potentiation

B. Cumulation
C. Antagonism
D. Habituation
E. Sensitization

147. A patient's middle ear inflammation was complicated by mastoiditis. There was a threat of purulent thrombosis of the nearest venous sinus. What sinus was under the threat?
A. Sigmoid
B. Inferior petrosal
C. Superior sagittal
D. Transverse
E. Rectus

148. Removal of a foreign body from the eye involves local anesthesia with lidocaine. What is the action mechanism of this medication?
A. It disturbs passing of Na+ through the membrane
B. It blocks the passing of nitric oxide
C. It inhibits cytochrome oxidase activity
D. It reduces dehydrogenase activity
E. It reduces the passage of neuromediators

149. Bacteriological examination of purulent discharges from urethra revealed some bacteria that had negative Gram's stain, resembled coffee corns, decomposed glucose and maltose up to acid. They were located in leukocytes. What disease do they cause?
A. Gonorrhea
B. Syphilis
C. Venereal lymphogranulomatosis
D. Soft chancre
E. Pseudo cholera

150. Four months ago a 43-year-old patient had a traumatic amputation of his lower extremity. Now he complains of sensing the amputated extremity and having constantly grave, sometimes unbearable pain in it. What type of pain does he have?
A. Phantom
B. Causalgia
C. Neuralgia
D. Thalamic
E. Reflex

151. A 57-year-old patient has periodic uterine bleedings. Diagnostic endometrectomy was performed. Biopsy material contains among the blood elements some glandular complexes of different sizes and forms that consist of atypical cells with hyperchromic nuclei and multiple mitoses (including pathological ones). What is the most probable diagnosis?
A. Adenocarcinoma
B. Fibromyoma of uterus
C. Chorioepithelioma
D. Glandular hyperplasia of endometrium
E. Endometritis

152. A 60-year-old patient has problems with the formation and moving of food mass, it disturbs the eating process. His tongue is stiff, speaking is impossible. What nerve is damaged?
A. XII
B. V
C. IX
D. XI
E. VII

153. A patient has increased permeability of blood vessel walls, increased gingival hemorrhage, small punctate hematomas on his skin, falling of teeth. What disturbance of vitamin metabolism can account for these symptoms?
A. Hypovitaminosis C
B. Hypervitaminosis D
C. Hypervitaminosis C
D. Hypovitaminosis D
E. Hypovitaminosis A

154. When a patient puts his tongue out the tip of it deflects to the left. Motor innervation of what cranial nerve is disturbed in this case?
A. N.hypoglossusdexter

B. N.glossopharyngeusdexter
C. N.vagusdexter
D. N.trigeminus sinister
E. N.facialis sinister

155. Cyanide poisoning causes immediate death. What is the mechanism of cyanide effect at the molecular level?
A. They inhibit cytochrome oxidase
B. They bind substrates of tricarboxylic acid cycle
C. They block succinate dehydrogenase
D. They inactivate oxygen
E. They inhibit cytochrome B

156. Autopsy of a man who died from ethylene glycol poisoning revealed that his kidneys are a little bit enlarged, edematic; their capsule can be easily removed. The cortical substance is broad and light-grey. The medullary substance is dark-red. What pathology had this man?
A. Necrotic nephrosis
B. Acute pyelonephritis
C. Acute glomerulonephritis
D. Acute tubular-interstitial nephritis
E. Lipoid nephrosis

157. A patient has a slowly healing fracture. What medicine can be used to accelerate the formation of a connective tissue matrix?
A. Methyluracil
B. Prednisolone
C. Cyclophosphan
D. Methotrexate
E. Cyclosporine

158. After recovering from epidemic parotiditis a patient began to lose weight, he was permanently thirsty, drank a lot of water, had frequent urination, voracious appetite. Now he has complaints of skin itch, weakness, furunculosis. His blood contains: glucose - 16 mmole/L, ketone bodies - 100 mcmole/L; glucosuria. What disease has developed?
A. Insulin-dependent diabetes
B. Insulin-independent diabetes
C. Steroid diabetes
D. Diabetes insipidus
E. Malnutrition diabetes

159. On examination of a road accident victim a doctor revealed left clavicle fracture and disturbed blood circulation in an extremity (no pulsing of radial artery). What cause of blood circulation disturbance is the most probable?
A. Compression of subclavian artery
B. Compression of axillary artery
C. Compression of the subclavian vein
D. Compression of vertebral artery
E. Compression of the axillary vein

160. A year after subtotal stomach resection on account of ulcer of lesser curvature the following blood changes were revealed: anemia, leukocytopenia and thrombocytopenia, color index -1,3, megaloblasts and megalocytes. What factor deficiency caused the development of this pathology?
A. Castle's factor
B. Hydrochloride acid
C. Mucin
D. Pepsin
E. Gastrin

161. A diver who has been staying at the depth of 40 m for a long time fell ill with caisson disease as a result of decompression. The main pathogenetic factor is the following embolism:
A. Gaseous
B. Air
C. Fat
D. Paradoxical
E. Tissue

162. While a 24-year-old woman was waiting for tooth extraction, tonus of sympathetic part of the autonomic nervous system rose. What reaction will the patient display?
A. Increased frequency of heartbeat

B. Hyperperistalsis
C. Hypersecretion of digestive juices
D. Bronchus constriction
E. Miotic pupils

163. A non-trained man has usually muscular hypoxia after a sprint. What metabolite accumulates in the muscles as a result of it?
A. Lactate
B. Ketone bodies
C. Glucose 6-phosphate
D. Oxaloacetate
E. -

164. A patient has a disorder of tear flow after a cold. What autonomic ganglion had been most damaged?
A. Pterygopalatine
B. Aural
C. Ciliated
D. Submandibular
E. Sublingual

165. A patient displays abnormal retro deviation of his lower jaw as a result of trauma in the region of the mandibular coronal process. What muscle is most likely to be damaged?
A. M.temporalis
B. M.masseter
C. M.pterygoideuslateralis
D. M.pterygoideusmedialis
E. M.levatorangulioris

166. Microspecimen of a child's finger skin reveals the subnormal development of epidermis. What embryonic leaf was damaged In the course of development?
A. Ectoderm
B. Mesoderm
C. Entoderm
D. Mesenchyma
E. Ectomesenchyma

167. During the post-synthetic period of the mitotic cycle the synthesis of tubulin proteins was disturbed. These proteins take part in the construction of the division spindle. It can lead to the disturbance of:
A. Chromosomes' disjunction
B. Spiralization of chromosomes
C. Cytokinesis
D. Despiralization of chromosomes
E. Mitosis duration

168. The electron micrograph of a kidney fragment presents an afferent arteriole with big cells under endothelium. These cells contain secretory granules. Name this type of cells:
A. Juxtaglomerular
B. Mesangial
C. Smooth muscular
D. Juxtavascular
E. Interstitial

169. A patient in the oral surgery department has got a purulent complication. Bacteriological analysis of the wound material found a culture that produces cyan pigment. What microorganism is the most probable causative agent?
A. Pseudomonas aeruginosa
B. Proteus vulgaris
C. Bacillus subtilis
D. Klebsiellapneumoniae
E. Staphylococcus epidermidis

170. Morphological examination of the carious cavity floor differentiated distinctly three zones: the one of softened dentin, transparent dentin and replacing dentin. What stage of caries are these changes typical for?
A. Median caries
B. Spot stage
C. Superficial caries
D. Deep caries
E. Chronic caries

171. A patient with chronic myeloleukemia has presentations of anemy – a decrease of erythrocyte number and hemoglobin content, oxyphil and polychromatophilic

normocytes, microcytes. What pathogenetic mechanism is the main for the development of this anemy?
A. Replacement of erythrocytic shoot
B. Intravascular erythrocyte hemolysis
C. Vitamin B12 deficiency
D. Reduction of erythropoietin synthesis
E. Chronic hemorrhage

172. A patient with acute rhinitis has hyperemia and excessive mucus formation in the nasal cavity. What epithelial cells of the mucous membrane have the intensified activity?
A. Goblet cells
B. Ciliated cells
C. Microvillous cells
D. Basal cells
E. Endocrine cells

173. It is known that the information about amino acids sequence in a protein molecule is coded inform of a sequence of four nucleotide types in a DNA molecule, different amino acids being coded with different quantity of triplets - from one to six. How is such a peculiarity of genetic code called?
A. Degeneracy
B. Versatility
C. Nonoverlayability
D. Triplety
E. Specificity

174. Sputum smears of a patient with the chronic pulmonary disease were stained by the Ziehl-Neelsen method and analyzed in the bacteriological laboratory. Microscopy revealed red bacillus. What property of tuberculosis mycobacteria was found?
A. Acid resistance
B. Alkali resistance
C. Alcohol resistance
D. Encapsulation
E. Spore-formation

175. A child has disturbed processes of ossification and "punctate" enamel. What microelement metabolism is disturbed?
A. Fluorine
B. Iron
C. Zinc
D. Chromium
E. Copper

176. A 58-year-old patient was being prepared for cholecystectomy operation. The drug complex of narcosis premedication included benzohexamethonium. What part does this medication play in the narcosis?
A. Functional blockade of visceral reflexes
B. Relaxation of skeletal muscles
C. Relaxation of smooth muscles
D. Reduction of excitement stage
E. Increase of retrograde amnesia

177. A 19-year-old patient was diagnosed with chronic acquired hemolytic anemia. What is the leading pathogenetic mechanism of this pathology's development?
A. Autoimmune hemolysis
B. Toxic hemolysis
C. Intracellular hemolysis
D. Hyposmolarity of plasm
E. Osmotic hemolysis

178. A man's energy consumption is measured on an empty stomach, in lying position, under conditions of physical psychical rest, at a comfortable temperature. At what time will the energy consumption be the lowest?
A. At 3-4 a.m.
B. At 7-8 a.m.
C. At 10-12 a.m.
D. At 2-4 p.m.
E. At 5-6 p.m.

179. A sportsman was examined after an intensive physical activity. The examination revealed the disorder of movement coordination but the force of muscle contractions remained the same. It can be explained by the retarded speed of excitement conduction through:

conduction through:
A. Central synapses
B. Neuromuscular synapses
C. Efferent nerves
D. Afferent nerves
E. Conduction tracts

180. Macroscopic examination of lung tissue revealed some areas of excessive airiness with small bubbles, histological examination registered thinning and rupture of alveolar septa and formation of big multiform cavities. What disease was revealed in the lung?
A. Pulmonary emphysema
B. Multiple bronchiectasis
C. Cavernous tuberculosis
D. Chronic bronchitis
E. Fibrosing alveolitis

181. A patient with chronic glomerulonephritis has the disorder of incretory function of kidneys. What blood elements deficit will result from it?
A. Erythrocytes
B. Leukocytes
C. Thrombocytes
D. Leukocytes and thrombocytes
E. Erythrocytes and leukocytes

182. On the territory of a certain region the mass death of rodents was observed. It was assumed that it may be caused by the plague agent. What serological reaction should be applied for the quick determination of antigene of this epizootic agent?
A. Precipitation reaction
B. Agglutination reaction
C. Reaction of passive hemagglutination
D. Bordet-Gengou test
E. Neutralization reaction

183. Examination of a patient who had been suffering from rheumatism for a long time revealed stenosis of mitral orifice, death was caused by cardiac and pulmonary insufficiency. An autopsy has shown brown induration of lungs. What type of circulation disturbance provokes such changes in the lungs?
A. Chronic left ventricular insufficiency
B. Chronic right ventricular insufficiency
C. Acute left ventricular insufficiency
D. Acute right ventricular insufficiency
E. Portal hypertension

184. What vitamin deficiency leads to both disorder of reproductive function and dystrophy of skeletal muscles?
A. Vitamin E
B. Vitamin A
C. Vitamin K
D. Vitamin D
E. Vitamin B1

185. The opening of a patient's abdominal cavity revealed about 2,0 L of purulent fluid. The peritoneum is dull, greyish, the serous tunic of intestines has grayish layers that can be easily removed. It is most likely to be:
A. Fibrinopurulent peritonitis
B. Hemorrhagic peritonitis
C. Serous peritonitis
D. Tuberculous peritonitis
E. -

186. Histological examination in the area of the neck of the fundus gland reveals small cells that have high nuclear-cytoplasmatic ratio and basophilic cytoplasm. Name the function of these cells:
A. Regeneration of glandular epithelium
B. Protective
C. Endocrine
D. Secretion of chlorine ions
E. Pepsinogen secretion

187. A month after surgical constriction of the rabbit's renal artery the considerable increase of systematic arterial pressure was observed. What of the following regulation mechanisms caused the animal's pressure change?

A. Angiotensin-II
B. Vasopressin
C. Adrenaline
D. Noradrenaline
E. Serotonin

188. A 62-year-old patient in grave condition was admitted to the neurological department on account of a cerebral hemorrhage. Objectively: hyperpnoe and rising of respiratory rate, then it falls to apnea, after that the cycle of respiratory movements restores. What respiratory type is it?
A. Cheyne-Stokes respiration
B. Kussmaul's respiration
C. Biot's respiration
D. Gasping respiration
E. Apneustic

189. An eye trauma caused soft tissue infection of eye-socket. Through what anatomical formation can the infection penetrate the middle cranial fossa?
A. Through the superior orbital fissure
B. Through the anterior ethmoidal foramen
C. Through the posterior ethmoidal foramen
D. Through the inferior orbital fissure
E. Through the zygomatic orbital foramen

190. A 17-year-old student pressed out a pustule in the medial angle of the eye. In 2 days she was taken to the institute of neurosurgery with thrombosis of the cavernous sinus. Through what vein did the infection get into this sinus?
A. V.angularis
B. V.maxillaris
C. V.profundafaciei
D. V.transversafaciei
E. V.diploicae frontalis

191. A patient complains of painful cracks in mouth angles. What sulfanilamide can be recommended for local treatment of angular stomatitis?
A. Streptocide liniment
B. Synthomycine liniment
C. Prednisolone ointment
D. Butadione ointment
E. Tetracycline ointment

192. A patient has difficulties with jaw joining when he is chewing. There is partial atrophy of masticatory muscles situated below the zygomatic arch. What nerve branches do these muscles innervate?
A. N.mandibularis
B. N.maxillaris
C. N.alveolaris inferior
D. Nn.alveolaressuperiores
E. N.infraorbitalis

193. A patient with tuberculosis was prescribed a certain medication as a part of complex therapy – a derivative of isonicotinic acid hydrazide. Name this preparation:
A. Isoniazide
B. Streptomycin sulfate
C. Cephaloridine
D. Rifampicin
E. Kanamycin

194. There are trisome, translocational and mosaic forms of Down's syndrome. What method of human genetics can be applied to differentiate the said forms of Down's syndrome?
A. Cytogenetical
B. Gemellary
C. Genealogical
D. Biochemical
E. Population-statistical

195. Retrospective diagnostics of old bacillary dysentery required serologic examination of blood serum in order to determine blood titer to the shigella. What reaction should be applied for this purpose?
A. Reaction of passive hemagglutination
B. Bordet-Gengou test
C. Precipitation reaction
D. Hemolysis reaction
E. Bacteriolysis reaction

196. A child was diagnosed with acute renal failure. What biochemical saliva indices can confirm this diagnosis?
A. Increased level of rest nitrogen
B. Increase of immunoglobulin A
C. Reduction of alkaline phosphatase
D. Increase of alpha-amylase
E. Decreased level of phosphate

197. Examination of a child who has recently recovered from measles revealed in the soft tissues of cheeks and perineum some inaccurate, edematic, red-and-black, slightly fluctuating areas. What complication is it?
A. Humid gangrene
B. Dry gangrene
C. Gas gangrene
D. Pressure sore
E. Trophic ulcer

198. A child damaged the lateral surface of his tongue. What lingual papillas are most likely to be damaged?
A. Foliate
B. Conic
C. Vallate
D. Filiform
E. Fungiform

199. In the course of an experiment the peripheral fragment of a cut vagus nerve on the dog's neck was being stimulated. There was the following change in cardiac activity:
A. Decrease of beat frequency
B. Increase of beat frequency and force
C. Increase of myocardium excitability
D. Increased speed of excitement conduction through the myocardium
E. Increase of beat force

200. Morphological examination revealed in the histological specimen of biopsy material an irregular shaped vessel. Its middle membrane is formed by bundles of smooth myocytes and layers of connective tissue. What type of vessel is it?
A. Vein of muscular type
B. Artery of muscular type
C. Lymphatic vessel
D. Venule
E. Arteriole

1. Autopsy of a 35 y.o. woman revealed not the only enlargement of many lymph nodes but also enlarged spleen weighing 600,0. Its incision showed that it was heterogeneous, dark red, dense with greyish-yellow necrotic areas up to 1 cm in diameter (porphyritic spleen). What disease can be assumed?
A. Lymphogranulomatosis
B. Chronic lymphoid leukosis
C. Chronic myeloid leukosis
D. Cancer metastases
E. Lymphosarcoma

2. A 42 y.o. man who had been suffering from chronic granulomatous periodontitis and chronic purulent osteomyelitis of his lower jaw for 8 years died under conditions of acute renal insufficiency. What complication of purulent osteomyelitis was developed in kidneys?
A. Amyloidosis
B. Hyalinosis
C. Adipose degeneration
D. Atrophy
E. Necrosis of epithelium of convoluted tubules

3. Microphotography represents a fragment of the cortical substance of a kidney. This fragment contains thick spot cells and juxtaglomerular cells with big secretory granules. What kidney structure is represented?
A. Juxtaglomerular apparatus
B. Renal corpuscle
C. Filtering barrier
D. Prostaglandin apparatus
E. Choroid glomus

4. A student applied to a doctor and asked him to prescribe a drug for the treatment of allergic rhinitis he fell ill with during linden flowering. What drug can be applied?
A. Loratadine
B. Noradrenaline hydrotartate
C. Propranolol
D. Ambroxol
E. Losartan

5. Histological examination of periapical tissue taken from a patient who has been suffering from chronic periodontitis for a long time revealed a granulation tissue interlaced by taeniae of squamous cell epithelium and encircled within a fibrous capsule. What is the most probable diagnosis?
A. Composite granuloma
B. Abscessing periodontitis
C. Granulating periodontitis
D. Simple granuloma
E. Cystic granuloma

6. Examination of a child revealed the growth of a pharyngeal tonsil causing the obstructed air escape from the nasal cavity. What openings of the nasal cavity are blocked in this case?
A. Choanae
B. Nostrils
C. Piriform
D. Pterygopalatine
E. Maxillary sinus

7. A patient has a trauma of his upper jaw with an injury of the supraorbital foramen. What jaw surface was damaged?
A. Anterior
B. Nasal
C. Orbital
D. Subtemporal
E. -

8. A patient with Itsenko-Cushing syndrome has persistent hyperglycemia and glycosuria, hypertension, osteoporosis, obesity. What hormone's synthesis and secretion are intensified in this case?
A. Cortisol
B. Adrenaline
C. Glucagon
D. Thyroxin
E. Aldosterone

9. A patient has deformed jawbones. Histological examination revealed in the place of bones the growth of cellular-fibrous tumor-

like tissue with primitive osteogenesis without distinct borders. What disease are these symptoms typical for?
A. Fibrous dysplasia
B. Ameloblastoma
C. Osteosarcoma
D. Eosinophilic granuloma
E. Parathyroid osteodystrophy

10. Examination of a 10 y.o. child revealed on the alveolar submandibular process a fixed tumourous mass 1,5 cm in diameter closing premolar crown on the vestibular side. The mucous membrane of its surface is reddish-brown, it bleeds as a reaction to a slight mechanical intervention. Biopsy results: the mass consists of small size vessels separated by thin layers of connective tissue and infiltrated by plasmocytes, the mucous membrane is here and there ulcered. What is the most probable diagnosis?
A. Angiomatous form of epulis
B. Gingival fibromatosis
C. Giant cell form of epulis
D. Hypertrophic gingivitis
E. Fibrous form of epulis

11. During embryogenesis trophoblast develops into an organ rudiment that has an endocrinal function. What rudiment is it?
A. Villous chorion
B. Amnion
C. Yolk sac
D. Allantois
E. Umbilical cord

12. Hydrocyanic acid and cyanides are the most violent poisons. According to the dose the death follows after a few seconds or minutes. The death is caused by the inhibited activity of the following enzyme:
A. Cytochrome oxidase
B. Acetylcholinesterase
C. ATP-synthetase
D. Catalase
E. Methemoglobin reductase

13. Electron microscopic study of a cell revealed roundish bubbles confined by a membrane and containing a lot of various hydrolytic enzymes. It is known that these organelles provide intracellular digestion and protective functions. These elements are:
A. Lysosomes
B. Centrosomes
C. Endoplasmic reticulum
D. Ribosomes
E. Mitochondria

14. Epithelium regeneration of the mucous membrane of the oral cavity (cell reproduction) was accompanied by semiconservative DNA replication (self-reproduction). Nucleotides of a new DNA chain are complementary to:
A. Maternal chain
B. Sense codons
C. DNA-polymerase enzyme
D. Introns
E. RNA-polymerase enzyme

15. A patient has an allergic reaction accompanied by itching, edemata and reddening of the skin. What biogenic amine has an increased concentration in the tissues?
A. Histamine
B. Serotonin
C. Tryptamine
D. Dopamine
E. Gamma-amino butyric acid

16. A patient had a trauma that resulted in a fracture in the external inferior third of his right crus. What bone was broken?
A. Fibular
B. Tibial
C. Femoral
D. Astragaloid
E. Calcaneal

17. Microscopic examination during the autopsy of a 70 y.o. man who had been ill with atherosclerosis for a long time and

died from cardiovascular insufficiency revealed in the abdominal area of aorta some dense oval fibrous plaques with lime deposition in the form of dense brittle plates. What stage of atherosclerosis morphogenesis is it?
A. Atherocalcinosis
B. Liposclerosis
C. Atheromatosis
D. Ulceration
E. Lipoidosis

18. Examination of a 40 y.o. man ill with stenosing (without metastases) esophageal carcinoma revealed the following changes: atrophy of skeletal muscles and fatty tissue. His skin is sallow, the epidermis is attenuated, the heart has grown smaller. Myocardium and liver are brown. What is the most probable diagnosis?
A. Alimentary cachexia
B. Myasthenia
C. Cancerous cachexia
D. Brown atrophy
E. Addison's disease

19. A patient suffering from chronic renal insufficiency felt ill with osteoporosis. It is caused by disturbed synthesis of the following regulator of mineral metabolism:
A. 1, 25(OH)2D3 generation
B. Proline hydroxylation
C. Lysine hydroxylation
D. Glutamate carboxylation
E. Cortisol hydroxylation

20. It was reported an outbreak of food poisoning connected with consumption of pastry that had been stored at room temperature and had duck eggs as one of the ingredients. What microorganisms might have caused this disease?
A. Salmonella
B. Colon bacilli
C. Staphylococci
D. Legionella
E. Comma bacilli

21. For the treatment of skin diseases with apparent inflammation in the maxillofacial area the topical glucocorticoids are applied. What preparation has a minimal resorptive effect?
A. Flumethasonipivalas
B. Prednisolone
C. Hydrocortisone
D. Triamcinolone
E. Dexamethasone

22. A patient being treated in the burns department has a suppurative complication. The pus is of bluish-green colour that is indicative of infection caused by Pseudomonas aeruginosa. What factor is typical for this causative agent?
A. Gram-negative stain
B. Presence of spores
C. Coccal form
D. Cell pairing
E. Mycelium formation

23. A 16 y.o. girl consulted a dentist about the dark colour of tooth enamel. Analysis of her pedigree revealed that this pathology was inherited by all girls from father and by 50% of boys from mother. What mode of inheritance are these peculiarities typical for?
A. Dominant, X-linked
B. Recessive, X-linked
C. Recessive, Y-linked
D. Autosomal and dominant
E. Autosomal and recessive

24. In course of an operation on account of a granuloma in the area of the right upper incisor a patient began to bleed. The hemorrhage was stopped just only 3 hours later. The patient's anamnesis contains information about chronic lymphatic leukemia. What is the most probable cause of hemorrhage?
A. Thrombocytopenia
B. Thrombocytopathia
C. Lymphocytosis

D. Leukopenia
E. Eosinophilia

25. The examination of a patient revealed a change of secretory function of a parotid gland. It is connected with the disturbance of its vegetative innervation. What ganglion of the vegetative nervous system gives postganglionic parasympathetic fibers for it?
A. Ganglion oticum
B. Ganglion ciliare
C. Ganglion pterygopalatinum
D. Ganglion submandibulare
E. Ganglion sublinguale

26. A hospital admitted a patient with complaints about abdominal swelling, diarrhea, meteorism after consumption of food rich in proteins. It is indicative of disturbed protein digestion and their intensified decaying. What substance is the product of this process in the bowels?
A. Indole
B. Bilirubin
C. Cadaverine
D. Agmatine
E. Putrescine

27. A patient who attempted suicide in a state of serious depression was delivered to a hospital by an ambulance. What drugs should be administered?
A. Antidepressants
B. Sedative
C. Neuroleptics
D. Tranquilizers
E. Lithium salts

28. After a surgical procedure a patient felt ill with enteroparesis. What medication from the group of anticholinesterase drugs should be prescribed?
A. Proserin
B. Carbacholine
C. Aceclydine
D. Pilocarpine
E. Acetylcholine

29. A 5 y.o. child's enamel and dentin are striated with yellowish-brown stripes, the child has also dentin exposure, multiple caries. It is known that the child's mother had been taking antibiotics during her pregnancy. What medication might have caused such an effect?
A. Tetracycline
B. Lincomycin
C. Streptocid
D. Nystatin
E. Ampicillin

30. A patient has a skin defect as a result of an extensive burn. In order to mask this defect the surgeons transplanted a skin flap from another body part of this patient. What type of transplantation is it?
A. Autotransplantation
B. Explantation
C. Allotransplantation
D. Xenotransplantation
E. Homotransplantation

31. Examination of a tooth revealed a large cavity in its crown. The floor of this cavity is formed by a thin layer of softened dentin that separates this cavity from the pulp. What is the most probable diagnosis?
A. Deep caries
B. Median caries
C. Superficial caries
D. Pulpitis
E. Periodontitis

32. During an operation on account of mandibular dislocation a doctor should consider the effect of a certain muscle. Its posterior fascicles drawback protruding lower jaw. What muscle is meant?
A. M. temporalis
B. M. masseter
C. M. pterygoideusmedialis
D. M. pterygoideuslateralis
E. M. mylohyoideus

33. After anlage of primary teeth at the beginning of the fifth month of embryogenesis some factors disturbed the growth ability of dental plate behind the mentioned anlages. What serious consequence is possible?
A. Permanent teeth won't be anlaged
B. Formation of Hertwig's epithelial root sheath will be disturbed
C. Cervix of enamel organ won't disintegrate
D. Formation of mouth vestibule will be disturbed
E. Dentin of primary teeth won't be formed

34. A 30 y.o. man was irradiated with approximately 3 Gy. What blood changes will be revealed 8 hours after exposure to radiation?
A. Lymphopenia
B. Leukopenia
C. Granulocytopenia
D. Thrombocytopenia
E. Anemia

35. Laboratory examination of a child revealed a high content of leucine, valine, isoleucine and their keto derivates in blood and urine. Urine had the typical smell of maple syrup. This disease was caused by the deficiency of the following enzyme:
A. Dehydrogenase of branched amino acids
B. Aminotransferase
C. Glucose-6-phosphatase
D. Phosphofructokinase
E. Phosphofructomutase

36. A patient with an acute attack of the duodenal ulcer was admitted to a hospital. Analysis of his gastric juice revealed intensification of secretory and acid-forming stomach functions. Choose a drug that will reduce secretory stomach function due to blockade of H2-receptors:
A. Ranitidine
B. Belladonna extract
C. Atropine
D. Methacin
E. Platyphyllin

37. A 30 y.o. patient is diagnosed with amebic dysentery. This diagnosis was bacteriologically confirmed. Name the preparation for its treatment:
A. Metronidazole
B. Mebendazole
C. Itraconazole
D. Furacillin
E. Acyclovir

38. An electrical cardio stimulator was implanted to a 75 y.o. man with the heart rate of 40 bpm. After that heart rate rose up to 70 bpm. Cardio stimulator assumed the function of the following heart part:
A. Sinoatrial node
B. Atrioventricular node
C. His' bundle branches
D. His' bundle fibers
E. Purkinje's fibers

39. Blood of patients ill with diabetes mellitus has a high content of free fatty acids. It may be caused by:
A. High activity of triglyceride lipase of adipocytes
B. Accumulation of palmitoyl-CoA in the cytosol
C. Activation of ketone bodies utilization
D. Activation of synthesis of apolipoproteins A-1, A-2, A-4
E. Low activity of phosphatidylcholine-cholestein-acyltransferase of plasma

40. A 9 y.o. boy was admitted to the endocrinological department. This boy has already had several fractures of hist extremities due to bone brittlness. The function of the following endocrinal glands (gland) is disturbed:
A. Parathyroid
B. Thyroid
C. Thymus
D. Adrenal

D. Adrenal
E. Epiphysis

41. A patient ill with adenoma of the glomerular zone of the adrenal cortex (Conn's disease) has arterial hypertension, convulsions, polyuria. What is the main factor in the pathogenesis of these disturbances?
A. Aldosterone hypersecretion
B. Aldosterone hyposecretion
C. Catecholamines hypersecretion
D. Glycocorticoids hypersecretion
E. Glycocorticoids hyposecretion

42. A couple applied to a genetic consultation with a question about the probability of giving birth to children with X-linked rachitis (dominant character). Father is healthy, the mother is heterozygous and suffers from this disease. Vitamin-resistant rachitis can be inherited by:
A. A half of all daughters and sons
B. Daughters only
C. Sons only
D. All children
E. All children will be healthy

43. A patient has a right-sided fracture and a hemorrhage (hematoma) in the area of the anterior third of his lower jaw, loss of skin sensitivity in the area of his chin. What nerve was damaged?
A. Mental nerve
B. Mylohyoid nerves
C. Inferior alveolar nerve
D. Buccal nerve
E. Superior alveolar nerves

44. A hospital admitted a 9 y.o. boy with mental and physical retardation. Biochemical blood analysis revealed a high content of phenylalanine. Such condition may be caused by blocking of the following enzyme:
A. Phenylalanine-4-monooxygenase
B. Oxidase of homogentisic acid
C. Glutamine transaminase
D. Aspartate aminotransferase
E. Glutamate decarboxylase

45. Vishnevsky's technique of vagosympathet blockade lies in the introduction of novocaine solution along the posterior edge of sternocleidomastoid muscle above its intersection with the exterior jugular vein. Within which triangle of neck is it performed?
A. Scapular-trapezoid
B. Clavicular-scapular
C. Carotic
D. Pirogov's triangle
E. Submandibular

46. A patient was diagnosed with a radicular cyst that had invaded the nasal cavity. What tooth is most probably affected?
A. Superior medial incisor
B. Superior canine
C. Superior lateral incisor
D. First superior bicuspid
E. First superior molar

47. A doctor recorded in the medical history that a patient had hypopnoe (reduced respiration depth). It means that the following characteristic of external respiration is reduced:
A. Respiratory volume
B. Vital lung capacity
C. Functional residual capacity
D. Expiration capacity
E. Respiratory minute volume

48. Among students of the same group there are representatives of different races. One of the students has straight black hair and a fold of skin extending over the superior eyelid - epicanthus. What race does this student most probably represent?
A. Mongoloid
B. Negroi
C. Caucasian
D. Australoid
E. Ethiopian

49. A patient with systemic scleroderma has intensified collagen destruction. Collagen destruction will be reflected by intensified urinary excretion of the following amino acid:
A. Oxyproline
B. Alanine
C. Tryptophane
D. Serine
E. Phenylalanine

50. To subdue the fever and relieve toothache a patient was prescribed paracetamol. What is the action mechanism of this medication?
A. Cycloxygenase blocking
B. Monoamine oxidase blocking
C. Lipoxygenase blocking
D. Cholinesterase blocking
E. Phosphodiesterase blocking

51. A patient has arterial hemorrhage from the cut wound in the area of the anterior part of the mastication muscle. What vessel should be ligated?
A. A. facialis
B. A. maxillaris
C. Aa. labials inferiores
D. A. mentalis
E. A. lingualis

52. A group of researchers set an experiment and obtained anucleate mutant cells. In the first place they will have disturbed synthesis of the following compounds:
A. Ribosomal RNA
B. Transfer RNA
C. Lipids
D. Monosaccharides
E. Polysaccharides

53. The study of a tubular organ revealed that its median membrane consists of solid hyaline rings. What epithelium lines mucous membrane of this organ?
A. Multinuclear prismatic ciliated
B. Monostratal prismatic glandular
C. Monostratal prismatic with a border
D. Multistratal squamous nonkeratinizing
E. Monostratal cubical

54. A patient has disturbed digestion of proteins, fats and carbohydrates. It is most likely to be caused by reduced secretion of the following digestive juice:
A. Pancreatic
B. Saliva
C. Gastric
D. Bile
E. Intestinal

55. A 7 y.o. girl was admitted to the infectious diseases hospital with fever, sore throat, common weakness. A doctor suspected diphtheria. What would be crucial for diagnosis confirmation after the pure culture of a causative agent had been singled out?
A. Toxigenicity test
B. Detection of volutin granules
C. Cystinase test
D. Hemolytic ability of a causative agent
E. Phagolysability

56. A neurological department admitted a 62 y.o. man in grave condition on account of a cerebral hemorrhage. Objectively: increase of respiration depth and frequency, then its decrease to apnoea, where upon the cycle of respiratory movements is restored. What respiration type is it?
A. Chain-Stoke's
B. Kussmaul's
C. Biot's
D. Gasping respiration
E. Apneustic

57. A patient ill with chronic glomerulonephritis has a disturbed incretory function of kidneys. It will result in the deficit of the following blood corpuscles:
A. Erythrocytes
B. Leukocytes
C. Thrombocytes

D. Leukocytes and thrombocytes
E. Erythrocytes and leukocytes

58. An embryo has signs of the disturbed process of dorsal mesoderm segmentation and somite generation. What part of the skin is most likely to have developmental abnormalities?
A. Derma
B. Hair
C. Sebaceous glands
D. Epidermis
E. Sudoriferous glands

59. A patient dropped into an ice hole, froze in the wind and fell ill. Body temperature rose up to 39, 7°C and varied from 39,0°C to 39,8°C. Name the type of patient's temperature profile?
A. Febris continua
B. Febrisrecurrens
C. Febrishectica
D. Febrisintermittens
E. Febrisremittens

60. A patient was admitted to a hospital because of the risk of inflammation spread from the occipital area to the cranial cavity. What anatomical formation can the inflammation spread through?
A. Condylar canal
B. Parietal foramen
C. Round foramen
D. Spinous foramen
E. Oval foramen

61. As a result of a road accident a driver got multiple injuries of the lateral surface of his head including the malar arch fracture. What muscle's function will be damaged?
A. M. masseter
B. M. orbicularis oris
C. M. buccinator
D. M. procerus
E. M. risorius

62. A patient is ill with dermatitis, diarrhea, dementia. During history taking it was revealed that the main foodstuff of the patient was maize. These disturbances are caused by the deficiency of the following vitamin:
A. PP
B. Bi
C. B2
D. B9
E. B8

63. Helminthological examination of the patient's feces revealed oval brown eggs with the tuberous external membrane. Name the type of helminth:
A. Ascarid
B. Pinworm
C. Whipworm
D. Dwarf tapeworm
E. Broad tapeworm

64. Isonitol triphosphates are produced in the organism tissues as a result of phosphatidylinositol diphosphate hydrolysis. In the mechanism of hormone activity they perform the function of secondary mediators (messengers). What is their activity in the cell aimed at?
A. Release of calcium ions from the cell depots
B. Activation of adenylate cyclase
C. Activation of protein kinase A
D. Inhibition of phosphodiesterase
E. Inhibition of protein kinase C

65. The introduction of a local anesthetic to a patient resulted in the development of anaphylactic shock. What is the leading mechanism of blood circulation disturbance?
A. Decrease of vascular tone
B. Hypervolemia
C. Pain
D. Activation of the sympathoadrenal system
E. Reduction of contractile myocardium function

66. A surgeon is going to take lymph from a patient's thoracic duct, from where it flows into the venous stream. Where should he insert a catheter into?
A. Left venous angle
B. Right venous angle
C. Site of postcava origination
D. Site of precava origination
E. Site of portal vein origination

67. In the course of an experiment the middle part of an animal's cochlea was damaged. It resulted in a disturbed perception of sound vibrations of the following frequency:
A. Medium
B. Low
C. High
D. High and medium
E. Low and medium

68. Dentists widely apply local anesthesia adding adrenalin to an anesthetic solution. What is the purpose of this method?
A. Local vasoconstriction
B. Local vasodilatation
C. Lowering of arterial pressure
D. Local reduction of vascular resistance
E. Microcirculation improvement

69. A patient with hemorrhage from the lacerated wound in the angle of his mouth was delivered to the accident ward. What artery was injured?
A. Facial
B. Maxillary
C. Lingual
D. Anterior superalveolar
E. Suborbital

70. Histological examination in the area of the cervix of a fundic gland reveals small cells that have high nuclear-cytoplasmatic ratio and basophilic cytoplasm. What is the function of these cells?
A. Regeneration of glandular epithelium
B. Protective
C. Endocrinal
D. Secretion of chlorine ions
E. Pepsinogen secretion

71. It is required to disinfect equipment in a dental room. Choose a preparation without disagreeable odour and colouring power:
A. Chlorhexidine bigluconate
B. Carbolic acid solution
C. Chloride lime
D. Ethacrydine lactate
E. Formalin

72. A 9 y.o. child has been taking antibiotics on account of bronchopneumonia for a long time. There appeared pain and burning in the area of the mucous membrane of his lips and tongue. Objectively: the mucous membrane of lips and tongue has caseous and grey plaques that can be easily removed by a spatula leaving hyperemia foci on their spot. A microscopical examination of the plaques revealed mycelium. What is the most probable diagnosis?
A. Candidouscheilitis
B. Exfoliativecheilitis
C. Leukoplakia
D. Contactant allergic cheilitis
E. Manganotti'scheilitis

73. The liver specimen contains intralobular capillaries that have broad irregular lumen. The greatest part of the capillary has no basal membrane. What type of capillaries is it?
A. Sinusoid
B. Visceral
C. Somatic
D. Precapillaries
E. Postcapillaries

74. Deglutition of a patient is disturbed as a result of a trauma. The most probable cause of this disturbance is the affection of the following part of CNS:
A. Medulla oblongata
B. Spinal cord, Th II-IV

C. Spinal cord, C V-VI
D. Mesencephalon
E. Hypothalamus

75. Microscopical examination of a surgical specimen (an ulcered part of a lip) revealed in the connective tissue of mucous membrane near the borders and under the floor of the ulcer some epithelial complexes consisting of the atypic multi-stratal epithelium with accumulations of bright pink concentric formations. What pathology is it?
A. Squamous cell keratinous carcinoma
B. Squamous cell nonkeratinous carcinoma
C. Transitional cell carcinoma
D. Basal cell carcinoma
E. Papilloma

76. When doctors of a sanitary-and-epidemiologic institution examine employees of public catering establishments they often reveal asymptomatic parasitosis, that is when a healthy person is a carrier of cysts that infect other people. What causative agent cannot parasitize in such a way?
A. Dysenteric amoeba
B. Malarial plasmodium
C. Enteral trichomonad
D. Dermatotropicleishmania
E. Viscerotropicleishmania

77. A student has dry mouth during exam passing. It is caused by the realization of the following reflexes:
A. Sympathetic conditioned
B. Sympathetic conditioned and unconditioned
C. Parasympathetic conditioned
D. Parasympathetic unconditioned
E. Sympathetic and parasympathetic unconditioned

78. Tetracycline taking in the first half of pregnancy causes abnormalities of fetus organs and systems, including tooth hypoplasia and alteration of their colour. What type of variability is the child's disease related to?
A. Modification
B. Combinative
C. Mutational
D. Hereditary
E. Recombinant

79. A patient applied to a doctor with complaints about noise and painful sensations in his ear. Objectively: a patient is ill with acute respiratory disease, rhinitis. The infection that caused inflammation of the tympanic cavity could have penetrated it through the following pharynx opening:
A. Pharyngeal opening of auditory tube
B. Tympanic opening of auditory tube
C. Choanae
D. Fauces
E. Aperture of larynx

80. A patient with craniocerebral trauma has a respiratory standstill. What part of the cerebrum is most likely to be damaged?
A. Medulla oblongata
B. Telencephalon
C. Mesencephalon
D. Cerebellum
E. Thalamencephalon

81. There is a specimen of the soft palate where both oral and nasal surfaces can be seen. It was revealed that the oral cavity had damaged epithelium. What epithelium is damaged?
A. Multistratal squamous nonkeratinizing
B. Multistratal cubical nonkeratinizing
C. Multistratal prismatic nonkeratinizing
D. Multistratal squamous keratinizing
E. Multirowed ciliated epithelium

82. A man's heart rate was measured according to his pulse. It equaled 120 bpm. What is the duration of the cardiac cycle?
A. 0,5 s
B. 0,7s
C. 0,8 s
D. 0,9 s

E. 1,0 s

83. A patient with acute poisoning with morphine was delivered to the hospital ward. What specific antagonist of narcotic analgesics is to be applied in this case?
A. Naloxone
B. Paracetamol
C. Methacin
D. Digoxin
E. Unithiol

84. A 2 y.o. child has catarrhal effects and skin eruption. A doctor suspected scarlet fever. The child was injected intracutaneously with some serum to the erythrogenic streptococcus toxin, on the spot of injection the eruption disappeared. What do the reaction results mean?
A. They confirm the clinical diagnosis
B. The child has hypersensitivity to the erythrogenic toxin
C. The disease was caused by nonhemolytic streptococcus
D. The complete dose of serum could be introduced intravenously
E. The child's immune system is much weakened

85. A patient has acute cardiac insufficiency resulting from essential hypertension. What drug is the most appropriate in this case?
A. Corglycon
B. Digoxin
C. Cardiovalene
D. Caffeine
E. Cordiamin

86. An 18 y.o. boy applied to a geneticist. The boy has an asthenic constitution: narrow shoulders, broad pelvis, nearly hairless face. Evident mental deficiency. The provisional diagnosis was Klinefelter's syndrome. What method of clinical genetics will enable the doctor to confirm this diagnosis?
A. Cytogenetic
B. Genealogical
C. Twin study
D. Dermatoglyphics
E. Population-and-statistical

87. During tooth development periodontium preserves remains of embryonal coleorhiza (Hertwig's epithelial root sheath) that are called Malassez's epithelial rests. They can be a source of cyst or tumor development in the area of tooth radix. What cells form Hertwig's epithelial root sheath?
A. Cells of enamel organ
B. Mesenchymal cells
C. Pulpocytes
D. Odontoblasts
E. Cementoblasts

88. A patient who has been treated in a neurological clinic with sedatives for a long time has the following complications: cough, rhinitis, lacrimation. What preparation might have caused such disorders?
A. Sodium bromide
B. Diazepam
C. Valerian
D. Phenazepam
E. Reserpine

89. A pregnant woman lost about 800 ml of blood during labour. There is also tachycardia, arterial pressure is 100/70 mm Hg, tachypnea up to 28/min. What hypoxia type is primary in such a clinical situation?
A. Blood
B. Cardiovascular
C. Mixed
D. Tissue
E. Respiratory

90. Examination of a tooth slice of a 42 y.o. man revealed on the dentinal-enamel border some solid linear fusiform structures as long as 1/3 of enamel depth. What structures were revealed?
A. Enamel spindles

B. Denticles
C. Enamel fascicles
D. "Dead" tracts
E. Carious damage

91. A patient with a closed fracture of humeral bone was bandaged with plaster. The next day the injured hand became swollen, cyanotic and cold. What disorder of peripheral blood circulation are these symptoms typical for?
A. Venous hyperemia
B. Arterial hyperemia
C. Ischemia
D. Thrombosis
E. Embolism

92. The typical symptom of cholera is the loss of a large quantity of water and sodium ions by an organism. What mechanism underlies the initiation of diarrhea in this case?
A. Activation of adenylate cyclase of enterocytes
B. Intensified renin secretion by the cells of renal arterioles
C. Aldosterone oxidation in the adrenal cortex
D. Inhibition of vasopressin synthesis in the hypothalamus
E. Intensified corticotrophin synthesis

93. As a result of the expression of some genome components the embryo cells acquire typical morphological, biochemical and functional properties. Name this process:
A. Differentiation
B. Capacitation
C. Reception
D. Determination
E. Induction

94. A newborn child has hyperemia, edema of mouth mucous membrane, small erosions with viscous mucopurulent discharge. Examination of mucopus smears reveals a great number of leukocytes containing gram-negative diplococci. The same microorganisms can be found outside the leukocytes. What is the most probable diagnosis?
A. Gonococcal stomatitis
B. Toxoplasmosis
C. Prenatal syphilis
D. Staphylococcal stomatitis
E. Blennorrhea

95. Electronic microphotography represents a cell of neural origin that is a component of mucous membrane epithelium. The distal part of its peripheral process has a clavate thickening with 1012 cilia sprouting from it. What cell is it?
A. Olfactory
B. Bipolar neuron of spinal ganglion
C. Sensory epithelial cells of a gustatory organ
D. Rod cell of retina
E. Cone cell

96. A man who has been staying in a stuffy room for a long time lost consciousness. He regained consciousness after inhalation of ammonia spirit vapour. This substance's effect is connected with direct influence upon the following structures:
A. Receptors of upper airways
B. Vasculomotorcentre
C. Respiratory centre
D. Resistive vessels
E. Capacitive vessels

97. A dentist was examining a patient and noticed excessive salivation. The dentist applied a medication inducing dryness of the oral cavity. What medication is it?
A. Atropine sulfate
B. Phentolamine
C. Pilocarpine hydrochloride
D. Proserin
E. Galantamine

98. A student has been staying in a badly ventilated room for a long time that resulted

in the acceleration of respiratory rate. What receptors were the first to react to the increased concentration of carbonic acid in the air?
A. Central chemoreceptors
B. Vascular chemoreceptors
C. Irritant receptors
D. Juxtaglomerular receptors
E. Olfactory receptors

99. An employee was working with radioactive substances and as a result of an incident he was irradiated with 4 Gy. He complains about a headache, nausea, dizziness. What changes in blood formula can be expected 10 hours after irradiation?
A. Neutrophilic leukocytosis
B. Lymphocytosis
C. Leukopenia
D. Agranulocytosis
E. Neutropenia

100. An isolated muscle fiber is under the experiment. It was ascertained that the excitement threshold of a cell was significantly lowered. What might have caused this phenomenon?
A. Activation of membrane sodium channels
B. Activation of membrane potassium channels
C. Inactivation of membrane sodium channels
D. Inactivation of membrane potassium channels
E. Blockade of energy production in the cell

101. Approach to the thyroid gland from the transversal (collar-like) access requires the opening of cellular suprasternal space. It is dangerous to damage the following anatomic formation in this space:
A. Venous jugular arch
B. Lymph nodes
C. Carotid
D. Subclavicular artery
E. Internal jugular vein

102. Roentgenological examination of a patient revealed a cyst in the area of a premolar that contained a tooth in its cavity. The microscopical examination reveals that the cyst wall is represented by the connective tissue and lined with multistratal squamous cell epithelium. Specify the diagnosis:
A. Follicular cyst
B. Radicular cyst
C. Primordial cyst
D. Eosinophilic granuloma
E. Epulis

103. Forty-eight hours after the tuberculin test (Mantoux test) a child had a papule up to 10 mm in diameter on the spot of tuberculin introduction. What hypersensitivity mechanism underlies the mentioned changes?
A. Cellular cytotoxicity
B. Anaphylaxis
C. Antibody-dependent cytotoxicity
D. Immunocomplex cytotoxicity
E. Granulomatosis

104. Immune-enzyme assay of blood serum revealed the presence of HBs-antigen. What disease is signalized by this antigen?
A. Viral hepatitis B
B. Viral hepatitis A
C. AIDS
D. Tuberculosis
E. Syphilis

105. On the 2nd day after myocardium infarction a patient experienced an abrupt drop of systolic arterial pressure down to 60 mm Hg accompanied by tachycardia of 140 beats per minute, dyspnea, loss of consciousness. What is the leading mechanism of shock pathogenesis?
A. Decrease of stroke volume
B. Intoxication by the products of necrotic breakdown
C. Decreased amount of circulating blood

D. Paroxysmal tachycardia
E. Anaphylactic reaction to the myocardial proteins

106. A man has an accelerated heart rate, mydriatic pupils, dry mouth. It is caused by activation of the following function regulating system:
A. Sympathetic
B. Parasympathetic
C. Metasympathetic
D. Vagoinsular
E. Hypothalamic-pituitary-adrenal

107. Examination of a histological specimen of tubular bone revealed signs of regeneration process (callus). What tissue is this structured formed of?
A. Rough fibrous osseous
B. Loose connective
C. Reticular
D. Epithelial
E. Lamellar osseous

108. A 5 year-old child had a temperature rise to 40°C, acute headache, vomiting, anxiety, chill. Four days later there appeared hemorrhagic skin eruption, oliguria and adrenal insufficiency that caused death. Bacteriological examination of smears from the child's pharynx revealed meningococcus. Which form of the disease was revealed?
A. Meningococcemia
B. Meningococcal meningitis
C. Meningoencephalitis
D. Meningicoccalnasopharyngitis
E. -

109. Antigens of Sonneshigella placed on the objects of outdoor environment and foodstuffs can be revealed using a specific test with the application of a diagnostic test system that includes a polystyrene tray with adsorbed particular antibodies. What reaction is it?
A. Immune-enzyme assay
B. Immunofluorescence test
C. Passive inverse hemagglutination test
D. Direct hemagglutination test
E. Immunoelectrophoresis test

110. A patient in a cardiological department has arrhythmia. A doctor administered him amiodaron. What is the main mechanism of amiodaron's antiarrhythmic action?
A. It blocks mostly potassium channels
B. It inhibits cholinoreceptors
C. It stimulates histamine receptors
D. It activates serotonin receptors
E. It alters myocardium susceptibility to the acetylcholine

111. A 3 month-old baby has a white film on the mucous membrane of his mouth, tongue and lips. A doctor suspected candidosis. What nutrient medium should be applied for the inoculation of the material under examination in order to confirm this diagnosis?
A. Sabouraud's
B. Endo
C. Jensen's
D. Roux
E. Clauberg's

112. The macroscopic examination of lung tissue revealed areas of high airiness with small bubbles. Histological examination revealed thinning and rupture of alveolar septa accompanied by the formation of large diversiform cavities. What disease was revealed in a lung?
A. Pulmonary emphysema
B. Multiple bronchiectasis
C. Cavernous tuberculosis
D. Chronic bronchitis
E. Fibrosing alveolitis

113. Electronic microphotography represents a cell without nucleoli and nuclear membrane. Chromosomes are loosely scattered, centrioles migrate to the poles. What phase of the cell cycle is it?
A. Prophase

B. Anaphase
C. Metaphase
D. Telophase
E. Interphase

114. A patient ill with chronic bronchitis takes a synthetic mucolytic drug that stimulates sputum thinning. What drug is it?
A. Acetylcysteine
B. Diazepam
C. Heparin
D. Furosemide
E. Enalapril

115. A patient with enteritis accompanied by intense diarrhea has a reduced quantity of water in the extracellular space and an increased amount of water inside the cells as well as low blood osmolarity. Name this disorder of water-electrolytic metabolism:
A. Hyposmolarhypohydration
B. Hyperosmolar hypohydration
C. Osmolarhypohydration
D. Hyposmolarhyperhydration
E. Hyperosmolar hyperhydration

116. A patient with diabetes mellitus went through an operation on account of abscess in the area of the posterior part of his neck. The wound healing lasted for a month and a half; the wound continuously discharged pus. On the site of the healed wound there appeared an irregular scar. In what way did the wound healing take place?
A. By secondary intention
B. Under the crust
C. By epithelization
D. By primary intention
E. By combined intention

117. Clinical examination enabled a provisional diagnosis: stomach cancer. Gastric juice contained lactic acid. What type of glucose catabolism turns up in the cancerous cells?
A. Anaerobic glycolysis
B. Pentose-phosphate cycle
C. Gluconeogenesis
D. Aerobic glycolysis
E. Glucose-alanine cycle

118. A 5-year-old girl has high temperature and sore throat. Objectively: soft palate edema, tonsils are covered with grey films that can hardly be removed and leave deep bleeding tissue injuries. What disease is the most probable?
A. Pharyngeal diphtheria
B. Vincent's angina
C. Lacunar angina
D. Infectious mononucleosis
E. Necrotic angina

119. During the examination of a child's oral cavity a pediatrician found eight incisors. Child development corresponds to his age. How old is the child?
A. 10-12 months
B. 6-7 months
C. 7-8 months
D. 12-15 months
E. 16-20 months

120. A child is presumably ill with diphtheria. A specimen of the affected mucous membrane of his pharynx was taken for analysis. The smear was stained and microscopical examination revealed yellow rods with dark blue thickenings on their ends. What structural element of a germ cell was revealed in the detected microorganisms?
A. Volutin granules
B. Plasmids
C. Capsule
D. Spores
E. Flagella

121. To prevent gum inflammation and to improve regeneration of epithelial periodontium cells manufacturers add to the toothpaste one of the following vitamins:
A. Retinol
B. Calciferol
C. Thiamine

D. Biotin
E. Phylloquinone

122. Recovery of an organism from an infectious disease is accompanied by the neutralization of antigens by specific antibodies. What cells produce them?
A. Plasmocytes
B. Fibroblasts
C. Tissue basophils
D. Eosinophils
E. T-lymphocytes

123. A patient was prescribed a drug with apparent lipophilic properties. What is the main mechanism of its absorption?
A. Passive diffusion
B. Filtration
C. Active transporting
D. Pinocytosis
E. Binding with transport proteins

124. Microscopical examination of discharges from the gums of a patient ill with paradontosis revealed some pear-shaped protozoan organisms 6-13 micrometer long. The parasite has one nucleus and an undulating membrane, and there are four flagella at the front of its body. What protozoan was found?
A. Trichomonads
B. Leishmania
C. Amoebae
D. Balantidia
E. Lamblia

125. Up to 50% of the world population aged above thirty is affected by paradontosis. The leading part in the pathogenesis of this disease is played by:
A. Neurodystrophic factor
B. Parodontium tissues damaged by kallikrein
C. Parodontium damaged by active cells
D. Dental calculus caused by the microflora
E. Immune damage of tissues

126. After a patient recovered from a cold, he got disturbed lacrimation. What vegetative ganglion was damaged most of all?
A. Pterygopalatine
B. Aural
C. Ciliated
D. Submandibular
E. Sublingual

127. Examination of a patient revealed enlargement of some body parts (jaw, nose, ears, feet, hands), but body proportions were conserved. It might be caused by intensified secretion of the following hormone:
A. Somatotropin
B. Somatostatin
C. Tetraiodothyronine
D. Triiodothyronine
E. Cortisol

128. Examination of a 60-year-old man's oral cavity revealed the following changes: the 26th and 27th teeth are covered with metallic crowns that plunge deep into the gums. There is a parodontal pouch 0,7 cm deep between them containing some pus. Gingival papillae of these teeth are hyperemic, edematic, cyanotic, bleed as a reaction to touching by a dental explorer. X-ray picture shows resorption of interdental septa of 1/2 of the tooth root. What is the most probable diagnosis?
A. Local parodontitis
B. Hypertrophic gingivitis
C. Chronic catarrhal gingivitis
D. Generalized parodontitis
E. -

129. It was revealed that a patient with coagulation failure has thrombosis of a branch of the inferior mesenteric artery. What bowel segment is affected?
A. Colon sigmoideum
B. Ileum
C. Caecum
D. Colon transversum
E. Colon ascendens

130. Parodontitis is accompanied by proteolysis activation in the parodontium tissues. Proteolysisactivation is signalized by the increase of the following component of mouth liquid:
A. Amino acids
B. Organic acids
C. Glucose
D. Biogenic amines
E. Cholesterol

131. The medullary substance of a hemopoietic organ's lobule in a histological specimen is lighter-colored and contains epithelial bodies. What organ are these morphological properties typical for?
A. Thymus
B. Lymph node
C. Spleen
D. Liver
E. Kidney

132. A patient applied to a doctor complaining about dizziness, memory impairment, periodical convulsions. It was found out that a product of glutamic acid decarboxylation caused such changes. What product is meant?
A. GABA
B. Pyridoxalphosphate
C. Thymidine diphosphate
D. ATP
E. Tetrahydrofolate

133. Enamel is characterized by high resistance to the influence of various mechanical and chemical factors. What component's synthesis provides such resistance?
A. Phtorapatite
B. Hydroxyapatite
C. Chlorapatite
D. Collagen
E. Carbonate apatite

134. A patient had a cranial trauma that resulted in sight loss. What area of the cerebral cortex was damaged?
A. Occipital
B. Frontal
C. Parietal
D. Temporal
E. Parietal and temporal

135. A 40-year-old patient had a maxillofacial trauma that resulted in the disturbed function of sublingual and submaxillary glands on the left - the glands began to produce some viscous saliva. The function of which nerve is disturbed?
A. Facial
B. Sublingual
C. Glossopharyngeal
D. Trifacial
E. Vagus

136. A 52 y.o. patient ill with mandibular cancer took radiation treatment. The tumor became less in size. What mechanism of cell destruction is the primary cause of radiation treatment effectiveness?
A. Generation of free radicals
B. Hyperthermia
C. Lysis by NK cells
D. Vascular thrombosis
E. Mutagenesis

137. Hemotransfusion stimulated the development of intravascular erythrocyte hemolysis. The patient has the following type of hypersensitivity:
A. II type hypersensitivity (antibody-dependent)
B. I type hypersensitivity (anaphylactic)
C. III type hypersensitivity (immune complex)
D. IV type hypersensitivity (cellular cytotoxicity)
E. V type hypersensitivity (granulomatosis)

138. Soft palate arches were taken for bioptic examination because of the suspected tumor (macroscopical examination revealed an ulcer with the dense floor). Biopsy revealed necrosis of mucous membrane along with infiltration of submucous layer by

with infiltration of submucous layer by lymphocytes, epithelioid cells, plasmatic cells, single neutrophils. There is also evident endo-and perivasculitis. What disease are the described changes typical for?
A. Primary syphilis
B. Aphthous stomatitis
C. Ulcerative stomatitis
D. Ulcerative necrotic stomatitis (Vincent's stomatitis)
E. Pharyngeal diphtheria

139. A 50 y.o. man abruptly felt palpitation, heartache, intense weakness, the rise of arterial pressure. His pulse is irregular and deficient. ECG shows no P wave and different R — R intervals. What cardiac rate abnormality is it?
A. Ciliary arrhythmia
B. Respiratory arrhythmia
C. Paroxysmal tachycardia
D. Atrioventricular heart block
E. Sinus extrasystole

140. A lightly dressed man is standing in a room; air temperature is +14°C'. Windows and doors are closed. In what way does he lose heat most of all?
A. Heat radiation
B. Heat conduction
C. Convection
D. Evaporation
E. Perspiration

141. A dentist revealed a shallow cavity with damaged enamel between two superior central incisors. He diagnosed a patient with caries. On what surface of tooth crown will the dentist fill the tooth?
A. Faciescontactusmesialis
B. Facieslingualis
C. Faciesocclusialis
D. Facieslabialis
E. Faciescontactusdistalis

142. In the course of an experiment a nerve is being stimulated by electric impulses. As a result of it sublingual and submaxillary glands discharge some dense, viscous saliva. What nerve is being stimulated?
A. N. sympathicus
B. N. glossopharyngeus
C. N. facialis
D. N. trigeminus
E. N. vagus

143. During an operation on a woman it became necessary to ligate her uterine artery. What formation can be accidentally ligated together with this artery?
A. Ureter
B. Uterine tube
C. Round ligament of uterus
D. Internal iliac vein
E. Urethra

144. A 35 y.o. patient diagnosed with sterility came to the gynecological department for the diagnostic biopsy of the endometrium. Microscopic examination revealed that the mucous membrane is edematous, uterine glands are convoluted and filled with thick secreta. The excess of the following hormone causes such changes in the endometrium:
A. Progesterone
B. Estrogen
C. Testosterone
D. Somatotropin
E. ACTH

145. Three years ago a 52 y.o. man underwent an operation for stomach extraction. Results of blood analysis: erythrocytes - 2,0• 1012/l, Hb- 85 g/l, colour index - 1,27 These changes were caused by disturbed assimilation of the following vitamin:
A. B12
B. B6
C. C
D. P
E. A

146. A sportsman has to improve his sport

results. He was recommended to take a preparation containing carnitine. What process is activated by this compound to the greatest extent?
A. Fatty acid transport
B. Amino acid transport
C. Calcium ion transport
D. Glucose transport
E. Vitamin K transport

147. A patient with edemata was prescribed a K+-retaining diuretic - aldosterone antagonist. What drug is it?
A. Spironolactone
B. Digoxin
C. Procainamide hydrochloride
D. Clonidine
E. Allopurinol

148. The first-grade pupils went through a medical examination aimed at the selection of children needing tuberculosis revaccination. What test was applied?
A. Mantoux test
B. Schick test
C. Supracutaneoustularin test
D. Burne test
E. Anthracene test

149. A 20 y.o. patient complains of general weakness, dizziness, rapid fatigability. Examination results: Hb- 80 g/l; microscopical analysis results: erythrocytes are deformed. These symptoms might be caused by:
A. Sickle-cell anemia
B. Parenchymatous jaundice
C. Acute intermittent porphyria
D. Obstructive jaundice
E. Addison's disease

150. A patient is ill with herpetic stomatitis provoked by immunosuppression. What preparation introduced intravenously, internally and locally can provide antiviral and immunopotentiating effect?
A. Acyclovir
B. Remantadinum
C. Levamisole
D. Methisazonum
E. Amoxicillin

151. A patient has recently had a staphylococcal infection that led to anasarca; laboratory urine analysis revealed massive proteinuria. Results of blood analysis: hypoproteinemia, hyperlipemia. What pathology can be suspected?
A. Nephrotic syndrome
B. Glomerulonephritis
C. Pyelonephritis
D. Urolithiasis
E. Chronic renal insufficiency

152. A 28 y.o. patient was diagnosed with acute inflammation of the mucous membrane of the nasolacrimal duct. It is known from his anamnesis that he had nasal discharges for ten days after he had recovered from flu. From which part of the nasal cavity could the infection have penetrated the nasolacrimal duct?
A. Inferior nasal meatus
B. Medial nasal meatus
C. Superior nasal meatus
D. Vestibule of nose
E. Frontal sinus

153. In case of many infectious diseases patient's blood may contain antigens of causative agents. What reaction should be applied provided that the level of antigenemia is low?
A. Enzyme-linked immunosorbent assay
B. Agglutination test
C. Indirect hemagglutination test
D. Latex agglutination test
E. Immunoelectrophoresis

154. Microscopical examination of an infiltrate removed from the submandibular skin area of a 30 y.o. man revealed foci of purulent fluxing surrounded by maturing granulations and mature connective tissue; the

pus contains druses consisting of multiple short rod-like elements with one end attached to the homogenous centre. What disease is it?
A. Actinomycosis
B. Tuberculosis
C. Syphilis
D. Candidosis
E. -

155. A pregnant woman applied to a doctor with complaints typical for toxoplasmosis. The doctor took a sample of her blood. What serological tests should be performed in this case?
A. Complement binding assay
B. Precipitation test
C. Neutralization test
D. Widal's test
E. Wassermann test

156. A newborn child gains weight very slowly; his urine contains too much orotic acid that is indicative of disturbed synthesis of pyrimidine nucleotides. What metabolite should be used to normalize metabolism?
A. Uridine
B. Adenosine
C. Guanosine
D. Thymidine
E. Histidine

157. It is known that information about the amino acid sequence in a protein molecule is stored as a sequence of four nucleotide types in a DNA molecule, and different amino acids are encoded by different quantity of triplets ranging from one to six. Name this property of genetic code:
A. Degeneracy
B. Universality
C. Disjointness
D. Triplety
E. Specificity

158. Pellagra may be caused by maize domination and a low quantity of animal foodstuffs in the dietary intake. This pathology results from the lack of the following amino acid:
A. Tryptophane
B. Isoleucine
C. Phenylalanine
D. Methionine
E. Histidine

159. A patient suffers from bradyarrhythmia caused by hypertension. What drug should be administered?
A. Platyphyllinhydrotartate
B. Clonidine
C. Papaverine hydrochloride
D. Reserpine
E. Methyldopa

160. After sprinting untrained people feel muscular pain as a result of lactate accumulation. It may be connected with intensification of the following biochemical process:
A. Glycolysis
B. Glyconeogenesis
C. Pentose-phosphate cycle
D. Lipogenesis
E. Glycogenesis

161. A patient has a disturbed function of masticatory muscles. What nerve is damaged?
A. Mandibular
B. Lingual
C. Auriculotemporal
D. Buccal
E. Maxillary

162. A patient complained about a carbuncle on his face. Examination results: neither dense nor painful edema of subcutaneous cellular tissue, there is black crust in the middle of the carbuncle and peripheral vesicular rash around it. Bacteriological examination revealed the presence of immobile streptobacilli able of capsulation. What microorganisms are causative agents of this disease?

A. Bacillus antracis
B. Staptylococcus aureus
C. Bacillus anthracoides
D. Bacillus megaterium
E. Bacillus subtilis

163. The imbalanced activity of UDP-glucuronyl transferase characterizes enzymatic jaundices. What compound is accumulated in the blood serum in the case of these pathologies?
A. Indirect bilirubin
B. Direct bilirubin
C. Biliverdin
D. Mesobilirubin
E. Verdoglobin

164. Being at a dentist, a patient had an attack of stenocardia. What drug from the nitrate group should be applied in this case?
A. Nitroglycerine
B. Menthol
C. Talinolole
D. Erinit
E. Validol

165. A 30 y.o. patient who was diagnosed with acute glomerulonephritis has proteinuria. What disturbance is the cause of this phenomenon?
A. Increased permeability of renal filter
B. Delayed excretion of products of nitrogen metabolism
C. Low oncotic pressure of blood plasma
D. High hydrostatic pressure of blood in capillaries
E. Decreased quantity of functioning nephrons

166. As a result of dehelmintization, a 2 m helminth came out with feces. It had a segmented body, a small head with four suckers and hooks. Name the type of helminth:
A. Armed tapeworm
B. Unarmed tapeworm
C. Dwarf tapeworm
D. Echinococcus
E. Broad tapeworm

167. A 20 y.o. patient complains about morbid thirst and profuse urination (up to 10 l a day). Glucose concentration in blood is normal; urine contains no glucose. The deficiency of the following hormone may cause such condition:
A. Vasopressin
B. Oxytocin
C. Insulin
D. Triiodothyronine
E. Cortisol

168. Examination of a micro specimen made of an unknown organ revealed some acini that contained 10-15 cone cells with basophilic cytoplasm, round nucleus and well developed granular endoplasmic reticulum. A basal membrane surrounds an acinus with myoepithelial cells localized in its splitting. What organ is the slice made of?
A. Parotid gland
B. Pancreas
C. Lungs
D. Sublingual gland
E. Liver

169. A patient who had been suffering from renal disease for many years died from uremia. The autopsy revealed that the kidneys were abnormally small, dense, fine-grained, light grey. What are the kidneys with such changes called?
A. Arteriolosclerotic
B. Contracted
C. Mottled
D. Sebaceous
E. -

170. A doctor needs to anaesthetize the anterior part of the mucous membrane of the hard palate. What nerves should he block?
A. Nasopalatine nerves
B. Inferior alveolar nerves
C. Zygomatic nerves
D. Pharyngeal nerves

E. Suborbital nerves

171. Hepatic disfunctions accompanied by the insufficient inflow of bile to the bowels result in coagulation failure. This phenomenon can be explained by:
A. Vitamin K deficiency
B. Iron deficiency
C. Thrombocytopenia
D. Erythropenia
E. Leukopenia

172. What substance makes the saliva viscous and mucous and performs a protective function, including protection from mechanical injury of mouth mucous membrane?
A. Mucin
B. Glucose
C. Kallikrein
D. Amylase
E. Lysozyme

173. During the morphological examination of pulp floor three zones can be differentiated: the one of softened dentin, sclerotic dentin, replacing dentin. What stage of caries are these changes typical for?
A. Median caries
B. White spot stage
C. Superficial caries
D. Deep caries
E. Chronic caries

174. Estimation of heat expenditures of a man's organism by means of inderect calomitery had the following results: the body consumed 1000 ml of oxygen and emitted 800 ml of carbonic acid per minute. What is the respiratory quotient of a man under examination?
A. 0,8
B. 1,25
C. 0,9
D. 0,84
E. 1,0

175. A 42 y.o. patient complains of pain in the epigastric area, vomiting; vomit masses have the colour of "coffee-grounds", the patient also has melena. Anamnesis records gastric ulcer. Bloodformula: erythrocytes - 2,8 • 1012/l, leukocytes - 8 • 109/l, Hb- 90 g/l. What complication is it?
A. Hemorrhage
B. Penetration
C. Perforation
D. Canceration
E. Pyloric stenosis

176. After the mouth is closed and teeth are clenched, the mouth begins to open reflectory. The following receptors initiate this reflex:
A. Periodontal receptors
B. Proprioceptors of muscles that let down the lower jaw
C. Proprioceptors of muscles that lift the lower jaw
D. Gustatory receptors
E. Mechanoreceptors of oral cavity mucous membrane

177. A 38 y.o. patient applied to a hospital and complained that she had lost sensation of food touching anterior 2/3 of her tongue as well as pain and temperature sensation (burned her tongue with hot tea) after an acute viral respiratory disease. It is caused by the damage of the following nerve branch:
A. Lingual nerve of a mandibular branch of a trifacial nerve
B. Lingual branches of a glossopharyngeal nerve
C. Lingual nerves of a sublingual nerve
D. Tympanichord of a facial nerve
E. Superior laryngeal nerve of a vagus

178. Autopsy of a 34 y.o. man who died from rheumatism revealed that epicardium surface was villous and covered with grey films that can be easily removed. After their removal the surface is edematic and

plethoric. What is the most probable diagnosis?
A. Fibrinous pericarditis
B. Purulent pericarditis
C. Hemorrhagic pericarditis
D. Proliferative pericarditis
E. Catarrhal pericarditis

179. For disinfection of nonmetallic surgical instruments the formaldehyde solution was used. What group does this antiseptic preparation belong to according to its chemical structure?
A. Aliphatics
B. Aromatics
C. Alcohols
D. Halogenated compounds
E. Detergents

180. Examination of a patient revealed that dental hypoplasia was caused by hypovitaminosis of vitamins A and D. These vitamins were administered perorally, but they didn't have any medicinal effect. What is the probable cause of disturbed vitamin assimilation?
A. Bile acid deficiency
B. Hypochlorhydria
C. Hyperchlorhydria
D. Achylia
E. Achlorhydria

181. A patient consulted a doctor about difficulties with urinary excretion. Examination revealed hypertrophy of an organ that encloses the proximal part of the urethra. What organ is it?
A. Prostate
B. Bulbourethral gland
C. Bulb of penis
D. Epididymis
E. Seminal vesicles

182. It was revealed that a 42 y.o. patient suffering from paradontosis had roundish calcified formations 2-3 mm in diameter in the coronal pulp. Name these structures:
A. Denticles
B. Interglobular spaces
C. Sclerotic dentin
D. Dead dentin
E. Intertubular dentin

183. A patient was stung by a bee. Examination results: his left hand is hot, pink and edematic, there is a big blister on the spot of the sting. What is the leading mechanism of edema development?
A. Increased vascular permeability
B. Reduced blood filling of vessels
C. Vascular damage caused by the sting
D. Reduction of the oncotic pressure of tissue
E. Reduction of the osmotic pressure of tissue

184. After a surgical procedure an experimental animal died from intense convulsions. What endocrinal glands were extracted?
A. Parathyroid
B. Thyroid
C. Adrenal
D. Ovaries
E. Testicles

185. A patient was delivered to the hospital with a neck injury. Examination revealed a damaged nerve located in the front part of the anterior scalene muscle. What nerve is damaged?
A. Diaphragmatic
B. Vagus
C. Glossopharyngeal
D. Sublingual
E. Cervical part of the sympathetic trunk

186. As a result of punctate retinal hemorrhage, a patient lost the ability to see objects in the centre of visual field. In what part of retina did the hemorrhage take place?
A. Yellow spot
B. Ciliary part of the retina

C. Iris
D. Blindspot
E. Vascular membrane

187. A patient has myocardium infarction of the posterior wall of the right ventricle. What artery's branches are thrombosed?
A. Right coronary artery
B. Left coronary artery
C. Left and right coronary artery
D. Right subclavicular artery
E. Left subclavicular artery

188. Speed of excitement conduction was studied in different areas of an isolated heart. In what area was the lowest speed registered?
A. In the atrioventricular node
B. In the His' bundle
C. In Purkinje's fibers
D. In the atrial myocardium
E. In the ventricular myocardium

189. During lancing of deep abscess of a cheek a vertical section was performed. It resulted in paresis (dysfunction) of muscles on the side of the operation. The branches of the following nerve were cut:
A. Facial
B. Maxillary
C. Mandibular
D. Vagus
E. Sublingual

190. A man is ill with a protozoan disease characterized by cerebral affection and loss of sight. The analysis revealed half-moon-shaped unicellular organisms with pointed ends. This disease is caused by:
A. Toxoplasma
B. Leishmania
C. Lamblia
D. Amoeba
E. Trichomonad

191. The mucous membrane of a patient's oral cavity has a greyish-white focus; the mass is dense and protrudes above the mucous membrane. Histological examination revealed hyperkeratosis, parakeratosis and acanthosis of the epithelium in this area. What pathological process was revealed in the mucous membrane?
A. Leukoplakia
B. Hyalinosis
C. Leukoderma
D. Local tumourous amyloidosis
E. Focal ichthyosis

192. Prophylactic examination of a patient revealed hyperglycemia, ketonuria, polyuria, glycosuria. What form of an acid-base balance disorder is the case?
A. Metabolic acidosis
B. Gaseous acidosis
C. Nongaseous acidosis
D. Gaseous alkalosis
E. Metabolic alkalosis

193. For the preparation of the burned skin surface of a patient, a certain medication was applied. Its antiseptic properties are provided by free oxygen released in the presence of organic substances. What medication is it?
A. Potassium permanganate
B. Furacillin
C. Chlorhexidine
D. Alcoholic iodine solution
E. Sodium hydrocarbonate

194. Vaccination is done by means of a toxin that has been neutralized by formaldehyde (0,4%) at a temperature 37-40oC for four weeks. Ramond was the first to apply this preparation for diphtheria prophylaxis. What preparation is it?
A. Anatoxin
B. Immunoglobulin
C. Antitoxic serum
D. Adjuvant
E. Inactivated vaccine

195. Blood analysis of a patient ill with

jaundice revealed an increase of total bilirubin by its indirect fraction. Urine and feces are intensively stained. What is the most probable mechanism of these abnormalities?
A. Increased erythrocyte hemolysis
B. Obstructed bile outflow from the liver
C. Damage of liver parenchyma
D. Disturbed formation of direct bilirubin
E. Disturbed conversion of urobilinogen in liver

196. All nonsteroidal anti-inflammatory drugs can be harmful to the stomach mucous membrane. In order to find substances that don't cause such complications, it is necessary to know the factors it is connected with. What molecular substrate should be less affected to reduce the intensity of this complication?
A. Cyclooxygenase 1
B. Cyclooxygenase 2
C. Kallikrein
D. Lysosomal enzymes
E. Adenylate cyclase

197. A blood smear of a patient who has recently recovered from flu contains 10% of roundish cells4,5-7 micrometer large with a big round nucleus and basophilically stained cytoplasm in formof a narrow border around the nucleus. What blood status are they typical for?
A. Lymphocytopenia
B. Thrombopenia
C. Leukopenia
D. Lymphocytosis
E. Monocytopenia

198. After prophylactic medical examination a 7 y.o. boy was diagnosed with Lesch-Nyhan syndrome (only boys fall ill). His parents are healthy, but his grandfather by his mother's side has the same disease. What type of inheritance is it?
A. Recessive, sex-linked
B. Dominant, sex-linked
C. Autosomal and recessive
D. Autosomal and dominant
E. Semidominance

199. A surgeon used novocaine as an anesthetic during surgical manipulations. Ten minutes after it the patient became pale; he got dyspnea and hypotension. What type of allergic reaction is it?
A. Anaphylactic
B. Cytotoxic
C. Immune complex
D. Stimulating
E. Cell-mediated

200. A patient consulted a doctor about high pain sensitivity of skin behind his auricle and external acoustic meatus. The palpation behind the sternocleidomastoid muscle is painful. It can be caused by irritation of the following nerve:
A. N. auricularismagnus
B. N. transversuscolli
C. N. occipitalis minor
D. Nn. Supraclaviculares
E. N. vagus

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E. N. vagus

1. A dentist was examining the oral cavity of a 9-year-old child in the buccal surface of gingiva in the area of the lower canine. He revealed a red, soft, node-like formation 1 cm in diameter that started immediately bleeding when touched. Microscopical examination revealed that this formation consisted of many small vessels like venules and capillaries separated by thin layers of connective tissue, with focal infiltration by lymphoid and plasmatic cells. Such changes are typical for:
A. Angiomatous epulis
B. Capillary hemangioma
C. Radicular granuloma
D. Fibrous epulis
E. Papilloma

2. Among public catering workers examined by doctors of sanitary-and-epidemiologic station often occur asymptomatic parasite carriers. It means that a healthy person carries cysts that infect other people. Such parasitizing is impossible for the following causative agent:
A. Dysenteric amoeba
B. Malarial plasmodium
C. Intestinal trichomonad
D. Dermatotropicleishmania
E. Viscerotropicleishmania

3. A young woman has entered a production unit where strongly smelled of paints and varnishes and had bronchospasm. This reflex was provoked by irritation of the following receptors:
A. Irritant
B. Juxtaglomerular
C. Pleural receptors
D. Central chemoreceptors
E. Peripheral chemoreceptors

4. A 10-month-old child has high excitability, sleep disturbance, amyotonia, retarded dentition, teeth erupt with inadequate enamel calcification. The deficiency of the following vitamin causes these changes:
A. Cholecalciferol
B. Riboflavin
C. Thiamine
D. Retinol
E. Nicotinamide

5. Electron-microscope investigation of cortical substance of a kidney reveals some structures lined with prismatic epithelium that usually has a brush border and deep plicae of plasmolemma in its basal part. There is a significant number of mitochondrions between these plicae. These structures belong to the following part of a nephron:
A. Proximal tubule
B. Distal convoluted tubule
C. Henle’s loop
D. Renal corpuscle
E. Distal straight tubule

6. The prophylactic medical examination of a 7-year-old boy revealed that the boy had Lesch-Nyhan syndrome (only boys can be affected). His parents are healthy, but his grandfather, by his mother's side, has the same diagnosis. What is the type of disease inheritance?
A. Recessive, sex-linked
B. Dominant, sex-linked
C. Autosomally recessive
D. Autosomally dominant
E. Semidominance

7. A 3-month-old infant has got a white deposition on the mucous membrane of his mouth, tongue and lips. The doctor suspected candidosis. What nutrient medium should be used for the inoculation of the material under examination to confirm this diagnosis?
A. Sabouraud
B. Endo
C. Loewenstein-Jensen
D. Roux
E. Clauberg

8. A child has physical and mental retardation, severe abnormalities in the connective tissue of internal organs; urine contains keratan sulfates. A metabolic disorder of the following substance causes it:
A. Glycosaminoglycan
B. Collagen
C. Elastin
D. Fibronectin
E. Hyaluronic acid

9. In the process of the secretory cycle, secretion granules come and go in the apical part of the cytoplasm of pancreas cells. These granules relate to the following structure elements:
A. Inclusions
B. Microfilaments
C. Lysosomes
D. Exocytic vacuoles
E. Granular endoplasmic reticulum

10. A patient was prescribed a drug with apparent lipophilic properties. What is the main mechanism of its absorption?
A. Passive diffusion
B. Filtration
C. Active transport
D. Pinocytosis
E. Binding with transport proteins

11. Blood analysis of a patient who has jaundice revealed an increase of total bilirubin by its indirect fraction. Urine and feces have intense colouring. What is the most probable mechanism of these abnormalities?
A. Increased hemolysis of erythrocytes
B. Obstruction of bile outflow from the liver
C. Damage of liver parenchyma
D. Impaired generation of direct bilirubin
E. Impaired transformation of urobilinogen in the liver

12. A patient has high sunlight sensitivity of the skin. During standing, his urine turns dark-brown. What is the most probable cause of this condition?
A. Porphyria
B. Hemolytic jaundice
C. Albinism
D. Pellagra
E. Alkaptonuria

13. A patient complained about ear noise and pain sensations. Objectively: the patient has an acute respiratory disease, rhinitis. The infection penetrated the tympanic cavity through the following opening of the pharynx:
A. Pharyngeal opening of auditory tube
B. Tympanic opening of auditory tube
C. Choanae
D. Fauces
E. Aperture of larynx

14. A patient who has chronic myeloid leukemia has got the following symptoms of anemia: decreased number of erythrocytes and low hemoglobin concentration, oxyphilic and polychromatophilic normocytes, microcytes. What is the leading pathogenetic mechanism of anemia development?
A. Substitution of haemoblast
B. Intravascular hemolysis of erythrocytes
C. Deficiency of vitamin B12
D. Reduced synthesis of erythropoietin
E. Chronic hemorrhage

15. A patient with apparent icteritiousness of skin, sclera, and mucous membranes was admitted to the hospital. The patient's urine was pale brown; the analysis revealed the presence of direct bilirubin. Feces had a low concentration of bile pigments. What type of jaundice is it?
A. Obturative
B. Parenchymatous
C. Haemolytic
D. Conjugated
E. Absorption

16. Examination of a female patient re-

vealed low activity of lipoprotein lipase, which hydrolyzes chylomicron triglycerides on the surface of the endothelium of adipose tissue capillaries. What biochemical disorders should be expected?
A. Type I hyperlipoproteinemia
B. Type II A hyperlipoproteinemia
C. Type III hyperlipoproteinemia
D. Type IV hyperlipoproteinemia
E. Type II B hyperlipoproteinemia

17. A patient has a deformation of jawbones. Histological examination revealed their growth of fibrocellular tumor-like illdefined tissue with primitive osteogenesis. What disease are these presentations typical for?
A. Fibrous dysplasia
B. Ameloblastoma
C. Osteosarcoma
D. Eosinophilic granuloma
E. Parathyroid osteodystrophy

18. A 52-year-old patient who has cancer of the lower jaw underwent a course of radiation therapy. The tumor has remitted. Which mechanism of cell destruction ensures efficiency of radiation therapy most of all?
A. Generation of free radicals
B. Hyperthermia
C. Lysis by natural killer cells
D. Vessel thrombosis
E. Mutagenesis

19. During the approach to the thyroid gland by means of transverse section suprasternal cellular tissue space should be opened. It will be dangerous to damage the following anatomic formation located within this space:
A. Venous jugular arch
B. Lymph nodes
C. Carotid artery
D. Subclavicular artery
E. Internal jugular vein

20. A patient was admitted to a hospital with poisoning with unsound food. His stomach was lavaged with a solution of potassium permanganate. What is its mechanism of action?
A. Release of atomic oxygen
B. Release of chlorine
C. Release of iodine
D. Disturbance of synthesis of respiratory chain enzymes
E. Destruction of bacteria membranes

21. Analysis of an electron diffraction pattern of a cell revealed mitochondrion destruction. It might result in an abnormal course of the following cell process:
A. Oxidation of organic substances
B. Nuclear division
C. Crossing over
D. Cleavage
E. –

22. A 75-year-old male patient consulted a surgeon about a brown nonhealing ulcer of the shin. Examination of biopsy material revealed diffuse growth of polymorphic atypic cells with brown pigment in their cytoplasm. Pearls' reaction was negative. There were also a lot of pathological mitoses and foci of tissue necrosis. What is the most probable diagnosis?
A. Melanoma
B. Local hemosiderosis
C. Intradermal nevus
D. Trophic ulcer
E. Skin cancer

23. A 22-year-old woman has been taking sulfanilamides for a long time that led to symptoms of hemolytic anemia caused by hereditary disturbance of synthesis of glucose 6-phosphate dehydrogenase. This enzyme of the pentose-phosphate cycle is responsible for the generation of:
A. NADP - H2
B. NAD
C. FAD

D. FMN
E. ATP

24. After a road accident, a driver has got deformity in the middle third of his left shin and intense pain, especially when he tries to move his left shin. The ends of a trihedral bone stick out of a wound, there is great blood loss. What bone might be damaged?
A. Tibia
B. Fibula
C. Femur
D. Patella
E. Astragalus

25. During the examination of a child's oral cavity, a pediatrician established the presence of inferior medial incisors. The child's development is normal. How old is the child?
A. 6-7 months
B. 8-9 months
C. 10-12 months
D. 13-14 months
E. –

26. Researchers studied the speed of excitement conduction in different areas of an isolated heart. Which area demonstrated the lowest speed?
A. Atrioventricular node
B. His' bundle
C. Purkinje's fibers
D. Atrial myocardium
E. Ventricular myocardium

27. A patient had an attack of bronchial asthma in the dentist's office. The attack was arrested by salbutamol. This drug relates to the following group of therapeutic agents:
A. β2-adrenomimetics
B. α-adrenomimetics
C. β1-β2-adrenomimetics
D. Sympatholytics
E. α-β-adrenomimetics

28. Microscopic examination of periodontium revealed plethoric vessels, edema of connective tissue along with infiltration by single neutrophils. What type of exudative inflammation in the periodontium is it?
A. Serous
B. Purulent
C. Putrid
D. Fibrinous
E. Catarrhal

29. A patient was administered clonidine to be taken parenterally in case of the abrupt rise of arterial pressure. What is its mechanism of action?
A. Stimulation of central a2- adrenoreceptors
B. Block of nicotinic cholinoreceptors of ganglia
C. Block of a1- and a2-adrenoreceptors
D. Block of a 1 -adrenoreceptors
E. Stimulation of central imidazole1-receptors

30. A 10-year-old child underwent a Mantoux test (with tuberculin). Forty-eight hours later, there appeared a papule up to 8 mm in diameter on the site of tuberculin injection. Tuberculin injection caused the following hypersensitivity reaction:
A. IV type hypersensitivity reaction
B. Arthus reaction
C. Seroreaction
D. Atopic reaction
E. II type hypersensitivity reaction

31. A micro specimen of the parotid gland presents secretory acines with serous cells that synthesize mostly enzymes. According to the chemical composition classification, the parotid gland relates to the following glands:
A. Serous
B. Mucous
C. Seromucous
D. Enzymatic
E. –

32. A specimen of connective tissue of derma was stained with Sudan III and hematoxylin. There are clusters of big polygonal cells that turned orange. Their nuclei are flattened and located on the periphery. What tissue is it?
A. White adipose
B. Brown adipose
C. Reticular connective
D. Hyaline cartilaginous
E. Lamellar osseous

33. After mouth opening the mouth closed reflectory. What receptors initiate this reflex?
A. Proprioceptors of elevator muscles of the mandible
B. Proprioceptors of depressor muscles of the mandible
C. Gustatory receptors
D. Periodontium receptors
E. Mechanoreceptors of the oral mucous membrane

34. The study of a patient's facial gesture revealed that he could not whistle, round his lips, mouth corners did not rise during laughing, oral fissure stretched sidewards (transversal smile). These symptoms indicate the atrophy of the following muscle:
A. Orbicular muscle of mouth
B. Greater zygomatic muscle
C. Cervical muscle
D. Risorius muscle
E. Masticatory muscle

35. During an experiment, the median part of an animal's cochlea was damaged. It resulted in the impaired perception of acoustic vibrations of the following frequency:
A. Medium
B. Low
C. High
D. High and medium
E. Low and medium

36. A patient underwent a Caesarean section. During the operation, a long incision was made in the uterus wall, and the fetus was extracted from the uterus. Healing of the sutured myometrium will proceed in the following way:
A. Formation of a fibrous cicatrix
B. Formation of smooth muscular tissue
C. Formation of cross-striated muscle fibers
D. Proliferation of myosatellitocytes
E. Hypertrophy of smooth myocytes

37. The examination of the uterine cavity revealed an embryonated ovum that was not attached to the endometrium. The embryo is at the following stage of development:
A. Blastocyst
B. Zygote
C. Morula
D. Gastrula
E. Neurula

38. A patient diagnosed with malignant carcinoids has an extremely high concentration of serotonin in the blood. This biogenic amine can be formed from the following amino acid:
A. Tryptophan
B. Alanine
C. Leucine
D. Threonine
E. Methionine

39. A 5-year-old child has the following symptoms: body temperature up to 40oC, acute headache, vomiting, anxiety, shiver. Four days later, there appeared hemorrhagic skin rash, oliguria, and adrenal insufficiency that caused death. Bacteriological examination of pharyngeal smears revealed meningococcus. What form of meningococcal infection was it?
A. Meningococcemia
B. Meningococcal meningitis
C. Meningoencephalitis
D. Meningococcal nasopharyngitis
E. –

40. An experimental rat got an intraabdominal injection of 10 ml of 40% glucose solution. Sixty minutes later, the rat passed into a comatose state as a result of dehydration. What is the mechanism of the development of this state?
A. Rise of the osmotic pressure of the extracellular fluid
B. Rise of oncotic pressure of the extracellular fluid
C. Reduction of vasopressin secretion
D. Loss of salts and water
E. Acid-base disbalance

41. A 28-year-old woman consulted a doctor about sterility. Examination revealed underdeveloped ovaries and uterus, irregular menstrual cycle. The study of sex chromatin revealed 2 Barr's bodies in most somatic cells. What chromosome disease is the most probable in this case?
A. Triplo-X syndrome
B. Edwards' syndrome
C. Patau's syndrome
D. Klinefelter's syndrome
E. Turner's syndrome

42. A child has an abnormal formation of tooth enamel and dentin as a result of the low concentration of calcium ions in the blood. The deficiency of the following hormone might cause such abnormalities:
A. Parathormone
B. Thyrocalcitonin
C. Thyroxin
D. Somatotropic hormone
E. Triiodothyronine

43. The influence of unfavorable factors upon the organism causes the change of thymus accompanied by mass loss of thymocytes, their displacement to the peripheral organs, the proliferation of epithelial reticulocytes. What phenomenon is it?
A. Accidental thymus involution
B. Age thymus involution
C. Thymus hypotrophy
D. Thymus dystrophy
E. Thymus atrophy

44. A 7-year-old child has angina. A smear from the tonsil surface was inoculated on blood agar. Twenty-four hours later, there had grown colonies of streptococci. Nutrient medium turned transparent around them. This study revealed the presence of the following pathogenous factor:
A. Hemolysin
B. Endotoxin
C. Neuraminidase
D. Beta-lactamase
E. Leukocidin

45. In order to speed up healing of the thermal injury, it is required to prescribe a drug that facilitates the epithelization of skin and mucous membranes. What drug is it?
A. Retinol acetate
B. Tocopherol acetate
C. Nicotinic acid
D. Ergocalciferol
E. Ascorbic acid

46. A patient has allergic rhinitis with profuse mucous discharges, itching, frequent sneezing. What drug should be chosen if you know that it selectively blocks histamine receptors?
A. Loratadine
B. Mesatonum
C. Adrenaline hydrochloride
D. Naphthizin
E. Prednisolone

47. Intralobular capillaries of a liver specimen have wide irregular lumen. The basal membrane is absent in the major part of the capillary. What type of capillaries is it?
A. Sinusoid
B. Visceral
C. Somatic
D. Precapillaries
E. Postcapillaries

48. A female patient suffering from acute bronchitis complains about respiratory obstruction and cough with thick viscous sputum. She was prescribed a mucolytic agent that stimulates surfactant synthesis. What mucolytic agent was prescribed?
A. Ambroxolum
B. Sodium hydrocarbonate
C. Morphine hydrochloride
D. Glaucin
E. Theophylline

49. The tissue is being stimulated by electric cathodic impulse with an amplitude of 70% of the threshold. What changes in membrane potential will be observed?
A. Partial depolarization
B. Hyperpolarization
C. Action potential
D. No changes
E. –

50. Roentgenological examination of the mandible of a 27-year-old man revealed a focus of osseous tissue destruction. Histological examination revealed a tumour consisting of odontogenic epithelium cords, immature connective tissue, and dysplastic dentin rests. What tumour is it?
A. Dentinoma
B. Ameloblastic fibro-odontoma
C. Odontoameloblastoma
D. Odontogenous fibroma
E. Complex odontoma

51. Hurtnup's disease is caused by point mutation of only one gene. It results in abnormal absorption of tryptophan in the intestine as well as its abnormal reabsorption in renal tubules. It causes synchronous disorders in digestive and urinary excretion systems. What genetic phenomenon is observed in this case?
A. Pleiotropy
B. Complementary interaction
C. Polymery
D. Codominance
E. Semidominance

52. The examination of a patient who has recently had a hepatic disease revealed a low concentration of prothrombin in blood. First of all, this will cause disturbance of:
A. Second phase of coagulation hemostasis
B. First phase of coagulation hemostasis
C. Vasculothrombocytichaemostasis
D. Fibrinolysis
E. Anticoagulative blood properties

53. Vagosympathetic Vishnevsky's block involves the introduction of novocaine along the posterior edge of the sternocleidomastoid muscle above its intersection with the exterior jugular vein. The block is performed within the following triangle of neck:
A. Omotrapezoid
B. Omoclavicular
C. Carotid
D. Pirogoff's
E. Submandibular

54. Examination of a tissue sample of enlarged cervical lymph nodes taken from a young woman revealed proliferation of lymphocytes, reticular cells, macrophages, big and small Hodgkin'scells, multinuclear Sternberg-Reed cells. There were also multiple eosinophils, single foci of caseous necrosis of the node tissue. What is the most probable diagnosis?
A. Lymphogranulomatosis
B. Tuberculosis
C. Acute leukosis
D. Lymphosarcoma
E. Metastasis of lung cancer

55. What factor may cause the increase of power inputs of the human organism by 100%?
A. Drop of external temperature
B. Rise of external temperature
C. Consumption of protein food
D. Consumption of carbohydrate food

D. Consumption of carbohydrate food
E. Consumption of fatty food

56. The medical ambulance delivered a 2-year-old girl to the children's department. Objectively: the child is inert, apathetic. The liver is enlarged; the study of biopsy material revealed glycogen excess. The blood glucose rate is below standard. The most probable cause of hypoglycemia is:
A. Low activity of glycogen phosphorylase
B. High activity of glucokinase
C. Low activity of glucose 6-phosphatase
D. Low activity of glucose 1-phosphate uridine transferase
E. Low activity of glycogen synthase

57. A 38-year-old patient takes aspirin and sulfanilamides. After their intake, intensified-erythrocyte hemolysis is observed, which is caused by the deficiency of glucose 6-phosphate dehydrogenase. The failure of the following coenzyme causes this pathology:
A. NADP - H
B. FAD - H2
C. Pyridoxal phosphate
D. FMN - H2
E. Ubiquinone

58. The ventral root of the spinal cord was damaged as a result of a trauma. The following processes of the following neurons were damaged:
A. Axons of motor neurons
B. Dendrites of motor neurons
C. Axons of sensory neurons
D. Dendrites of sensory neurons
E. Dendrites of internuncial neurons

59. A 35-year-old patient complains about permanent thirst, poor appetite. He drinks 9 l water per day. Daily diuresis is increased, urine is colourless, its relative density is 1,005. The most probable cause of this pathology development is the damage of:
A. Hypothalamic nuclei
B. Epithelium of renal tubuli
C. Adenohypophysis
D. Epiphysis
E. Basal membrane of glomerular capillaries

60. A 42-year-old patient who had been suffering from chronic granulomatous periodontitis and chronic purulent osteomyelitis of his lower jaw for eight years died from chronic renal insufficiency. What complication of purulent osteomyelitis has developed in kidneys?
A. Amyloidosis
B. Hyalinosis
C. Adipose degeneration
D. Atrophy
E. Necrosis of epithelium of convoluted tubules

61. A female patient has symptoms of inflammation of urogenital tracts. A smear from the vaginal mucous membrane contained big unicellular pyriform organisms with a sharp spike on the back end of their bodies, big nucleus, and undulating membrane. What protozoa were revealed in the smear?
A. Trichomonas vaginalis
B. Trichomonas hominis
C. Trichomonas buccalis
D. Trypanosomagambiense
E. Lambliaintestinalis

62. A histological specimen presents a developed tooth that has a coating resistant to acids, but it can be found only on the lateral surfaces of the tooth. What coating is meant?
A. Cuticle
B. Dentine
C. Enamel pellicle
D. Enamel
E. Cement

63. The microscopic study of an endocrine gland revealed that its parenchyma consist-

gland revealed that its parenchyma consisted of follicular structures. Their wall was formed by monolayer cubic epithelium, and their cavity was filled up with oxyphilic substance. What hormone is secreted by this gland?
A. Thyroxin
B. Aldosterone
C. Cortisol
D. Parathyrin
E. Oxytocin

64. The 16th tooth of a patient is missing. X-ray picture shows in the depth of the alveolar process rarefaction of bone and a well-defined cavity that contained the underdeveloped tooth crown. The microscopical examination revealed that the cavity wall was lined with stratified squamous epithelium and enclosed within a fibrous capsule. Make a diagnosis:
A. Follicular gnathic cyst
B. Radicular gnathic cyst
C. Cyst of the incisive canal
D. Cystic ameloblastoma of jaw
E. Primordial gnathic cyst

65. A 34-year-old male patient consulted a doctor about face carbuncle. Objectively: loose, painless edema of hypodermic tissue; black crust in the centre of carbuncle, vesicular rash around it. Microbiological examination revealed static streptobacilli capable of capsule building. What microorganisms are the causative agents of this disease?
A. Bacillus antracis
B. Staphylococcus aureus
C. Bacillus anthracoides
D. Bacillus subtilis
E. Bacillus megaterium

66. A patient with a tumour in the area of superior tubercles of the quadrigeminal plate has lost pupillary reflex. It is most probably caused by dysfunction of the following nucleus of cranial nerves:
A. Accessory nucleus of the oculomotor nerve
B. Motor nucleus of the oculomotor nerve
C. Motor nucleus of the abducent nerve
D. Motor nucleus of the trochlear nerve
E. Motor nucleus of the accessory nerve

67. A mountain climber spent a long time in the mountains. Erythrocyte number has risen from $5,0 \cdot 10^{12}$/l up to $6,0 \cdot 10^{12}$/l. What factor stimulated erythropoiesis?
A. Decrease of O^2 in the arterial blood
B. Increase of O^2 in the arterial blood
C. Decrease of O^2 in the venous blood
D. Increase of O^2 in the venous blood
E. Increase of O^2 in the cells

68. A patient has been suffering from diabetes mellitus for five years. As a result of not keeping to a diet, the patient passed into a comatose state. The emergency doctor injected him glucose. The patient's state got better. What is the most probable type of coma in this case?
A. Hypoglycemic
B. Acidotic
C. Hyperglycemic
D. Hepatic
E. Hypothyroid

69. Microscopical examination of the coronary artery of a 53-year-old dead man revealed the luminal narrowing of the vessel because of fibrous plaque mixed with lipids. The most probable form of atherosclerosis is:
A. Liposclerosis
B. Lipoidosis
C. Atheromatosis
D. Ulceration
E. –

70. After continuous treatment with antibiotics, a patient got symptoms of stomatitis. Examination of specimens of oral mucous membrane revealed some oval polymorphous Gram-positive microorganisms ar-

ranged in clusters. What microorganisms may be the cause of such manifestations?
A. C.albicans
B. C.perfringens
C. S.aureus
D. S.pyogenes
E. C.pylori

71. Analysis of a patient's saliva revealed a high concentration of lactate. It is most probably caused by activation of the following process:
A. Anaerobic glucose breakdown
B. Aerobic glucose breakdown
C. Glycogen breakdown
D. Carbohydrate hydrolysis
E. Glucose-lactate cycle

72. As a result of a trauma, a patient has got dysfunction of the lachrymal gland. What nerve is responsible for its secretion?
A. N. petrosus major
B. N. petrosus minor
C. Chorda tympany
D. N. auricularismagnus
E. N. occipitalis minor

73. A patient with myocardium infarction was admitted to the resuscitation department. What drug should be injected into the patient to prevent thrombosis?
A. Heparin
B. Chingamin
C. Thyroxine
D. Biseptol-480
E. Dimedrol

74. Abnormal chromosome disjunction during meiosis resulted in the formation of an ovum with 22autosomes and a polar body with 24 chromosomes. If such an ovum would be fertilized with a normal spermatozoon (22 + X) the child might have the following syndrome:
A. Turner's syndrome
B. Klinefelter's syndrome
C. Trisomy X
D. Down's syndrome
E. Edwards' syndrome

75. During the examination, a dentist revealed cervical caries of right inferior incisors as well as enlargement of a particular group of lymph nodes. What lymph nodes are enlarged?
A. Submental
B. Occipital
C. Superficial cervical
D. Deep cervical
E. Facial

76. Autopsy of a dead patient revealed that pia mater was dull, greenish-yellow overlays were covering almost all convexital surface of cerebral hemispheres. Histological examination revealed extreme hyperemia of maters along with diffuse leukocytic infiltration. What is the most probable diagnosis?
A. Meningococcal infection
B. Measles
C. Anthrax
D. Tuberculosis
E. Influenza

77. During a neuro-surgical operation, the occipital areas of the cerebral cortex are stimulated. What sensations will the patient have?
A. Visual
B. Tactile
C. Auditory
D. Olfactory
E. Gustatory

78. Roentgenological examination of a patient revealed a cyst enclosing a tooth in its cavity in the area of the premolar. The microscopical examination revealed that the cyst wall consisted of connective tissue and was lined with multilayer squamous epithelium. What is the most probable diagnosis?
A. Follicular cyst
B. Radicular cyst

C. Primordial cyst
D. Eosinophilic granuloma
E. Epulis

79. After extraction of the II maxillary molar tooth, the patient has got hemorrhage from the alveolar socket. The observed hemorrhage is from the system of the following artery:
A. Maxillary
B. Inferior alveolar
C. Facial
D. Ascending pharyngeal
E. Mylohyoid

80. A 40-year-old European works in a Southeast Asian country. He complains that it is hard to bear high temperature under conditions of high relative humidity. The reason for it is difficult heat emission by way of:
A. Evaporation
B. Radiation
C. Heat conduction
D. Convection
E. Convection and heat conduction

81. The pathological process of purulent barotitis involves an artery on the anterior wall of the tympanic cavity. What artery is it?
A. A. carotisinterna
B. A. carotis externa
C. A. meningea media
D. A. auricularis posterior
E. A. temporalis superficialis

82. After mouth closing and teeth clenching, the mouth opens reflectory. What receptors initiate this reflex?
A. Receptors of periodontium
B. Proprioceptors of depressor muscles of the lower jaw
C. Proprioceptors of elevator muscles of the lower jaw
D. Gustatory receptors
E. Mechanoreceptors of the oral mucous membrane

83. What changes will be observed in an isolated heart after the introduction of adrenaline into the perfusion solution?
A. Increase of heart rate and force
B. Decrease of heart force
C. Increase of heart force
D. Diastolic arrest
E. Increase in heart rate

84. The formation of ribosome subunits in a cell was disturbed in the course of an experiment (by means of activated mutagenic factors). It will affect the following metabolic process:
A. Protein biosynthesis
B. Carbohydrate biosynthesis
C. ATP synthesis
D. Photosynthesis
E. Biological oxidation

85. A 43-year-old female patient was admitted to the hospital with complaints of pain in the right subcostal area, skin itch. Examination revealed hypalgesia and hematolysis, skin icteritiousness, bradycardia, hypotonia. What is the most probable cause of these symptoms?
A. Cholemia
B. Intensification of erythrocyte hemolysis
C. Diabetes mellitus
D. Parenchymatous jaundice
E. Hepatocellular jaundice

86. A patient was admitted to the infectious diseases department. His skin was dry, with low turgor; he had rice-water stool. The patient was diagnosed with cholera. The following disorder of water-electrolytic balance ordinarily accompanies this disease:
A. Isoosmotichypohydration
B. Hyperosmotic hyperhydration
C. Hypoosmotichypohydration
D. Hyperosmotic hypohydration
E. Hyposmotichyperhydration

87. A 27-year-old patient consulted a doctor about a solid tumour in front of the antilobium. During removal of this tumour, a dental surgeon revealed a vein. What vein is localized in thisarea?
A. V retromandibularis
B. V facialis
C. V jugularisinterna
D. V jugularis externa
E. V auricularis posterior

88. A married couple applied to the genetic consultation in order to consult about their child with multiple abnormalities (microcephaly, idiocy etc.). The woman has had an illness during her pregnancy, but she didn't take any teratogens or mutagens. The parents' and the child's karyotype is normal. Anamnesis study revealed that the family kept a cat. What gravidic disease caused the child's abnormalities?
A. Toxoplasmosis
B. Leishmaniasis
C. Dysentery
D. Balantidiasis
E. Trichomoniasis

89. A histological specimen presents an organ that has both cortical and medullary substance. The cortical substance consists of an external zone that contains lymph nodules as well as of a paracortical zone. The medullary substance contains medullary cords, sinuses, and trabecules. What organ possesses these morphological signs?
A. Lymph node
B. Spleen
C. Kidney
D. Thymus
E. Adrenal glands

90. A 35-year-old female patient diagnosed with infertility underwent a diagnostic biopsy of the endometrium. Microscopical examination revealed that its mucous membrane was edematic, uterine glands were convoluted and filled with thick secretion. An excess of the following hormone causes such changes of the endometrium:
A. Progesterone
B. Estrogen
C. Testosterone
D. Somatotropin
E. ACTH

91. A patient consulted a doctor about acute pain in the right subcostal area. During examination the doctor noticed yellowed sclera of the patient. Laboratory analyses revealed high activity of alanine-aminotransferase and negative reaction to stercobilin in feces. What disease are these symptoms typical for?
A. Cholelithiasis
B. Hemolytic jaundice
C. Hepatitis
D. Chronic colitis
E. Chronic gastritis

92. A patient has been diagnosed with alkaptonuria. A deficiency of the following enzyme causes this pathology:
A. Oxidase of homogentisic acid
B. Phenylalanine hydroxylase
C. Glutamate dehydrogenase
D. Pyruvate dehydrogenase
E. DOPA decarboxylase

93. Poisoning with corrosive sublimate caused acute renal insufficiency. Its progress included four stages: 1) initial, 2) oligoanuria, 4) recovery. Name the third stage of acute renal insufficiency:
A. Polyuric
B. Metabolic
C. Hemodynamic
D. Ischemic
E. Pathochemical

94. A patient suffering from caries of the left inferior premolar has got swelling on his neck above the hyoid bone. There appeared fever, salivary discharge, contraction of masticatory muscles, difficult mouth

opening. The patient was diagnosed with phlegmon of the mouth floor. What muscles will be involved in the process?
A. Mylohyoid and geniohyoid
B. Digastric and stylohyoid
C. Hyoglossal and styloglossal
D. Platysma and stylohyoid
E. Thyrohyoid and sternohyoid

95. A blood sample of a pregnant woman was typed. Erythrocyte-agglutination reaction was present with standard sera 0a, P(I), Ba(III), the reaction was absent with the serum Ap(II). The blood under examination relates to the following group:
A. Ap(II)
B. Ba(III)
C. 0a, p(I)
D. AB(IV)
E. –

96. A 38-year-old patient complained that after acute respiratory viral disease, she had lost sensation of food contact with the front 2/3 of her tongue as well as pain and temperature sensation (burned her tongue with hot tea). Which nerve and which branch of it were damaged?
A. Lingual nerve of the mandibular branch of trigeminus
B. Lingual branches of the glossopharyngeal nerve
C. Lingual nerves of sublingual nerve
D. Tympanichord of the facial nerve
E. Superior laryngeal nerve of the vagus

97. For anaesthetization, a patient got an injection of local anesthetic. A few minutes later, the patient got dyspnea and tachycardia; he lost consciousness. What type of shock is it?
A. Anaphylactic
B. Cardiogenic
C. Haemorrhagic
D. Traumatic
E. Burn

98. A sensory nerve ganglion consists of roundish neurocytes with one process that divides into axon and dendrite at a certain distance from perikaryon. What are such cells called?
A. Pseudounipolar
B. Unipolar
C. Bipolar
D. Multipolar
E. Apolar

99. During the examination of a patient, a dentist revealed carious cavities on the front teeth that don't have accessory antagonists. What teeth are meant?
A. Inferior medial incisors
B. Inferior lateral incisors
C. Superior lateral incisors
D. Superior medial incisors
E. Superior canines

100. A patient suffers from chronic left-ventricular insufficiency. What drug should be prescribed?
A. Digoxin
B. Bemegride
C. Etimizol
D. Vinpocetine
E. Pyracetam

101. During starvation, the normal rate of glucose is maintained by means of activation of gluconeogenesis. What substance can be used as a substrate for this process?
A. Alanine
B. Ammonia
C. Adenine
D. Urea
E. Guanine

102. Parodontosis is treated by means of antioxidants. Which of the following natural compounds is used as an antioxidant:
A. Tocopherol
B. Thiamine
C. Gluconate
D. Pyridoxine

E. Choline

103. During the preventive examination of a miner, a doctor revealed changes in cardiovascular fitness being evidence of cardiac insufficiency at a stage of compensation. What is the main evidence of compensation for cardiac activity?
A. Myocardium hypertrophy
B. Tachycardia
C. Rise of arterial pressure
D. Dyspnea
E. Cyanosis

104. What method should be applied for sterilization of heatproof and moistureproof stomatological instruments in order to ensure total destruction of viruses, vegetative and spore forms of microorganisms?
A. Autoclaving
B. Boiling
C. Pasteurization
D. Tyndallization
E. Burning in the flame of the gas burner

105. The autopsy revealed that the upper lobe of the right lung was enlarged, grey, airless; the surface of incision was dripping with turbid liquid; pleura had a lot of fibrinous plicae. Microscopical examination of alveoles revealed exudate containing neutrophils, desquamated alveolocytes, and fibrin fibers. Bronchus wall was intact. What is the most probable diagnosis?
A. Croupous pneumonia
B. Interstitial pneumonia
C. Pulmonary abscess
D. Focal pneumonia
E. Influenzal pneumonia

106. A student has dry mouth during an exam. The realization of the following reflexes causes it:
A. Conditioned sympathetic
B. Conditioned and unconditioned sympathetic
C. Conditioned parasympathetic
D. Unconditioned parasympathetic
E. Unconditioned sympathetic and parasympathetic

107. A patient with ventricular arrhythmia was admitted to the cardiological department. What drug should be administered?
A. Amiodarone
B. Amlodipine
C. Drotaverine
D. Aminazine
E. Proserin

108. A 30-year-old woman has been continuously using lipstick with a fluorescent substance that led to the development of limited erythema on the prolabium, slight peeling, and later small transversal sulci and fissures. Microscopical examination of the affected zone revealed in the connective tissue sensibilized lymphocytes and macrophages, effects of cytolysis. What type of immunological hypersensitivity has developed on the lip?
A. IV type (cellular cytotoxicity)
B. I type (reagin type)
C. II type (antibody cytotoxicity)
D. III type (complex immune cytotoxicity)
E. Granulomatosis

109. A female patient with pyelonephritis was admitted to the urological department. Examination revealed an associated infection accompanied by pyelovenous reflux. The affection of the following structure induced this complication:
A. Fornical renal apparatus
B. Excretory renal tracts
C. Straight tubules
D. Renal tubules
E. Renal corpuscle

110. A patient has mental retardation, small height, brachydactyly, mongoloid slant. Analysis of his karyotype revealed trisomy 21. What chromosomal anomaly is it?
A. Down's disease

B. Klinefelter's syndrome
C. Turner's syndrome
D. Trisomy X
E. Specific fetopathy

111. A patient was delivered to the admission ward with poisoning with an insecticide of anticholinesterase action. What drug able to block muscarinic cholinoreceptors should be prescribed?
A. Atropine sulfate
B. Pilocarpine hydrochloride
C. Dithylinum
D. Benzohexonium
E. Mesatonum

112. A histological specimen of an oral cavity organ demonstrates that the organ's anterior surface is lined with multilayer squamous nonkeratinous epithelium, and its posterior surface – with multiserial ciliated epithelium. What organ is it?
A. Soft palate
B. Gingiva
C. Hard palate
D. Lip
E. Cheek

113. A patient suffering from non-insulin-dependent diabetes mellitus was prescribed glibenclamid internally. What is the mechanism of its hypoglycemic action?
A. It stimulates the generation of endogenous insulin by beta cells
B. It inhibits gluconeogenesis in the liver
C. It intensifies the utilization of glucose by peripheral tissues
D. It inhibits glucose absorption in the bowels
E. It inhibits alpha-glucosidase and polysaccharide breakdown

114. A patient with myocardium infarction was admitted to the cardiological department. In order to relieve his pain, it was decided to potentiate the action of fentanyl by a certain neuroleptic. Whatis the most suitable neuroleptic for neuroleptanalgesia?
A. Droperidol
B. Aminazine
C. Triftazine
D. Haloperidol
E. Sulpiride

115. A patient with a fracture of the greater wing of sphenoid bone was admitted to the craniocerebral department. The fracture line went through the spinous foramen. What vessel was damaged?
A. Middle meningeal artery
B. Superficial artery
C. Lateral pterygoid artery
D. Anterior deep temporal artery
E. Posterior deep temporal artery

116. What contraction of upper extremity muscles will be observed during holding (but not moving)a load in a certain position?
A. Isometric
B. Isotonic
C. Auxotonic
D. Concentric
E. Excentric

117. A histological specimen presents the tissue that contains cells having no processes and a few tens of nuclei each. One of the cell surfaces has a corrugated zone that provides the secretion of hydrolytic elements. What tissue is it?
A. Osseous tissue
B. Cartilaginous tissue
C. Epithelial tissue
D. Nerve tissue
E. Muscular tissue

118. A 6-year-old child was delivered to the hospital because of measles pneumonia. On the mucous membrane of a cheek, a dentist revealed an ill-defined greyish area 2x2,5 cm large. Soft tissues are edematic and foul-smelling. The most probable diagnosis of the dentist should be:

A. Noma
B. Gangrenous stomatitis
C. Pustular stomatitis
D. Phlegmonous stomatitis
E. Ulcerous stomatitis

119. A patient with a fracture of femoral bone in the area of the surgical neck got symptoms of acute dextro ventricular insufficiency as a result of pulmonary embolism. What type of embolism is it?
A. Fat
B. Metastatic
C. Gas
D. Air
E. Tissue

120. Examination of a man revealed a protozoan disease that affected the brain and caused vision loss. Blood analysis revealed unicellular half-moon-shaped organisms with a pointed end. The causative agent of this disease is:
A. Toxoplasma
B. Leishmania
C. Lamblia
D. Amoeba
E. Trichmonad

121. A 55-year-old man had been suffering from chronic glomerulonephritis. He died from chronic renal failure. Macroscopical examination revealed on the surface of epicardium and pericardium some greyish-white villous depositions. After their removal, dilated and plethoric vessels were uncovered. What process took place in the pericardium?
A. Fibrinous inflammation
B. Organization
C. Proliferative inflammation
D. Hemorrhagic inflammation
E. Arterial hyperemia

122. Clinical examination of a female patient revealed the reduction of basal metabolism by 40%, gain in body mass, drop of body temperature, face puffiness, sexual dysfunctions, inertness and apathy, lowered intelligence. These symptoms are caused by dysfunction of the following endocrine gland:
A. Hypofunction of thyroid gland
B. Hypofunction of parathyroid glands
C. Hypophysishyperfunction
D. Epiphysis hypofunction
E. Hyperfunction of the thyroid gland

123. A patient suffering from hepatocerebral degeneration has a low concentration of ceruloplasmin in blood serum. What element accumulation will be observed in the liver, cerebrum, and kidneys of the patient?
A. Cuprum
B. Calcium
C. Sodium
D. Potassium
E. Ferrum

124. A 48-year-old male patient was admitted to the hospital with an acute attack of chronic glomerulonephritis. Examination revealed chronic renal failure. What is the cause of hyperazotemia by chronic renal failure?
A. Reduction of glomerular filtration
B. Reduction of tubular reabsorption
C. Reduction of tubular excretion
D. Disorder of protein metabolism
E. Disorder of water-electrolytic metabolism

125. Examination of a patient 24 hours after appendectomy revealed neutrophilic leukocytosis with the regenerative shift. What is the most probable mechanism of the development of absolute leukocytosis in peripheral blood?
A. Intensification of leukopoiesis
B. Redistribution of leukocytes in the organism
C. Reduction of leucolysis
D. Slower emigration of leukocytes to the

E. Immunity activation

126. On the 2nd day after myocardium infarction, the patient's systolic arterial pressure abruptly dropped down to 60 mm Hg. It was accompanied by tachycardia up to 140 bpm, dyspnea, loss of consciousness. What is the leading mechanism in the pathogenesis of this shock?
A. Decrease of stroke volume
B. Intoxication by the products of necrotic degeneration
C. Decrease of circulating blood volume
D. Paroxysmal tachycardia
E. Anaphylactic reaction to myocardial proteins

127. Potassium cyanide that is a poison came into a patient's organism and caused death a few minutes after it. The most probable cause of its toxic effect was the abnormal activity of:
A. Cytochrome oxidase
B. Catalase
C. ATP-synthetase
D. NADP — H-dehydrogenase
E. Hemoglobin synthesis

128. A 60-year-old patient complains of tongue burning, excessive salivation, and glossalgia effects that came five days after he started using a metal dental bridge. Objectively: the mucous membrane of the oral cavity is edematic and hyperemic. What form of stomatitis is it?
A. Catarrhal
B. Purulent
C. Ulcerous
D. Gangrenous
E. Fibrinous

129. It was necessary to determine the absolute gustation thresholds of a healthy man for different substances. The lowest threshold will be observed for the following substance:
A. Quinine
B. Sodium chloride
C. Glucose
D. Saccharose
E. Citric acid

130. What preventive medications should be injected to a patient with open maxillofacial trauma provided that he has never got prophylactic vaccination before?
A. Antitetanus immunoglobulin and anatoxin
B. Anticonvulsive drugs and anatoxin
C. Antitetanus serum and antibiotics
D. Diphtheria, tetanus toxoids and pertussis vaccine, and antibiotics
E. Tetanus anatoxin and antibiotics

131. A patient has hyperkaliemia and hyponatremia. Such changes might be caused by hyposecretion of the following hormone:
A. Aldosterone
B. Vasopressin
C. Cortisol
D. Parathormone
E. Natriuretic

132. Researches of the latest decades established that immediate "executors" of cell apoptosis are special enzymes called caspases. The generation of one of them proceeds with the participation of cytochrome. What is its function in a normal cell?
A. Enzyme of the respiratory chain of electron transport
B. Enzyme of tricarboxylic acid cycle
C. Enzyme of beta-oxidation of fatty acids
D. Component of the H + ATP system
E. Component of the pyruvate-dehydrogenase system

133. A man got poisoned with mushrooms. They contain muscarine that stimulates muscarinic cholinoreceptors. What symptom is typical for poisoning with inedible mushrooms?
A. Miosis
B. Mydriasis

C. Bronchi dilation
D. Heart rate rise
E. Arterial pressure rise

134. ECG of a patient showed that the RR interval equaled 1,5 s, heart rate equaled 40 bpm. What is a cardiac pacemaker?
A. Atrioventricular node
B. Sinus node
C. His' bundle
D. Left branch of His' bundle
E. Right branch of His' bundle

135. A patient with Itsenko-Cushing syndrome has persistent hyperglycemia and glycosuria, hypertension, osteoporosis, obesity. Increased synthesis and hypersecretion of the following hormone will be observed in this case:
A. Cortisol
B. Adrenaline
C. Glucagon
D. Thyroxin
E. Aldosterone

136. A 70-year-old patient suffering from cardiac insufficiency has been uncontrolled, taking digoxin that resulted in extrasystole, vomiting, vision impairment, anxiety, sleep disturbance, reduction of diuresis. Application of drugs relating to the following group will be pathogenetically reasonable in this case:
A. Donators of sulfhydric groups
B. Stimulants of pi-adrenoreceptors
C. Angiotensin II receptor blockers
D. Potassium channel blockers
E. Donators of nitrogen oxide

137. Examination of experimental rats that have been getting only carbohydrate feed for a longtime revealed the accumulation of water in tissues. What is the leading pathogenetic mechanism of edema development?
A. Hypooncotic
B. Membranogenic
C. Dysregulatory
D. Lymphogenous
E. Hyperosmolar

138. Rheography of an 18-year-old student during exercise showed a redistribution of blood flow between organs. The peak blood flow will be observed in the following vessels:
A. Skeletal muscles
B. Liver
C. Cerebrum
D. Kidneys
E. Gastrointestinal tract

139. It is known that information about the sequence of amino acids in a protein molecule is encoded as a sequence of four types of nucleotides in a DNA molecule, and different amino acids are encoded by a different number of triplets - from one to six. Such peculiarity of the genetic code is called:
A. Degeneracy
B. Universality
C. Nonoverlapping
D. Triplety
E. Specificity

140. Microscopical study of discharges from the urethra of a patient suffering from acute urethritis revealed bean-shaped microorganisms up to 1 micrometer in diameter arranged in pairs and placed inside the leukocytes. What microorganisms are these?
A. Gonococci
B. Meningococci
C. Tetracocci
D. Streptococci
E. Staphylococci

141. A female patient was admitted to the hospital with pleuritis. Which area of the pleural cavity contains most exudate?
A. Costodiaphragmatic recess
B. Phrenicomediastinal recess
C. Costomediastinal recess

D. Under the pleural cupula
E. Under the pulmonary radix

142. A 24-year-old patient consulted a doctor about pain below his lower jaw on the right. The dental surgeon revealed a concrement in the submandibular gland. During its removal he had to prevent bleeding out of the following artery:
A. A. facialis
B. A. submentalis
C. A. alveolaris inferior
D. A. labialis inferior
E. A. lingualis

143. Analysis of a dentist's urine obtained at the end of his working day revealed protein concentration at the rate of 0,7 g/l. His morning urine hadn't such changes. What is this
phenomenon called?
A. Functional proteinuria
B. Organic proteinuria
C. Nonselective proteinuria
D. Extrarenal proteinuria
E. Hematuria

144. A 62-year-old patient with cerebral hemorrhage was admitted to the neurological department in grave condition. Objectively: increase of respiration depth and rate with its following reduction to apnoea; after that respiration cycle restores. What respiration type is it?
A. Cheyne-Stokes
B. Kussmaul's
C. Biot's
D. Gasping
E. Apneustic

145. Periodontitis is accompanied by activation of proteolysis in the periodontium tissues. The evidence of proteolysis activation is the increase of the following component of oral liquid:
A. Amino acids
B. Organic acids
C. Glucose
D. Biogenic amines
E. Cholesterol

146. Roentgenological examination of a patient revealed a deformity of the inferior wall of the right eye socket. What paranasal sinus was most probably damaged?
A. Right maxillary sinus
B. Sphenoidal sinus
C. Frontal sinus
D. Right ethmoidal labyrinth
E. Left ethmoidal labyrinth

147. A patient underwent extraction of a tooth with an oval crown and two tubercles on its masticatory surface. Its root is strongly flattened in mesiodistal direction; its apex is bifurcated. What tooth was extracted?
A. First superior premolar
B. First inferior premolar
C. Canine
D. Second superior premolar
E. Second inferior premolar

148. A 15-year-old girl was delivered to the hospital with inflammation of the vermiform appendix. Blood analysis revealed signs of anemia. Her feces contained lemon -shaped helminthic eggs(50x30 micrometer) with "plugs" on the poles. What type of helminth is it?
A. Trichuris
B. Pinworm
C. Hookworm
D. Echinococcus
E. Hymenolepis nana

149. In the surgical department of dental clinic cases of hospital-acquired staphylococcal infection were registered, which was caused by strains with multiple drug resistance. The presence of: can identify such a feature
A. R-plasmids
B. F-plasmids

C. Temperate bacteriophages
D. Exotoxins
E. Virulent bacteriophages

150. A patient consulted a dentist about itching and burning in the oral cavity, high temperature. The patient was diagnosed with trichomonal gingivostomatitis. What drug should be chosen for his treatment?
A. Metronidazole
B. Ampicillin
C. Doxycycline hydrochloride
D. Gentamicin sulfate
E. Nystatin

151. A 40-year-old male patient died from cerebral edema. In anamnesis, the face carbuncle was registered. The autopsy revealed hyperemia and edema of cerebral tissue. The white matter of the left hemisphere had two cavities 6x5,5 and 5x4,5 cm large filled with yellowish-green cream-like fluid. Walls of the cavities were built up by nerve tissue with irregular rands. What complication of carbuncle was it?
A. Acute abscesses
B. Chronic abscesses
C. Empyema
D. Colliquativenecroses
E. Cysts

152. A 35-year-old man got a trauma that resulted in a complete rupture of the spinal cord at a level of the first cervical segment. What changes in respiration will be observed?
A. Respiration will come to a standstill
B. Respiration won't change
C. Respiration will become diaphragmatic
D. Respiration will become frequent and shallow
E. Respiration will become infrequent and deep

153. A sportsman needs to improve his sporting results. He was recommended a drug containing carnitine. What process is activated by this compound in the first place?
A. Transport of fatty acids
B. Transport of amino acids
C. Transport of calcium ions
D. Transport of glucose
E. Transport of vitamin K

154. A patient suffering from syphilis was prescribed a drug, the action of which based upon the disturbed generation of mureinleading to death of the causative agent. What drug is it?
A. Benzylpenicillin sodium salt
B. Bijochinol
C. Ciprofloxacin
D. Azithromycin
E. Doxycycline hydrochloride

155. A patient who takes blocker of membrane cytoreceptors of efferent conductor synapses of the autonomic nervous system complains about dry mouth. What receptors are blocked?
A. Muscarinic cholinoreceptors
B. Nicotinic cholinoreceptors
C. H2 -receptors
D. ^-adrenoreceptors
E. 3-adrenoreceptors

156. Histological study of an extirpated pulp revealed some cylindrical cells in its peripheral layer. What are these cells called?
A. Odontoblasts
B. Fibroblasts
C. Monocytes
D. Ameloblasts
E. Myofibroblasts

157. A patient with essential hypertension was admitted to the cardiological department. To lower arterial pressure, a doctor prescribed a drug that blocks pi and ^-adrenoreceptors. What drug is it?
A. Propranolol
B. Proserin

C. Celecoxib
D. Prednisolone
E. Indometacin

158. A patient noticed symptoms of approaching an attack of bronchial asthma and took several tablets one by one at short intervals out of the doctor's control. The short-term improvement of his condition came only after taking the first two tablets. Next, intakes of a drug didn't improve his condition. Reduction of drug effectiveness was caused by:
A. Tachyphylaxis
B. Cumulation
C. Addiction
D. Dependence
E. Idiosyncrasy

159. A patient with the disfunction of external respiration has to undergo a tracheotomy. The isthmus of thyroid gland is commonly situated on a level with the following tracheal rings:
A. II- IV
B. III-IV
C. I-II
D. IV-V
E. V-VI

160. A patient with streptococcal infection of gums was prescribed a drug that contained a beta-lactam ring in its structure. Whi- ch drug relates to this group?
A. Benzylpenicillin
B. Rifampicin
C. Erythromycin
D. Streptomycin sulfate
E. Chloramphenicol

161. A doctor examined a victim of a road accident and revealed damage to the exterior wall of the eye socket. The patient has lost the ability to abduct the eyeball on the affected side. What nerve might be damaged in this case?
A. N. abducens
B. N. trochlearis
C. N. oculomotorius
D. N. ophthalmicus
E. N. infraorbitalis

162. A patient who has been taking a certain drug for a long time cannot discontinue the use of it because this causes psychic and somatic dysfunction. The syndrome occurring at refraining from the use of a drug is called:
A. Abstinence
B. Sensitization
C. Idiosyncrasy
D. Tachyphylaxis
E. Cumulation

163. A patient has roundish ulcers on his face, inflammation, and enlargement of lymph nodes. These symptoms turned up as a result of mosquito bites. Laboratory examination of discharge from the ulcers revealed unicellular flagellar organisms. What is the most probable diagnosis?
A. Dermatotropicleishmaniasis
B. Toxoplasmosis
C. Scabies
D. Trypanosomiasis
E. Myasis

164. Autopsy of a 68-year-old man who died from chronic cardiac insufficiency revealed deformed, thickened, conjoined cusps of the mitral valve. Along the edge of joining, there were small (1-2mm) thrombs. What form of endocarditis caused the development of chronic cardiac insufficiency?
A. Recurrent verrucous
B. Diffuse
C. Acute verrucous
D. Fibroplastic
E. Polypoulcerous

165. Examination of mountain climbers who have spent a long time in a high-altitude region revealed an increase of erythrocyte number (over six • 1012/l) and

hemoglobin concentration(over 170 g/l). What mechanism caused this phenomenon?
A. Intensified production of erythropoietin by the kidneys
B. Weakening of erythrocyte haemolysis in bloodstream
C. Improved ability of tissue for oxygen utilization
D. Intensified processes of anoxic energy production
E. Weakening of intracellular erythrocyte hemolysis

166. Autopsy of a man who had been suffering from hypertension revealed in his brain a cavity with rubiginous walls. What event preceded the development of these changes?
A. Haematoma
B. Diapedetichaemorrhages
C. Ischemic infarction
D. Plasmorrhagias
E. Abscess

167. A patient suffering from chronic renal insufficiency has got osteoporosis. Osteoporosis was caused by abnormal synthesis of the following regulator of mineral metabolism in kidneys:
A. 1, 25(OH)2 D3 formation
B. Proline hydroxylation
C. Lysine hydroxylation
D. Glutamate carboxylation
E. Cortisol hydroxylation

168. During embryogenesis, the epithelial band, also known as vestibular plate, gives rise to the development of vestibule of mouth. What biological mechanism of the programmed death of cells provides growth of buccolabial sulcus from the epithelial plate?
A. Apoptosis
B. Necrosis
C. Meiosis
D. Paranecrosis
E. Amitosis

169. After the restoration of blood circulation in damaged tissue, the accumulation of lactate comes to a stop and the speed of glucose consumption slows down. These metabolic changes are caused by activation of the following process:
A. Aerobic glycolysis
B. Anaerobic glycolysis
C. Lipolysis
D. Gluconeogenesis
E. Glycogen biosynthesis

170. A basketball player complains of pain over his heel that is getting stronger during walking. It might be caused by damage of tendon of the following muscle:
A. m. triceps surae
B. m. tibialis posterior
C. m. flexor digitorum longus
D. m. fibularis longus
E. m. fibularis brevis

171. A patient with a neck injury was admitted to the hospital. Examination revealed a damaged nerve located anteriad to the frontal scalene. What nerve is damaged?
A. Phrenic
B. Vagus
C. Glossopharyngeal
D. Sublingual
E. Cervical part of the sympathetic trunk

172. The examination of a patient revealed an abnormal development of enamel. It is caused by damage of the following structural elements of dental germ:
A. Internal enamel epithelium of enamel organ
B. External enamel epithelium of enamel organ
C. Intermediate layer of the enamel organ
D. Pulp of enamel organ
E. Cervix of the enamel organ

173. A 23-year-old man got perforation of the hard palate. There was also a well-

defined solid formation. Post-operative microscopical examination of this formation revealed a large focus of caseous necrosis surrounded by granulation tissue with endovasculitis and cellular infiltrate consisting mainly of plasmocytes but also of lymphocytes and epithelioid cells. What is the most probable diagnosis?
A. Syphilis
B. Tuberculosis
C. Scleroma
D. Sarcoma
E. Lepra

174. A patient suffering from essential arterial hypertension got a hypertensive crisis that caused an attack of cardiac asthma. What is the leading mechanism of cardiac insufficiency in this case?
A. Cardiac overload due to increased resistance
B. Cardiac overload due to increased blood volume
C. Absolute coronary insufficiency
D. Myocardium damage
E. Disturbed blood inflow to the heart

175. A newborn has signs of dyspepsia after milk feeding. Symptoms of dyspepsia disappear when milk is substituted for glucose solution. The newborn has a low activity of the following enzyme:
A. Lactase
B. Invertase
C. Maltase
D. Amylase
E. Isomaltase

176. A male patient underwent an operation on account of an inguinal hernia. During the operation, a surgeon damaged the content of the inguinal canal. What structure was damaged?
A. Funiculus spermaticus
B. Urarchus
C. Lig. teres uteri
D. Lig. inguinale
E. –

177. Coprological examination of a patient's feces revealed small operculate eggs. It is known from the anamnesis that the patient often consumes fish. What fluke parasitizes in the patient's organism?
A. Cat liver fluke
B. Blood fluke
C. Lung fluke
D. Liver fluke
E. Lancet fluke

178. A typical symptom of cholera is a great loss of water and sodium ions. What mechanism underlies the development of diarrhea in this case?
A. Activation of adenylate cyclase of enterocytes
B. Increased secretion of renin by the cells of renal arterioles
C. Aldosterone oxidation in the adrenal cortex
D. Inhibition of vasopressin synthesis in the hypothalamus
E. Increased corticotropin synthesis

179. A patient underwent partial removal of a structure of the central nervous system by medical indications. It resulted in the development of atony, astasia, intention tremor, ataxia, adiadochokinesis. What structure of CNS was partially removed?
A. Cerebellum
B. Amygdaloid complex
C. Hippocampus
D. Basal ganglions
E. Motor cortex

180. Medical examination of the first-year pupils included a Mantoux test. 15 pupils out of 35 had a negative reaction. What actions should be taken against children with a negative reaction?
A. BCG vaccination
B. Antitoxin vaccination
C. Rabies vaccination

D. Repeat Mantoux test
E. Examination of blood serum

181. As a result of improper feeding, an infant got full-blown diarrhea. One of its main consequences is the excretion of a large amount of sodium bicarbonate. What form of acid-base balance disturbance is it?
A. Excretory acidosis
B. Metabolic alkalosis
C. Respiratory acidosis
D. Respiratory alkalosis
E. Acid-base balance won't be disturbed

182. A patient suffering from chronic bronchitis takes a synthetic mucolytic drug that stimulates sputum liquefaction. What drug is it?
A. Acetylcysteine
B. Diazepam
C. Heparin
D. Furosemide
E. Enalapril

183. A patient with an acute duodenal ulcer was admitted to the hospital. Analysis of gastric juice revealed hyperfunction of secretion and acid-forming in the stomach. Choose a drug that can reduce the secretory function of the stomach due to inhibition of H2-receptors:
A. Ranitidine
B. Extract of dry belladonna
C. Atropine
D. Methacin
E. Platyphyllin

184. A patient has dislocation of his mandible that caused impairment of salivation and gustatory sensitivity of anterior 2/3 of his tongue. What nerve was damaged?
A. Tympanichord
B. Greater petrosal nerve
C. Lesser petrosal nerve
D. Deep petrosal nerve
E. Sublingual nerve

185. The endoscopic examination of duodenum revealed a tumour of the major papilla. This pathological formation is localized in the following part of the duodenum:
A. Descending part
B. Superior part
C. Horizontal part
D. Ascending part
E. Superior flexure

186. A student has accidentally hit his elbow against the edge of the table and sensed burning and tingling on the interior surface of his forearm. What nerve was damaged in this case?
A. N. ulnaris
B. N. radialis
C. N. medianus
D. N. axillaris
E. N. musculocutaneus

187. A 40-year-old female patient has enlarged thyroid gland. On palpation, the gland is dense, its surface is slightly tuberous. Histological examination of gland sample revealed diffuse infiltration of tissue by the cells, formation of lymphoid follicles. What disease is it?
A. Autoimmune thyroiditis
B. Endemic goiter
C. Sporadic goiter
D. Diffuse toxic goiter
E. Riedel's disease

188. Pathological material taken from a patient suffering from pulpitis was inoculated onto Kitt-Tarozzi cultural medium. It is planned to find the following microorganisms:
A. Anaerobic
B. Acid-resistant
C. Acidophilic
D. Haemolytic
E. Aerobic

189. A 58-year-old female patient had to be prepared for cholecystectomy. The complex

of premedication drugs included benzohexonium. What is the function of this drug in anesthesia?
A. Functional block of visceral reflexes
B. Relaxation of skeletal muscles
C. Relaxation of smooth muscles
D. Reduction of the excitement phase
E. Intensification of retrograde amnesia

190. Patients suffering from relapsing typhus have a fever that can be characterized by several days of high temperature alternating with periods of normal temperature. Such temperature curve is called:
A. Febrisrecurrens
B. Febrishectica
C. Febrisintermittens
D. Febris continua
E. Febrisatypica

191. Microscopical examination of exudate obtained from a rat with aseptic peritonitis and mixed with bird's erythrocytes revealed macrophages surrounded by foreign erythrocytes. What stage of phagocytosis is it?
A. Adherence
B. Uncomplete phagocytosis
C. Approaching
D. Immersion
E. Intracellular digestion

192. Specific prophylaxis involved the application of a vaccine containing microorganisms and exotoxin-detoxicated by formalin. It relates to the following type of vaccine:
A. Combined
B. Genetically engineered
C. Anatoxin
D. Chemical
E. Live

193. A patient with myocardium infarction was delivered to the resuscitation department. What drug should be injected into the patient for the prevention of pain shock?
A. Promedol
B. Analgin
C. Paracetamol
D. Celecoxib
E. Naloxone

194. The examination of a tubular organ revealed that its middle membrane consisted of solid hyaline rings. What epithelium lines mucous membrane of this organ?
A. Multinuclear prismatic ciliated
B. Monolayer prismatic glanduous
C. Monolayer prismatic with a limbus
D. Multilayer squamous nonkeratinous
E. Monolayer cubic

195. Treatment of many diseases involves the use of cocarboxylase (thiamine pyrophosphate) for supplying cells with energy. What metabolic process is activated in this case?
A. Oxidizing decarboxylation of pyruvate
B. Glutamate deamination
C. Amino acids decarboxylation
D. Decarboxylation of biogenic amines
E. Detoxication of harmful substances in the liver

196. A new-born child has hyperemia, edema of the oral mucous membrane, small erosions with viscous mucopus. Smears from the mucopus contain a lot of leukocytes with Gram-negative diplococci. The same microorganisms can also be found beyond the leukocytes. What is the most probable diagnosis?
A. Gonococcal stomatitis
B. Toxoplasmosis
C. Congenital syphilis
D. Staphylococcal stomatitis
E. Blennorrhea

197. Active physical work induces a rise in the concentration of carbonic acid in the blood. It causes deepening and acceleration of respiration, thus reducing the concentration of carbonic acid and hydrogen ions in the blood. It maintains the following pro-

cess:
A. Homeostasis
B. Immunity
C. Ontogenesis
D. Orthobiosis
E. Anabiosis

198. On a certain territory, the mass death of rodents was registered. It was suspected that the plague might have caused their death. What serological reaction should be applied for quick identification of the antigen of the causative agent of this epizooty?
A. Precipitation
B. Agglutination
C. Passive hemagglutination
D. Complement binding
E. Neutralization

199. Examination of puncture biopsy material of liver revealed dystrophy of hepatocytes, their necrosis, and sclerosis along with disturbance of beam and lobulous structure and formation of pseudolobules of regeneration nodes. What is the most probable diagnosis?
A. Liver cirrhosis
B. Chronic hepatosis
C. Chronic hepatitis
D. Progressing massive liver necrosis
E. Acute hepatitis

200. Examination of nasal cavity revealed a deviation of the posterior part of the nasal septum. What bone is affected?
A. Vomer
B. Medial plate of the pterygoid process
C. Lateral plate of the pterygoid process
D. Perpendicular plate of the ethmoid bone
E. Vertical plate of the palatine bone

1. A woman with intractable vomiting was admitted to the infectious disease ward. What changes of water-salt metabolism are likely to be observed?
A. Hypo-osmolar dehydration
B. Iso-osmolar dehydration
C. Hyperosmolar dehydration
D. Hypo-osmolar hyper dehydration
E. Hyper-osmolar hyper dehydration

2. Vaccination is done by means of a toxin that has been neutralized by formaldehyde (0,4%) at a temperature of 37-40oC for four weeks. Ramond was the first to apply this preparation for diphtheria prophylaxis. What preparation is it?
A. Anatoxin
B. Immunoglobulin
C. Antitoxic serum
D. Adjuvant
E. Inactivated vaccine

3. Examination of a patient revealed that hypovitaminosis of vitamins A caused dental hypoplasia, and these vitamins were administered perorally, but they didn't have any medicinal effect. What is the probable cause of disturbed vitamin assimilation?
A. Bile acid deficiency
B. Hypochlorhydria
C. Hyperchlorhydria
D. Achylia
E. Achlorhydria

4. Underdevelopment of which parts of the facial skeleton in the embryonal period is the reason for such a malformation as cleft palate?
A. Palatine processes
B. Frontal processes
C. Frontal and maxillary processes
D. Mandibular processes
E. Mandibular and palatine processes

5. A patient complains of headache, difficult respiration. Rhoentgenologi-cal examination allowed confirming the following diagnosis: frontitis (frontal sinus inflammation). Which nasal meatus may contain purulent discharges?
A. Median
B. Superior
C. Inferior
D. Common
E. Above the superior nasal turbinate

6. Autopsy of a man, who died from acute posthemorrhagic anemia resulting from pulmonary hemorrhage, revealed the following: macroscopically -lung apexes were deformed, their section showed multiple whitish-grey foci 10-15 mm in diameter and multiple pathological cavities up to 15 mm in diameter with dense walls. Microscopically: the cavity walls presented proliferation of the connective tissue infiltrated by epithelioid cells, multicellular giant cells and lymphocytes. What is the most likely diagnosis?
A. Secondary fibrocavernous tuberculosis
B. Primary tuberculosis without signs of progress
C. Progressing tuberculosis complex
D. Hematogenic disseminated pulmonary tuberculosis
E. Hematogenicmiliary pulmonary tuberculosis

7. It is known that people who permanently live in highland have an increased concentration of erythrocytes per each blood volume unit. Owing to this fact, blood can optimally fulfill the following function:
A. Gas transport
B. Amino acid transport
C. Hemostasis participation
D. Maintenance of acid-base balance
E. Maintenance of ionic equilibrium

8. As a result of a trauma, a patient has damaged frontal spinal roots. What structures are likely to be affected?
A. Axons of the motoneurons and axons of the lateral horn neurons

B. Central processes of the sensory neurons of the spinal ganglions
C. Peripheral processes of the sensory neurons of the spinal ganglions
D. Axons of the lateral horn neurons
E. Dendrites of the spinal ganglion neurons

9. A 5 y.o. child had a temperature rise up to 40oC, acute headache, vomiting, anxiety, chill. Four days later, there appeared hemorrhagic skin eruption, oliguria, and adrenal insufficiency that caused death. Bacteriological examination of smears from the child's pharynx revealed meningococcus. What disease form was revealed?
A. Meningococcemia
B. Meningococcal meningitis
C. Meningoencephalitis
D. Meningicoccalnasopharyngitis
E. –

10. Examination of a patient with an interbrain injury revealed the hearing impairment. What structures must be damaged?
A. Medial geniculate bodies of thalamus
B. Lateral geniculate bodies of thalamus
C. Intralaminar nuclei of the hypothalamus
D. Frontal nuclei of the hypothalamus
E. Medial nuclei of the hypothalamus

11. A 7-year-old child has angina. A smear from the tonsil surface was inoculated on blood agar. Twenty-four hours later, there had grown colonies of streptococci. Nutrient medium turned transparent around them. This study revealed the presence of the following pathogenic factor:
A. Hemolysin
B. Endotoxin
C. Neuraminidase
D. Beta-lactamase
E. Leukocidin

12. A pregnant woman lost about 800 ml of blood during labour. There is also tachycardia, arterial pressure is 100/70 mm Hg, tachypnea up to 28/min. What hypoxia type is the primary in such a clinical situation?
A. Blood
B. Cardiovascular
C. Mixed
D. Tissue
E. Respiratory

13. A scientific expedition in India was guided by a native who had never parted with his dog. What invasion diseases can be transmitted to the participants of the expedition as a result of contacts with this dog if it is known to be the source of invasion?
A. Echinococcosis
B. Teniasis
C. Paragonimiasis
D. Dicroceliasis
E. Fascioliasis

14. A child has an abnormal formation of tooth enamel and dentin as a result of a low concentration of calcium ions in the blood. The deficiency of the following hormone might cause such abnormalities:
A. Parathormone
B. Thyrocalcitonin
C. Thyroxin
D. Somatotropic hormone
E. Triiodothyronine

15. While under barbituric anesthesia, a 65-year-old male patient developed respiratory inhibition. The anesthesiologist made him a 10 ml intravenous injection of a 0,5% bemegride solution. The patient's condition got better; the pulmonary ventilation volume increased. What phenomenon underlies the interaction of these medications?
A. Direct antagonism
B. Indirect antagonism
C. Unilateral antagonism
D. Direct synergism
E. Indirect synergism

16. As a result of chest trauma, the costal cartilage was damaged. The cartilage regenerates due to the following layer of peri-

chondrium:
A. Chondrogenic
B. Fibrous
C. Elastic
D. Collagen
E. Sharpey's fibers

17. The air in a room has an increased concentration of carbonic acid. What respiratory changes (depth and rate) will be observed in a person after entering this room?
A. Increase in depth and rate
B. Decrease in depth
C. Increase in depth
D. Decrease in rate
E. Increase in rate

18. A chemical industry worker complains about enamel wear. Objectively: generalized destruction of dental crowns along with replacing dentin formation. What is the most likely diagnosis?
A. Necrosis of hard tooth tissues
B. Dental erosion
C. Wedge-shaped defects
D. Fluorosis
E. Median caries

19. A 40-year-old male patient died from cerebral edema. In anamnesis, the face carbuncle was registered. The autopsy revealed hyperemia and edema of cerebral tissue. The white matter of the left hemisphere had two cavities 6x5,5 and 5x4,5 cm large filled with yellowish-green cream-like fluid. Walls of the cavities were built up by nerve tissue with irregular rands. What complication of carbuncle was it?
A. Acute abscesses
B. Chronic abscesses
C. Empyema
D. Colliquativenecroses
E. Cysts

20. It is known that patients with diabetes mellitus are more subject to inflammatory processes; they have low regeneration and slower wound healing. What is the reason for this?
A. Decrease in protheosynthesis
B. Increase in lipolysis
C. Accelerated gluconeogenesis
D. Decrease in lipolysis
E. Intensification of catabolism

21. A patient has myocardial infarction in the region of the frontal wall of the left ventricle. Circulatory dysfunction occurred in the following vascular basin:
A. Frontal interventricular branch of the left coronary artery
B. Frontal ventricular branch of the right coronary artery
C. Circumflex branch of the left coronary artery
D. Marginal branch of the left coronary artery
E. Atrioventricular branch of the left coronary artery

22. At an altitude of 14000 m, an aircraft experienced a sudden loss of cabin pressure. The pilot must have developed the following type of embolism:
A. Gaseous
B. Foreign body embolism
C. Thromboembolism
D. Air embolism
E. Fat embolism

23. Before an operation, a 30-year-old male patient had his blood typed. It turned out to be Rh-positive. Erythrocytes were not agglutinated by standard sera of 0(I), A(II), B (III) groups. According to the AB0 blood group system, this blood is of the following type:
A. 0(I)
B. A(II)
C. B(III)
D. AB(IV)
E. –

24. A 60-year-old patient consulted a doc-

tor about retrosternal pain arising immediately after physical exercise. He was prescribed nitroglycerin. The medication relieved retrosternal pain, but the patient got an acute headache. What is the likely mechanism of this side effect?
A. Intracranial pressure rise
B. ^-adrenoreceptor block
C. Phosphodiesterase block
D. Reduced accumulation of calcium ions
E. Inhibited formation of mediators in the brain

25. The examination of the nasal cavity revealed a deviation of the posterior part of the nasal septum. Whatnbone is affected?
A. Vomer
B. Medial plate of the pterygoid process
C. Lateral plate of the pterygoid process
D. Perpendicular plate of the ethmoid bone
E. Vertical plate of palatine bone

26. After the parenteral introduction of a medication, a patient fell into a coma. He had Cheyne-Stokes respiration, apparently miotic pupils. The patellar reflex was preserved. What medication might have caused the intoxication?
A. Morphine hydrochloride
B. Aminazine
C. Diazepam
D. Analgine
E. Phenobarbital

27. As a result of a cold, a patient has the abnormal pain and temperature sensitivity of the frontal 2/3 of his tongue. Which nerve must be damaged?
A. Trigeminus
B. Sublingual
C. Accessory
D. Vagus
E. Glossopharyngeal

28. After the destruction of CNS structure, an animal lost its orientation reflexes. What exactly was destroyed?
A. Quadrigeminal plate
B. Red nuclei
C. Lateral vestibular nuclei
D. Black substance
E. Medial reticular nuclei

29. During post embryonal hemopoiesis in the red bone marrow, the cells of one of the cellular differons demonstrate a gradual decrease in cytoplasmic basophilia as well as an increase inoxyphilia; the nucleus is being forced out. Such morphological changes are typical for the following haemopoiesis type:
A. Erythropoiesis
B. Lymphopoiesis
C. Neutrophil cytopoiesis
D. Eosinophil cytopoiesis
E. Basophil cytopoiesis

30. A patient is found to have increased permeability of blood vessel walls accompanied by increased gingival hemorrhage, petechial skin hemorrhages, dedentition. What pathology is observed in this patient?
A. Hypovitaminosis C
B. Hypervitaminosis D
C. Hypervitaminosis C
D. Hypovitaminosis D
E. Hypovitaminosis A

31. A patient complained about a carbuncle on his face. Examination results: neither dense nor painful edema of subcutaneous cellular tissue, there is a black crust in the middle of thecarbuncle and a peripheral vesicular rash around it. Bacteriological examination revealed the presence of immobile streptobacilli able of capsulation. What microorganisms are causative agents of this disease?
A. Bacillus antracis
B. Staptylococcus aureus
C. Bacillus anthracoides
D. Bacillus megaterium
E. Bacillus subtilis

32. In order to anesthetize superior incisors, an anesthetic should be injected in the region of the incisive foramen. What nerve is located in this place?
A. N.nasopalatinus
B. N.pharyngeus
C. N.palatinus major
D. Rr.nasalesposterioresinferiores
E. Nn.palatiniminors

33. A child suspected of tuberculosis underwent a Mantoux test. Twenty-four hours after allergen injection there appeared a swelling, hyperemia, and tenderness. What are the main components in the development of this reaction?
A. Mononuclears, T-lymphocytes and lymphokines
B. Granulocytes, T-lymphocytes and IgG
C. Plasmatic cells, T-lymphocytes and lymphokines
D. B-lymphocytes, IgM
E. Macrophages, B-lymphocytes and monocytes

34. Histological examination of a micro specimen presenting a malignant lung tumour revealed that the tumor consisted of lymphocyte-like cells forming any structures. Stroma is mildely marked, there are a lot of mitoses and necroses. What tumour is it?
A. Small cell carcinoma
B. Fibroma
C. Squamous cell nonkeratinous carcinoma
D. Squamous cell keratinous carcinoma
E. Adenocarcinoma

35. Clinical examination of a female patient revealed the reduction of basal metabolism by 40%, gain in body mass, drop of body temperature, face puffiness, sexual dysfunctions, inertness, and apathy, lowered intelligence. These symptoms are caused by dysfunction of the following endocrine gland:
A. Hypofunction of thyroid gland
B. Hypofunction of parathyroid glands
C. Hypophysishyperfunction
D. Epiphysis hypofunction
E. Hyperfunction of the thyroid gland

36. A 35 y.o. patient diagnosed with sterility came to the gynecological department for diagnostic biopsy of the endometrium. Microscopic examination revealed that the mucous membrane is edematous, uterine glands are convoluted and filled with thick secreta. The excess of the following hormone causes such changes in the endometrium:
A. Progesterone
B. Estrogen
C. Testosterone
D. Somatotropin
E. ACTH

37. Cystinuria in humans shows itself in the form of cystine stones in kidneys (homozygotes) or else an increased rate of cystine in the urine (heterozygotes). Cystinuria is a monogenic disease. Specify the type of interaction between cystinuria genes and the normal rate of cystine in urine:
A. Semidominance
B. Epistasis
C. Complete dominance
D. Complementarity
E. Codomination

38. Analysis of urine from a 24-year-old man revealed the following changes: daily diuresis - 10 l, relative density - 1,001, qualitative alterations are absent. A patient complains of excessive thirst, frequent urination. What is the most likely cause of this disease?
A. Vasopressin hyposecretion
B. Glucocorticoid hypersecretion
C. Vasopressin hypersecretion
D. Relative insulin insufficiency
E. Aldosteron hypersecretion

39. A patient diagnosed with acute pancrea-

titis was admitted to the surgical department. Which drug administration would be pathogenetically grounded?
A. Contrical
B. Tripsin
C. Chymotripsin
D. Pancreatin
E. Fibrinolysin

40. A patient complains about retrosternal pain, dyspnea, and palpitation. After examination, he was diagnosed with coronary heart disease and prescribed verapamil. What is the mechanism of its action?
A. It blocks calcium channels
B. It blocks ^-adrenoreceptors
C. It blocks 3-adrenoreceptors
D. It blocks potassium channels
E. It blocks sodium channels

41. A 13-year-old patient complains of general weakness, dizziness, fatiguability. Mental retardation is also observed. Examination revealed a high concentration of valine, isoleucine and leucine in blood and urine. The patient's urine has a specific smell. What is the likely cause of such a condition?
A. Maple syrup urine disease
B. Addison's disease
C. Tyrosinosi
D. Histidinemia
E. Basedow's disease

42. In the mountains, some clinically healthy people present with anemia symptoms. The blood test can reveal sickle cells. What is the genotype of such people?
A. Aa
B. aa
C. AA
D. XcXc
E. XCXc

43. A patient with a fracture of femoral bone in the area of the surgical neck got symptoms of acute dextroventricular insufficiency as a result of pulmonary embolism. What type of embolism is it?
A. Fat
B. Metastatic
C. Gas
D. Air
E. Tissue

44. Examination of a 42-year-old patient suffering from paradontosis revealed some roundish calcified formations 2-3 mm in diameter in the coronal pulp. Name these structures:
A. Denticles
B. Interglobular dentin
C. Interglobular spaces
D. Sclerotic dentin
E. Dead dentin

45. Glucose concentration in a patient's blood is 15 millimole/l (reabsorption threshold is 10millimole/l). What effect can be expected?
A. Glucosuria
B. Diuresis reduction
C. Reduced glucose reabsorption
D. Reduced vasopressin secretion
E. Reduced aldosterone secretion

46. A boy has fallen down from the tree. Now he finds it difficult to abduct his arm till it takes a horizontal position. Which muscle is most probably injured?
A. M.deltoideus
B. M.tricepsbrachii
C. M.anconeus
D. M.coracobrachialis
E. M.supinator

47. Treatment of many diseases involves the use of cocarboxylase (thiamine pyrophosphate) for supplying cells with energy. What metabolic process is activated in this case?
A. Oxidizing decarboxylation of pyruvate
B. Glutamate deamination
C. Amino acids decarboxylation

D. Decarboxylation of biogenic amines
E. Detoxication of harmful substances in liver

48. A patient was admitted to a surgical department for an operation. He has to undergo neuroleptanalgesia. To achieve neuroleptanalgesia, it would be rational to combine fentanyl with the following medicine:
A. Droperidol
B. Cholosasum
C. Salbutamol
D. Pilocarpine
E. Fraxiparine

49. A 35-year-old patient with chronic periodontitis underwent excision of a cyst 3 cm in diameter found at the root of the 15th tooth. Histological examination revealed that it had a thin wall formed by mature connective tissue infiltrated by lymphocytes and plasmatic cells. Its internal surface was lined with multilayer pavement epithelium with no signs of keratinization; the cavity contained serous exudate. What is the most likely diagnosis?
A. Radicular cyst
B. Follicular cyst
C. Primordial cyst
D. Cherubism
E. Follicular ameloblastoma

50. A patient has dislocation of his mandible that caused impairment of salivation and gustatory sensitivity of anterior 2/3 of his tongue. What nerve was damaged?
A. Tympanichord
B. Greater petrosal nerve
C. Lesser petrosal nerve
D. Deep petrosal nerve
E. Sublingual nerve

51. A patient has applied eye drops containing atropine, which resulted in persistent mydriasis. Which muscle was blocked?
A. Pupil-contracting
B. Pupil-dilating
C. Ciliate
D. Rectus
E. Oblique

52. On examination, a male patient was diagnosed with acute radiation disease. Laboratory examination revealed an abrupt decrease in serotonin found in blood platelets. A likely cause of the decrease in serotonin concentration would be a metabolic imbalance of the following substance:
A. 5-oxytryptophane
B. Tyrosine
C. Histidine
D. Phenylalanine
E. Serine

53. Microscopic examination of a parenchymatous organ revealed that its epithelial cords formed glomerular, fascicular and reticular zones. Accumulations of chromaffin cells presented the central part of the organ. Specify this organ:
A. Adrenal gland
B. Thyroid gland
C. Epiphysis
D. Liver
E. Hypophysis

54. Children often have laboured nasal breathing, which is caused by overdevelopment of lymphoid tissue of the pharyngeal mucous membrane. This phenomenon may cause enlargement of the following tonsils:
A. Tonsillapharyngea
B. Tonsillapalatina
C. Tonsillalingualis
D. Tonsillatubaria
E. All above-mentioned

55. A 65-year-old male patient complains about being unable to move his lower jaw in a backward direction. It was revealed that after a fall, the following muscle was damaged:
A. Temporal
B. Masticatory

C. Lateral pterygopalatine
D. Medial pterygopalatine
E. Digastric

56. A patient in a cardiological department has arrhythmia. A doctor administered him amiodarone. What is the main mechanism of amiodarone antiarrhythmic action?
A. It blocks mostly potassium channels
B. It inhibits cholinoreceptors
C. It stimulates histamine receptors
D. It activates serotonin receptors
E. It alters myocardium susceptibility to the acetylcholine

57. A 25-year-old patient with clinical presentations of nephrotic syndrome underwent puncture biopsy of a kidney. Microscopical examination revealed the expansion of the epithelium cells of proximal nephron tubules, vacuoles containing transparent liquid in the cytoplasm, peripheral deviation of the nucleus. What degeneration was revealed in the tubule epithelium?
A. Hydropic
B. Granular
C. Adipose
D. Keratinization
E. Hyaline drop

58. Pellagra may be caused by maize domination and a low quantity of animal foodstuffs in the dietary intake. This pathology results from the lack of the following amino acid:
A. Tryptophane
B. Isoleucine
C. Phenylalanine
D. Methionine
E. Histidine

59. Histological examination of the myocardium of a 47-year-old patient with rheumatic heart disease(section material) revealed some big, visually empty vacuoles within the cardiomyocytes. They turn black when stained with osmic acid, and yellow-red when stained with sudan III. What pathological process is it?
A. Adipose degeneration
B. Hyaline drop degeneration
C. Hydropic degeneration
D. Carbohydrate degeneration
E. Dysproteinosis

60. A histological specimen of a mandibular gland shows an excretory duct. The mucous membrane of the duct is lined with cubic epithelium whose cells have weakly developed organelles. What excretory duct is it?
A. Intercalated
B. Striated
C. Interlobular
D. Common excretory
E. –

61. A patient suffering from non-insulin-dependent diabetes mellitus was prescribed glibenclamide internally. What is the mechanism of its hypoglycemic action?
A. It stimulates the generation of endogenous insulin by beta cells
B. It inhibits gluconeogenesis in the liver
C. It intensifies the utilization of glucose by peripheral tissues
D. It inhibits glucose absorption in the bowels
E. It inhibits alpha-glucosidase and polysaccharide breakdown

62. A patient suffering from tuberculosis was treated with rifampicin, which caused the drug resistance of tuberculosis mycobacteria. In order to reduce mycobacteria resistance, rifampicin should be combined with the following drug:
A. Isoniazid
B. Acyclovir
C. Intraconazole
D. Metronidazole
E. Amoxicillin

63. According to the law of constant chro-

mosome number, each species of most animals has an adefinite and constant number of chromosomes. The mechanisms providing this constancy in sexual reproduction of the organisms is called:
A. Meiosis
B. Shizogony
C. Amitosis
D. Regeneration
E. Gemmation

64. A patient with edemata was prescribed a K+-retaining diuretic - aldosterone antagonist. What drug is it?
A. Spironolactone
B. Digoxin
C. Procainamide hydrochloride
D. Clonidine
E. Alopurinole

65. A patient complains about having pain during mastication, especially when he moves his jaw forward or sideward. What muscles are damaged?
A. Lateral pterygoid
B. Medial pterygoid
C. Masticatory
D. Mylohyoid
E. Temporal

66. Laboratory of extremely dangerous infections received a sample taken from a patient with assumed cholera. What express-diagnostics method can confirm this diagnosis?
A. Immunofluorescence test
B. Complement binding reaction
C. Agglutination test
D. Precipitation reaction
E. Hemagglutination reaction

67. A patient consulted a dentist about pains, reddening and swelling of gums. The dentist assumed herpetic gingivostomatitis. What virus might have caused this disease?
A. Herpes simplex virus type 1
B. Herpes simplex virus type 2
C. Herpes zoster
D. Cytomegalic virus
E. Epstein-Barr virus

68. It was revealed that a patient with coagulation failure has thrombosis of a branch of the inferior mesenteric artery. What bowel segment is affected?
A. Colon sigmoideum
B. Ileum
C. Caecum
D. Colon transversum
E. Colon ascenden

69. While exercising on a bicycle ergometer, a sportsman was trying to choose such a load that would allow him to achieve the maximal performance of his muscles. What load intensity is required in this case?
A. Middle
B. Maximal
C. Minimal
D. Alternating minimal and maximal
E. Continuous minimal

70. A man who has been staying in a stuffy room for a long time lost consciousness. He regained consciousness after inhalation of ammonia spirit vapour. This substance's effect is connected with direct influence upon the following structures:
A. Receptors of upper airways
B. Vasculomotorcentre
C. Respiratory centre
D. Resistive vessels
E. Capacitive vessels

71. Examination of a bronchial tissue sample revealed atrophy of mucous membrane, cystic degeneration of glands, focal metaplastic changes of lining prismatic epithelial cells into multilayer squamous cells; increase in goblet cell number; in some parts of the bronchial wall and especially in the mucous membrane there was marked cellular inflammatory infiltration and growth of granulation tissue bulging into the bron-

chial lumen in the form of a polyp. What is the most likely diagnosis?
A. Chronic bronchitis
B. Lobar pneumonia
C. Acute bronchitis
D. Bronchopneumonia
E. Interstitial pneumonia

72. A lightly dressed man is standing in a room; air temperature is + 14° C. Windows and doors are closed. In what way does he lose heat most of all?
A. Heat radiation
B. Heat conduction
C. Convection
D. Evaporation
E. Perspiration

73. A teenager had his tooth extracted under novocain anesthesia. Ten minutes later, he presented with skin pallor, dyspnea, hypotension. When this reaction is developed, and the allergen achieves tissue basophils, it reacts with:
A. IgE
B. IgA
C. IgD
D. IgM
E. T-lymphocytes

74. A histological specimen presenting a tooth slice shows that the intercellular dentin substance contains collagen fibers being tangential to the dentino enamel junction and perpendicular to the dentinal tubules (Ebner's fibers). This dentin layer is called:
A. Parapulpar dentin
B. Mantle dentin
C. Granular layer
D. Interglobular dentin
E. Secondary dentin

75. Examination of a 60 y.o. man's oral cavity revealed the following changes: the 26th and 27thtooth are covered with metallic crowns that plunge deep into the gums. There is a parodontal pouch 0,7 cm deep between them containing some pus. Gingival papillae of these teeth are hyperemic, edematic, cyanotic, bleed as a reaction to touching by a dental explorer. X-ray picture shows resorption of interdental septa of 1/2 of the tooth root. What is the most probable diagnosis?
A. Local parodontitis
B. Hypertrophic gingivitis
C. Chronic catarrhal gingivitis
D. Generalized parodontitis
E. –

76. A patient complains about shin pain, which is getting worse during walking. Objectively: there is edema and reddening along the vein. A doctor administered a direct coagulant to be applied topically. What drug can be applied for this purpose?
A. Heparin ointment
B. Salicylic ointment
C. Troxevasin ointment
D. Butadion ointment
E. Thrombin

77. A patient was diagnosed with seborrheic dermatitis associated with vitamin H (biotin)deficiency. The patient has disturbed activity of the following enzyme:
A. Acetyl-CoA-carboxylase
B. Pyruvate decarboxylase
C. Alcohol dehydrogenase
D. Amino transferase
E. Carbomoyl phosphate synthetase

78. In hemotransfusions, it is recommended to transfuse only phenotype-matched blood. According to the AB0 system, blood group is determined by:
A. Carbohydrate determinants of erythrocyte membranes
B. Proteins of blood serum
C. Protein determinants of erythrocyte membranes
D. Protein-polysaccharide components of leukocytes
E. Carbohydrate determinants of leukocyte

membranes

79. Examination of a 30-year-old man's mandible revealed in the region of his molar a dense tumour-like formation that significantly deformed the mandible. Here and there the formation wasn't fully detached from the bone tissue. Microscopical examination of a tissue sampling revealed that stroma had some cords and follicles with odontogenous cylindric epithelial cells in peripheria and stellate cells resembling of the enamel oragan pulp in the centre. What is the most likely diagnosis?
A. Ameloblastoma
B. Adenomatoid tumour
C. Primary intraosteal cancer
D. Adenocarcinoma
E. Osteoclastoma

80. A 70-year-old patient is diagnosed with brainstem hemorrhage. Examination revealed increased tonus of flexor muscles accompanied by decreased tonus of extensor muscles. Such changes in muscle tonus can be explained by the irritation of the following brain structures:
A. Red nuclei
B. Vestibular nuclei
C. Quadrigeminal plate
D. Black substance
E. Reticular formation

81. What artery may be damaged during the conduction anesthetization in the region of the mandibular foramen?
A. Inferior alveolar artery
B. Buccal artery
C. Lingual artery
D. Pterygoid branches
E. Median meningeal artery

82. A 60-year-old patient presents with intestinal hypoperistalsis. Which of the following food stuff will stimulate peristalsis most of all?
A. Brown bred
B. White bread
C. Meat
D. Lard
E. Tea

83. A patient consulted a dentist about a lesion of his oral mucosa. He was diagnosed with herpetic stomatitis. Which of the following drugs will have an effect on the etiotropic factor?
A. Acyclovir
B. Dimedrol
C. Paracetamol
D. Levamisole
E. Furacilinum

84. Blood of a child and putative father was referred to forensic medical examination for affiliation. What chemical components should be identified in the blood under the study?
A. DNA
B. Transfer RNA
C. Ribosomal RNA
D. Messenger RNA
E. SnRNA

85. As a result of iodine deficiency in foodstuffs, Transcarpathian people often have an endemic goiter. The following type of variability causes this disease:
A. Modification
B. Mutational
C. Combinatorial
D. Ontogenetic
E. Correlative

86. A 14-year-old patient was diagnosed with Hutchinson's triad: barrel-shaped incisors, parenchymatous keratitis, and deafness. The revealed presentations are consistent with the following disease:
A. Syphilis
B. Toxoplasmosis
C. Lepra
D. Tuberculosis
E. Opisthorchiasis

87. During physical exercise, people are less sensitive to pain. The reason for it is the activation of:
A. Antinociceptive system
B. Nociceptive system
C. Thyroid gland functions
D. Sympathoadrenal system
E. Adrenal gland functions

88. Coprological examination of a patient's feces revealed small operculate eggs. It is known from the anamnesis that the patient often consumes fish. What fluke parasitizes in the patient's organism?
A. Cat liver fluke
B. Blood fluke
C. Lung fluke
D. Liver fluke
E. Lancet fluke

89. In spring, a patient experiences petechial hemorrhages, loosening of teeth, high liability to colds. A doctor supposes hypovitaminosis C. In this respect loosening of teeth can be explained by:
A. Structural failure of collagen in the periodontal ligaments
B. Structural change of glycosaminoglycan
C. Increased permeability of periodont membranes
D. Mechanical damage of teeth
E. Disturbed oxidation-reduction process in the periodont

90. A girl who was provisionally diagnosed with Turner's syndrome came to a genetic consultation. The diagnosis can be specified by means of the following genetic method:
A. Sex chromatin test
B. Genealogical
C. Hybridological
D. Biochemical
E. Dermatoglyphics

91. A female patient who has chronic hepatitis complains about increased susceptibility to barbiturates, which previously induced no symptoms of intoxication. It may be explained through the following liver dysfunction:
A. Metabolic
B. Cholepoietic
C. Hemodynamic
D. Hemopoietic
E. Phagocytal

92. A female patient with a tumour of the pancreas has developed mechanic jaundice resulting from compression of a bile-excreting duct. Which duct is compressed?
A. Ductus choledochus
B. Ductus cysticus
C. Ductus hepaticuscommunis
D. Ductus hepaticusdexter
E. Ductus hepaticus sinister

93. A 35-year-old patient consulted a dentist about the low density of dental tissues, increased fragility of teeth on eating solid food. In order to determine Ca/P relation, a scrape of enamel was sent to the laboratory. What value of this index is suggestive of intensified demineralization?
A. 0,9
B. 1,67
C. 1,85
D. 2,5
E. 1,5

94. A 38-year-old patient takes aspirin and sulfanilamides. After their intake, intensified erythrocyte hemolysis is observed, which is caused by a deficiency of glucose 6-phosphate dehydrogenase. The failure of the following coenzyme causes this pathology:
A. NADP - H
B. FAD - H2
C. Pyridoxal phosphate
D. FMN - H2
E. Ubiquinone

95. A patient has increased pyruvate con-

centration in blood. Large amount of it is excreted with urine. What vitamin deficiency is observed?
A. Bi
B. E
C. B_3
D. B_6
E. B_2

96. Blood analysis of a patient who has jaundice revealed an increase of total bilirubin by its indirect fraction. Urine and feces have intense colouring. What is the most probable mechanism of these abnormalities?
A. Increased hemolysis of erythrocytes
B. Obstruction of bile outflow from the liver
C. Damage of liver parenchyma
D. Impaired generation of direct bilirubin
E. Impaired transformation of urobilinogen in the liver

97. A female patient suffering from secondary syphilis got foci of skin depigmentation in the upper parts of her back. What pathological process is it?
A. Leukoderma
B. Metaplasia
C. Leukoplasia
D. Dysplasia
E. Parakeratosis

98. A patient underwent gastroscopy that revealed an insufficient amount of mucus covering the mucous membrane. This phenomenon is caused by the dysfunction of the following cells of the stomach wall:
A. Cells of prysmatic glandular epithelium
B. Parietal cells of gastric glands
C. Principal exocrinocytes of gastric glands
D. Cervical cells of gastric glands
E. Endocrinocytes

99. Autopsy of an aged man who had been suffering from acute intestinal upset for the last 2weeks revealed the following changes in the rectum and sigmoid colon: mucous membrane surface was coated with brown-green film. The intestine wall was thickened, and its cavity was extremely constricted. Microscopical examination revealed variously deep penetrating necrosis of mucous membrane; necrotic masses contained fibrin fibers and bore signs of leukocytic infiltration. What is the most likely diagnosis?
A. Fibrinous colitis
B. Catarrhal colitis
C. Ulcerative colitis
D. Follicular collitis
E. –

100. Specimen of a patient's sputum was stained with the following dyes and reagents: Ziehl's solution, methylene blue solution, 5% solution of sulfuric acid. What staining method was applied?
A. Ziehl-Neelsen
B. Burri's
C. Gram's
D. Peshkov's
E. Neisser's

101. A newborn didn't take his first breath. The autopsy revealed that despite unobstructed respiratory tracts, the baby's lungs didn't expand. What might be the cause of it?
A. Surfactant absence
B. Bronchostenosis
C. Bronchi rupture
D. Apical cap of lung
E. Alveoli enlargement

102. Epithelium regeneration of the mucous membrane of the oral cavity (cell reproduction) was accompanied by semiconservative DNA replication (self-reproduction). Nucleotides of a new DNA chain are complementary to:
A. Maternal chain
B. Sense codons
C. DNA-polymerase enzyme

C. DNA-polymerase enzyme
D. Introns
E. RNA-polymerase enzyme

103. A 49-year-old woman spent a lot of time standing. As a result of it she got leg edema. What is the most likely cause of the edema?
A. Increase in hydrostatic pressure of blood in veins
B. Decrease in hydrostatic pressure of blood in veins
C. Decrease in hydrostatic pressure of blood in arteries
D. Increase in oncotic pressure of blood plasma
E. Increase in systemic arterial pressure

104. A patient with high obesity was recommended to take carnitine as a food additive for better fat burning. What function is fulfilled by carnitine in the process of fat oxidation?
A. Transport of fatty acids from the cytosol to the mitochondria
B. Transport of fatty acids from the fat depots to the tissues
C. Participation in one of the reactions of beta-oxidation of fatty acids
D. Fatty acid activation
E. Intracellular lipolysis activation

105. A female patient was admitted to the hospital with pleuritis. Which area of the pleural cavity contains most exudate?
A. Costodiaphragmatic recess
B. Phrenicomediastinal recess
C. Costomediastinal recess
D. Under the pleural cupula
E. Under the pulmonary radix

106. Heterozygous parents with A(II) and B (III) blood group according to the AB0 system have got a child. What is the probability that the child has 0 (I) blood group?
A. 25%
B. 100%
C. 75%
D. 50%
E. 0%

107. During an operation on a woman, it became necessary to ligate her uterine artery. What formation can be accidentally ligated together with this artery?
A. Ureter
B. Uterine tube
C. Round ligament of uterus
D. Internal iliac vein
E. Urethra

108. Examination of a patient who complains of deglutitive problem revealed a tumour-like eminence 1-2 cm in diameter on the tongue root in the region of the cecal foramen. These are overgrown remnants of the following gland:
A. Thyroid
B. Parathyroid
C. Adenohypophysis
D. Thymus
E. Sublingual

109. The introduction of a local anesthetic to a patient resulted in the development of anaphylactic shock. What is the leading mechanism of blood circulation disturbance?
A. Decrease of vascular tone
B. Hypervolemia
C. Pain
D. Activation of the sympathoadrenal system
E. Reduction of contractile myocardium function

110. 30 minutes after a road accident, a 35-year-old man was found to have a massive trauma of his lower extremities without significant external hemorrhage. The injured is in an excited state. What is the leading component of traumatic shock pathogenesis that requires immediate correction?
A. Pain

B. Internal hemorrhage
C. Internal plasm loss
D. Intoxication
E. Internal organs dysfunction

111. As a result of a trauma, a patient is unable to extend his cubital articulation. It may be caused by dysfunction of the following muscle:
A. Musculus triceps brachii
B. Musculus infraspinatus
C. Musculuslevatorscapule
D. Musculusteres major
E. Musculus subscapularis

112. A scheme shows an exocrine gland with an unbranched excretory duct into which only one terminal part in the form of a saccule opens. In compliance with the morphological classification of exocrine glands, such gland is called as follows:
A. Simple unbranched alveolar
B. Complex branched alveolar
C. Simple branched tubular
D. Complex unbranched alveolar
E. Complex unbranched alveolar-tubular

113. A 45-year-old patient was admitted to the resuscitation department with laryngeal edema. During tracheotomy a surgeon accidentally cut across the jugular venous arch that lies within:
A. Spatiuminteraponeuroticumsuprasternale
B. Spatiumpretracheale
C. Spatiumretropharyngeale
D. Spatiuminterscalenum
E. Spatiumantescalenum

114. A male patient underwent an operation on account of an inguinal hernia. During the operation, a surgeon damaged the content of the inguinal canal. What structure was damaged?
A. Funiculus spermaticus
B. Urarchus
C. Lig. teres uteri
D. Lig. inguinale
E. –

115. A patient was admitted to a hospital because of a penetrating wound of the mouth floor. Which muscle is injured?
A. Mylohyoid
B. Thyrohyoid
C. Stylohyoid
D. Omohyoid
E. Sternohyoid

116. A patient complains about pain in his upper jaw and toothache. Objectively: the patient feels pain when pressed in the region of the supraorbital foramen. What nerve is affected?
A. The second branch of trigeminus
B. The first branch of trigeminus
C. The third branch of trigeminus
D. Trochlear nerve
E. Facial nerve

117. Autopsy of a 70-year-old man who died from cardiac insufficiency revealed deformed and constricted coronary arteries. The artery section shows that the inti-mal surface is stony hard and fragile. It is also whitish, with a nodular appearance. What stage of atherosclerosis is it?
A. Atherocalcinosis
B. Liposclerosis
C. Atheromatosis
D. Lipoidosis
E. Ulceration

118. During the examination of a 36-year-old woman, a dentist revealed a formation in the form of a nodule up to 0,8 cm in diameter, of dark brown-red colour, soft, on a wide base. The formation was found on the buccal surface of gum in the region of the 2nd molar. Histological examination revealed that the formation had plenty of sinusoid vessels and a lot of roundish mononuclear and big multinuclear cells; in some parts, accumulations of hemosiderin gran-

ules could be found. What is the most likely diagnosis?
A. Giant-cell epulis
B. Root granuloma
C. Angiomatous epulis
D. Ameloblastoma
E. Mandibular osteoclastoma

119. After prophylactic medical examination a 7 y.o. boy was diagnosed with Lesch-Nyhan syndrome (only boys fall ill). His parents are healthy, but his grandfather, by his mother's side, has the same disease. What type of inheritance is it?
A. Recessive, sex-linked
B. Dominant, sex-linked
C. Autosomal and recessive
D. Autosomal and dominant
E. Semidominance

120. To prevent possible negative effect upon the gastric mucsa, a patient with rheumatoid arthritis was administered a nonsteroid anti-inflammatory drug - a COX-2 selective inhibitor. Specify this drug:
A. Celecoxib
B. Analgine
C. Acetylsalicinic acid
D. Butadion
E. Ibuprofen

121. For infection prevention, a patient who underwent an appendectomy was prescribed a cephalosporin antibiotic. Antimicrobial activity of these antibiotics is called forth by the disturbance of the following process:
A. Microbial wall formation
B. Nucleic acid synthesis
C. Ribosomal protein synthesis
D. Energy metabolism
E. Cholinesterase block

122. Two weeks after hemotransfusion, a patient developed a fever. What protozoal disease can be suspected?
A. Malaria
B. Toxoplasmosis
C. Leishmaniasis
D. Amebiasis
E. Trypanosomiasis

123. Autopsy of a 35 y.o. woman revealed not only enlargement of many lymph nodes but also enlarged spleen weighing 600,0. Its incision showed that it was heterogeneous, dark red, dense with greyish-yellow necrotic areas up to 1 cm in diameter (porphyritic spleen). What disease can be assumed?
A. Lymphogranulomatosis
B. Chronic lymphoid leukosis
C. Chronic myeloid leukosis
D. Cancer metastases
E. Lymphosarcoma

124. In the course of an experiment, thalamocortical tracts of an experimental animal were cut through. The animal didn't lose the following sensations:
A. Olfactory
B. Auditory
C. Exteroceptive
D. Visual
E. Nociceptive

125. A sample taken from the pharynx of a patient with angina was inoculated on the blood-tellurite agar. IIIe resulted in the growth of grey, radially striated (in the form of rosettes) colonies up to 4-5mm in diameter. Microscopically there can be seen gram-positive rods with club-shaped ends arranged in the form of spread fingers. What microorganisms are these?
A. Corynebacteriadiphtheriae
B. Clostridium botulinum
C. Diphtheroids
D. Streptococci
E. Streptobacilli

126. A 60-year-old female patient presents with hypoactivity of the principal digestive enzyme of saliva. It is usually accompanied by disturbed primary hydrolysis of:

A. Carbohydrates
B. Fats
C. Proteins
D. Cellulose
E. Lactose

127. A man is in the state of rest. He has been forcing himself to breathe deeply and frequently for3-4 minutes. What effect will it have upon the acid-base balance of the organism?
A. Respiratory alkalosis
B. Respiratory acidosis
C. Metabolic alkalosis
D. Metabolic acidosis
E. There will be no change in acid-base balance

128. A patient complains about attacks of laboured breathing, dizziness. He works at a chemical plant producing hydrocyanic acid. The described symptoms might be associated with dysfunction of the following enzyme:
A. Cytochrome oxidase
B. Lactate dehydrogenase
C. Succinate dehydrogenase
D. Catalase
E. Pyruvate dehydrogenase

129. A patient with toxic paralysis of the respiratory centre was given several cordiamin injections intended to stimulate the respiratory centre. What side effects may arise?
A. Clonic convulsions
B. Tonic convulsions
C. Arrhythmia
D. Collapse
E. Bronchiospasm

130. Patients with erythropoietic porphyria (Gunther's disease) are known to have photoesthetic skin, red urine. In the ultraviolet light, their teeth exhibit bright red fluorescence. This disease is associated with deficiency of the following enzyme:
A. Uroporphyrinogen-III-cosynthase
B. Uroporphyrinogen-I-synthase
C. Delta-aminolevulinate synthase
D. Uroporphyrinogen decarboxylase
E. Ferrochelatase

131. Osteolathyrism is characterized by a loss of tensile strength of collagen, which is induced by a significant decrease in the formation of cross-links in collagen fibrils. The cause for it is the reduced activity of:
A. Lysyl oxidase
B. Monoamine oxidase
C. Prolyl hydroxylase
D. Lysyl hydroxylase
E. Collagenase

132. While examining a blood smear taken from a patient and stained by Romanovsky's method, a doctor revealed some protozoa and diagnosed the patient with Chagas disease. What protozoan is the causative agent of this disease?
A. Trypanosomacruzi
B. Toxoplasma gondii
C. Leishmaniadonovani
D. Leishmaniatropica
E. Trypanosomabrucei

133. A patient has coronary heart disease. For its treatment, he was prescribed an antianginal drug that activates guanylate cyclase and accumulates cyclic guanosine monophosphate in the myocardium cells. What drug is it?
A. Isosorbidemononitrate
B. Dipiridamol
C. Panangine
D. Validol
E. Verapamil

134. A sensory nerve ganglion consists of roundish neurocytes with one process that divides into axon and dendrite at a certain distance from perikaryon. What are such cells called?
A. Pseudounipolar

B. Unipolar
C. Bipolar
D. Multipolar
E. Apolar

135. A patient who has been taking a certain drug for a long time cannot discontinue the use of it because this causes psychic and somatic dysfunctions. The syndrome occurring at refraining from the use of a drug is called:
A. Abstinence
B. Sensitization
C. Idiosyncrasy
D. Tachyphylaxis
E. Cumulation

136. ECG of a patient shows that T-waves in the second standard extremity lead are positive, their amplitude and duration are normal. It would be true that the following process is taking its normal course in the cardiac ventricles:
A. Repolarization
B. Depolarization
C. Excitement
D. Contraction
E. Relaxation

137. Cytogenetic examination of a patient with dysfunction of the reproductive system revealed normal karyotype 46,XY in some cells, but most cells have Klinefelter's syndrome karyotype -47,XXY Such phenomenon of cell inhomogeneity is called:
A. Mosaicism
B. Inversion
C. Transposition
D. Duplication
E. Heterogeneity

138. A 40-year-old female patient has enlarged thyroid gland. On palpation, the gland is dense, its surface is slightly tuberous. Histological examination of gland sample revealed diffuse infiltration of tissue by the cells, formation of lymphoid follicles. What disease is it?
A. Autoimmune thyroiditis
B. Endemic goiter
C. Sporadic goiter
D. Diffuse toxic goiter
E. Riedel's disease

139. A patient has roundish ulcers on his face, inflammation, and enlargement of lymph nodes. These symptoms turned up as a result of mosquito bites. Laboratory examination of discharge from the ulcers revealed unicellular aflagellar organisms. What is the most probable diagnosis?
A. Dermatotropicleishmaniasis
B. Toxoplasmosis
C. Scabies
D. Trypanosomiasis
E. Myiasis

140. A 5-month-old boy was hospitalized for tonic convulsions. He has a lifetime history of this disease. Examination revealed coarse hair, thinned and fragile nails, pale and dry skin. In blood: calcium - 1,5 milli-mole/l, phosphor - 1,9 milli-mole/l. These changes are associated with:
A. Hypoparathyroidism
B. Hyperparathyroidism
C. Hyperaldosteronism
D. Hypoaldosteronism
E. Hypothyroidism

141. Autopsy of a 68-year-old man who died from chronic cardiac insufficiency revealed deformed, thickened, conjoined cusps of the mitral valve. Along the edge of joining, there were small (1-2mm) thrombs. What form of endocarditis caused the development of chronic cardiac insufficiency?
A. Recurrent verrucous
B. Diffuse
C. Acute verrucous
D. Fibroplastic
E. Polypoulcerous

142. Examination of a patient with chronic

renal insufficiency revealed an increase in residual nitrogen concentration in blood up to 35 millimole/l, more than half of which is urea. What type of hyperazotemia is it?
A. Retentional
B. Hepatic
C. Productional
D. Residual
E. Combined

143. During the examination of a child's oral cavity, a pediatrician found eight incisors. The child's development corresponds to his age. How old is the child?
A. 10-12 months
B. 6-7 months
C. 7-8 months
D. 12-15 months
E. 16-20 months

144. Examination of a patient, suffering from atrophic gastritis, revealed megaloblastic anemia. The anemia is likely to be caused by the deficiency of the following substance:
A. Gastromucoproteid
B. Vitamin B6
C. Vitamin Bi
D. Iron
E. Erythropoietin

145. A patient has secretory dysfunction of the submandibular salivary gland. Which nerve is responsible for its vegetative innervation?
A. Chorda tympani
B. N.auriculotemporalis
C. N.mandibularis
D. N.petrosus major
E. N.petrosus minor

146. Liver puncture biopsy in a patient with hepatocellular insufficiency revealed vacuolar, ballooning degeneration of hepatocytes, necrosis of single cells, Councilman's bodies, infiltration of the portal and lobular stroma mainly by lymphocytes and macrophages with a small number of polymorphonuclear leukocytes. What is the most likely diagnosis?
A. Acute viral hepatitis
B. Chronic persisting hepatitis
C. Chronic active hepatitis
D. Autoimmune hepatitis
E. Alcoholic hepatitis

147. Dehelmintization of a patient revealed some long fragments of a helminth with a segmented structure. Mature segments were rectangular, 30x12 mm large, closed-type matrix was in the form of a stem with 17-35 lateral branches. Specify this helminth:
A. Hookless tapeworm
B. Alveococcus
C. Echinococcus
D. Dwarf tapeworm
E. Armed tapeworm

148. As a result of a trauma, a patient has developed traumatic shock. The patient is fussy, talkative, pale. AP- 140/90 mm Hg, Ps- 120 bpm. This condition is consistent with the following shock phase:
A. Erectile
B. Latent
C. Terminal
D. Torpid
E. –

149. The study of a tubular organ revealed that its median membrane consists of solid hyaline rings. What epithelium lines mucous membrane of this organ?
A. Multinuclear prismatic ciliated
B. Monostratal prismatic glandular
C. Monostratal prismatic with a border
D. Multistratal squamous nonkeratinizing
E. Monostratal cubical

150. As a result of a road accident, a 26-year-old man is in the torpid phase of shock. Blood count:leukocytes - 3,2 • 109/l. What is the leading mechanism of leukopenia development?

A. Leukocyte redistribution in the bloodstream
B. Leukopoiesis inhibition
C. Faulty release of mature leukocytes from the bone marrow into the blood
D. Leukocyte destruction in the hematopoietic organs
E. Increased excretion of the leukocytes from the organism

151. Examination of a 35-year-old patient included histological analysis of the red bone marrow punctate that revealed a significant increase in the megakaryocyte number. It will cause the following alterations in the peripheral blood:
A. Thrombocytopenia
B. Leukocytosis
C. Thrombocytosis
D. Agranulocytosis
E. Leukopenia

152. Examination of urine in a newborn revealed the presence of citrulline and high ammonia concentration. This baby is most likely to have the disorder of the following substance production:
A. Urea
B. Uric acid
C. Ammonia
D. Creatinine
E. Creatine

153. A patient has torticollis. Which neck muscle is damaged?
A. M.sternocleidomastoideus
B. M.omohyoideus
C. M.platisma
D. M.sternohyoideus
E. M.mylohyoideus

154. Examination of a kidney tissue sampling revealed leukocyte infiltration of interstitial tissue; miliary abscesses; dystrophic tubules filled with desquamated epithelium and leukocytes. Whatis the most likely diagnosis?
A. Pyelonephritis
B. Glomerulonephritis
C. Pyelitis
D. Necrotic nephrosis
E. Nephrolithiasis

155. The total number of leukocytes in the patient's blood is 90 • 109/l. Leukogram: eosinophils - 0%,basophils - 0%, juvenile - 0%, stab neutrophils - 2%, segmentonuclear cells - 20%,lymphoblasts -1%, prolymphocytes - 2%, lymphocytes - 70%, monocytes - 5%, Botkin-Gumprecht cells. Clinical examination revealed enlarged cervical and submandibular lymph nodes. Such clinical presentations are typical for the following pathology:
A. Chronic lympholeukosis
B. Acute lympholeukosis
C. Lymphogranulomatosis
D. Infectious mononucleosis
E. Chronic myeloleukosis

156. A 70-year-old man has developed prosthetic stomatitis. Apart from this, he was found to have an evident lesion of mouth corners. Microscopicalexaminati- on revealed large ovoid gram-positive cells. What microorganisms are most likely to be the leading etiological agent of such a lesion?
A. Candida fungi
B. Streptococci
C. Staphylococci
D. Neisseria
E. Corynebacteria

157. A patient being treated in the burns department has a suppurative complication. The pus is of bluish-green colour that is indicative of infection caused by Pseudomonas aeruginosa. What factor is typical for this causative agent?
A. Gram-negative stain
B. Presense of spores
C. Coccal form

D. Cell pairing
E. Mycelium formation

158. A patient who has been treated for viral hepatitis B developed symptoms of hepatic insufficiency. What changes indicating disorder in protein metabolism are likely to be observed in this case?
A. Absolute hypoalbuminemia
B. Absolute hyperalbuminemia
C. Absolute hyperfibrinogenemia
D. Protein rate in blood will stay unchanged
E. Absolute hyperglobulinemia

159. During an experiment, it is required to estimate the rate of cell excitability. For this purpose it would be rational to determine:
A. Depolarization threshold
B. Rest potential
C. Critical level of depolarization
D. Amplitude of action potential
E. Duration of action potential

160. Obliterating atherosclerosis causes changes in the vessels of the lower extremities. A histological specimen of such a vessel presents both internal and external elastic membranes, the middle membrane contains a lot of myocytes. What vessel is affected in the case of this disease?
A. Artery of muscular type
B. Artery of elastic type
C. Artery of mixed type
D. Vein with strongly developed muscles
E. Lymph node

161. Blood analysis of a 16-year-old girl suffering from the autoimmune inflammation of the thyroid gland revealed multiple plasmatic cells. Such increase in plasmocyte number is caused by proliferation and differentiation of the following blood cells:
A. B-lymphocytes
B. T-helpers
C. Tissue basophils
D. T-killers
E. T-suppressors

162. A male patient has stenosis of the mitral orifice. What is the leading mechanism of cardiac failure?
A. Resistance-induced overload
B. Volume overload
C. Tension-induced overload
D. Myocardial damage
E. –

163. A patient was delivered to a hospital after having been exposed to ionizing radiation. He presents with vomiting, anorexia, pain in a different region of the abdomen, bloody feces, the elevation of body temperature, inertness. Such clinical presentations are typical for the following form of acute radiation disease:
A. Intestinal
B. Bone-marrow
C. Cerebral
D. Combined
E. Toxemic

164. A patient consulted a dentist about the temporomandibular joint arthritis. The dentist administered an ointment containing diclofenac sodium. What is its mechanism of action?
A. Cyclooxigenase inhibition
B. Phospholipase inhibition
C. Opiate receptor activation
D. Opiate receptor block
E. Cyclooxigenase activation

165. A patient suffering from syphilis was prescribed a drug, the action of which based upon the disturbed generation of murein leading to the death of the causative agent. What drug is it?
A. Benzylpenicillin sodium salt
B. Bijochinol
C. Ciprofloxacin
D. Azithromycin
E. Doxycycline hydrochloride

166. While operating on a tumour of the abdominal part of the ureter, a doctor should be aware of an important arterial vessel located in front of it. Which vessel is it?
A. A.testicularis
B. A.renalis
C. A.ileocolica
D. A.iliacainterna
E. A.iliacacommunis

167. Researches of the latest decades established that immediate "executors" of cell apoptosis are special enzymes called caspases. The generation of one of them proceeds with the participation of cytochrome. What is its function in a normal cell?
A. Enzyme of the respiratory chain of electron transport
B. Enzyme of tricarboxylic acid cycle
C. Enzyme of beta-oxidation of fatty acids
D. Component of H+ATP system
E. Component of the pyruvate-dehydrogenase system

168. In a surgical department of a stomatological polyclinic, a patient is being prepared for tooth extraction. What drug should be added to the solution of a local anesthetic in order to prolong its action?
A. Adrenalin hydrochloride
B. Noradrenaline hydrotartrate
C. Isadrine
D. Salbutamol
E. Octadine

169. While being at the dentist's, a patient had an attack of bronchial asthma. The dentist applied a 3-adrenomimetic drug in the form of inhalations. What drug was applied?
A. Salbutamol
B. Aminophylline
C. Adrenaline hydrochloride
D. Atropine sulfate
E. Ephedrine hydrochloride

170. ECG of a patient showed that the RR interval equaled 1,5 s, heart rate equaled 40 bpm. What is the cardiac pacemaker?
A. Atrioventricular node
B. Sinus node
C. His' bundle
D. Left branch of His' bundle
E. Right branch of His' bundle

171. A patient who takes a blocker of membrane cytoreceptors of efferent conductor synapses of the autonomic nervous system complains about dry mouth. What receptors are blocked?
A. Muscarinic cholinoreceptors
B. Nicotinic cholinoreceptors
C. H2 -receptors
D. ^-adrenoreceptors
E. 3-adrenoreceptors

172. Bacteriological analysis of purulent discharges from urethra revealed the presence of gram-negative bacteria resembling coffee beans, which were able to decompose glucose and maltose into acid. They were found in the leukocytes. These bacteria are causative agents of the following disease:
A. Gonorrhea
B. Syphilis
C. Venereal lymphogranulomatosis
D. Ulculmolle
E. Melioidosis

173. Injection of an anesthetic before the tooth extraction resulted in the development of anaphylactic shock accompanied by oliguria. What pathogenetic mechanism caused a decrease in diuresis in this case?
A. Decrease in hydrostatic pressure in the renal corpuscle capillaries
B. Increase in hydrostatic pressure in the Bowman's capsule
C. Damage of glomerular filter
D. Increase in oncotic pressure of blood plasma
E. Increase in vasopressin secretion

174. Autopsy of a man, who died from typhoid fever on the 5th day of disease, revealed the following changes: aggregated follicles of ileum were enlarged and plethoric; they protruded over the mucous membrane, and multiple sulci and convolutions could be seen on their surface. Histological examination revealed plethority and edema of tissues, presence of granulomas composed of big cells with light cytoplasm, and containing typhoid bacilli. These local changes are compliant with the following period of typhoid fever:
A. Stage of medullary swelling
B. Stage of necrosis
C. Stage of ulcer healing
D. Stage of clean ulcers
E. Stage of ulceration

175. The examination of the uterine cavity revealed an embryonated ovum that wasn't attached to the endometrium. The embryo is in the following stage of development:
A. Blastocyst
B. Zygote
C. Morula
D. Gastrula
E. Neurula

176. Prophylactic examination of a patient revealed hyperglycemia, ketonuria, polyuria, glycosuria. What form of an acid-base balance disorder is the case?
A. Metabolic acidosis
B. Gaseous acidosis
C. Nongaseous acidosis
D. Gaseous alkalosis
E. Metabolic alkalosis

177. During anaesthetization of the oral cavity mucous tunic, a patient developed anaphylactic shock (generalized vasodilatation, increase in vascular permeability along with escape of liquid to the tissues). What type of hypersensitivity has the patient developed?
A. I type (anaphylactic)
B. II type (antibody-dependent)
C. III type (immune complex)
D. IV type (cellular cytotoxicity)
E. V type (granulomatosis)

178. An electrical cardiostimulator was implanted to a 75 y.o. man with a heart rate of 40 bpm. After that, the heart rate rose to 70 bpm. Cardiostumulator assumed the function of the following heart part:
A. Sinoatrial node
B. Atrioventricular node
C. His' bundle branches
D. His' bundle fibers
E. Purkinje's fibers

179. A specimen of connective tissue of derma was stained with Sudan III and hematoxylin. There are clusters of big polygonal cells that turned orange. Their nuclei are flattened and located on periphery. What tissue is it?
A. White adipose
B. Brown adipose
C. Reticular connective
D. Hyaline cartilaginous
E. Lamellar osseous

180. Various cells of the oral mucous membrane and antimicrobial substances synthesized by these cells play an important part in the local immunity of the oral cavity. Specify the key factors for the local immunity:
A. Secretory IgA
B. B-lymphocytes
C. IgG
D. Macrophages
E. Eosinophils

181. In the process of tooth tissue histogenesis dentin wasn't formed in time for some reasons. What process of further histogenesis will be delayed or will not take place at all?
A. Enamel formation
B. Pulp formation

C. Predentinal space formation
D. Cellular cement formation
E. Acellular cement formation

182. While on holiday in the countryside, a boy found a spider with the following morphological peculiarities: body length at the rate of 2 cm, round black abdomen with two rows of red dots on its dorsal surface, four pairs of segmented extremities covered with tiny black hairs. Identify this arthropod:
A. Steppe spider (Latrodectus tredecimguttatus)
B. Scorpion
C. Solifugae
D. Mite
E. Tarantula

183. A histological specimen of an eyeball shows a structure in the form of a convexoconvex formation connected with the ciliary body by the fibers of ciliary zonule and covered with a transparent capsule. Specify this structure:
A. Crystalline lens
B. Vitreous body
C. Ciliary body
D. Cornea
E. Sclera

184. A patient with gastric ulcer underwent a course of treatment, which led to digestion normalization, pain relief, better mood. However, in a few weeks the epigastric pain, as well as heartburn and sour eructation, recurred. Such a course of the disease can be characterized as:
A. Relapse
B. Remission period
C. Complication
D. Prodromal period
E. Latent period

185. A patient underwent the extraction of his superior medial incisor. It is supplied with blood by the branches of the following artery:
A. A.infraorbitalis
B. A.buccalis
C. A.palatinadescendens
D. A.sphenopalatina
E. A.alveolaris inferior

186. Examination of a patient revealed that he had a strong, balanced, inert type of higher nervous activity, according to Pavlov's classification. What temperament has this patient, according to Hippocrate?
A. Phlegmatic
B. Sanguine
C. Choleric
D. Melancholic
E. –

187. A 40-year-old male patient had a tumour-like formation 8x7 cm large on his neck. A surgeon removed it only partially because of the close connection with large vessels. Microscopical examination revealed marked cellular and tissue atypism, lipoblast-type cells in different stages of maturity, with polymorphism and nuclear hyperchromia, pathological mitoses, necrosis foci. Specify the histological form of the tumour:
A. Liposarcoma
B. Lipoma
C. Fibroma
D. Fibrosarcoma
E. Hibernoma

188. It was determined that the basal metabolic rate of a patient under study increased due value by 8%. It means that the intensity of energetic metabolism processes in this patient is:
A. Normal
B. Moderately increased
C. Moderately inhibited
D. Essentially inhibited
E. Essentially increased

189. A 30-year-old woman has a subnormal

concentration of enzymes in the pancreatic juice. It might be caused by the hyposecretion of the following gastrointestinal hormone:
A. Cholecystokinin-pancreozymin
B. Somatostatin
C. Secretin
D. Gastro-inhibiting peptide
E. Vaso-intestinal peptide

190. A 35-year-old man got a trauma that resulted in a complete rupture of the spinal cord at a level of the first cervical segment. What changes in respiration will be observed?
A. Respiration will come to a standstill
B. Respiration won't change
C. Respiration will become diaphragmatic
D. Respiration will become frequent and shallow
E. Respiration will become infrequent and deep

191. Inside a human cell, the informational RNA containing both exons and introns was delivered to the granular endoplasmic reticulum to the ribosomes. What process does NOT take place?
A. Processing
B. Replication
C. Transcription
D. Translation
E. Prolongation

192. Examination of a patient's oral cavity revealed contacting cutting edges of his superior and inferior incisors. Such tooth position is typical for the following occlusion:
A. Direct occlusion
B. Orthognathia
C. Biprognathic occlusion
D. Closed occlusion
E. Prognathism

193. Parodontitis is treated with calcium preparations and a hormone that stimulates tooth mineralization and inhibits tissue resorption. What hormone is it?
A. Calcitonin
B. Parathormone
C. Adrenalin
D. Aldosterone
E. Thyroxine

194. A child with renal insufficiency exhibits delayed teeth eruption. It is most likely caused by the abnormal formation of the following substance:
A. 1,25 (OH)2D3
B. Glycocyamine
C. Glutamate
D. o-ketoglutarate
E. Hydroxylysine

195. A 65-year-old patient with chronic heart failure has been taking digitoxin in self-administered dosages for a long time. She was admitted to the hospital for general health aggravation, arrhythmia, nausea, reduced diuresis, insomnia. What is the primary action to be taken?
A. To withhold digitoxin
B. To reduce digitoxin dosage
C. To administer strophanthine intravenously
D. To administer digoxin
E. To give an intravenous injection of calcium gluconate solution

196. A 50-year-old male patient suffers from chronic bronchitis, complains about dyspnea during physical activity, sustained cough with sputum. After examination, he was diagnosed with pulmonary emphysema. This complication is caused by:
A. Decrease in lung elasticity
B. Decrease in alveolar ventilation
C. Decrease in lung compliance
D. Decrease in lung perfusion
E. Ventilation-perfusion disbalance

197. During starvation, the normal rate of glucose is maintained by means of gluconeogenesis activation. What substance can be

used as a substrate for this process?
A. Alanine
B. Ammonia
C. Adenine
D. Urea
E. Guanine

198. Heart auscultation revealed diastolic murmur in the II intercostal space along the right parasternal line. It is the evidence of the following valve pathology:
A. Aortic valve
B. Bicuspid
C. Tricuspid
D. Valve of pulmonary trunk
E. –

199. A patient with convulsive contractions of facial muscles was admitted to the infectious disease ward. From a scratch on his lower right extremity, analysts isolated bacteria with terminal endospores that gave them drumstick appearance. What bacteria are compliant with the given description?
A. Clostridium tetani
B. Clostridium botulinum
C. Clostridium perfringens
D. Bacillus anthracis
E. Bacillus cereus

200. A patient suffering from stomatitis was prescribed oral rinsing. Which antiseptic from the oxidant group is the most suitable for this purpose?
A. Potassium permanganate
B. Boric acid
C. Alcoholic iodine solution
D. Ethyl alcohol

1. A patient suffers from hypertension and atherosclerosis. He should reduce the consumption of the following lipide:
A. Cholesterol
B. Oleic acid
C. Lecithin
D. Monooleate glyceride
E. Phosphatidylserine

2. A patient diagnosed with acute pancreatitis was admitted to the surgical department. Which drug administration would be pathogenetically grounded?
A. Contrical
B. Tripsin
C. Chymotripsin
D. Pancreatin
E. Fibrinolysin

3. The heart rate of an adult man is 40/min. This rate is possible due to the following element of the cardiac conduction system:
A. Atrioventricular node
B. Sinoatrial node
C. Purkinje's fibers
D. His' bundle
E. His' bundle branches

4. Parodontitis is treated with calcium preparations and a hormone that stimulates tooth mineralization and inhibits tissue resorption. What hormone is it?
A. Calcitonin
B. Parathormone
C. Adrenalin
D. Aldosterone
E. Thyroxine

5. Studying the mitotic cycle phases of an onion root, the researchers revealed a cell with chromosomes lying in the equatorial plane in the form of a star. What phase of mitosis is it?
A. Metaphase
B. Prophase
C. Anaphase
D. Telophase
E. Interphase

6. A removed vermiform appendix was sent for histological analysis. The appendix was enlarged, with thickened walls and dull plethoric serous membrane covered by coagulated fibrin. After dissection, some pus could be seen. Microscopical examination revealed vascular congestion, edema of all the layers, and their diffuse infiltration with leukocytes. Specify the form of acute appendicitis:
A. Flegmonous
B. Apostematous
C. Simple
D. Superficial
E. Gangrenous

7. In the focus of inflammation, the vessels of microvasculature exhibit an increased permeability and hydrodynamic pressure rise. The inter-tissue fluid has an increase in osmotic concentration and dispersity of protein structures. What type of edema will develop in this case?
A. Combined
B. Hydrodynamic
C. Colloid osmotic
D. Lymphogenous
E. Membranogenic

8. A histologic specimen of the sagittal section of the mandible primordium of a 3,5-month-old human embryo shows an epithelial organ surrounded by compactly arranged mesenchymal cells. This mesenchymal formation is called:
A. Dental saccule
B. Dental bulb
C. External enamel organs
D. Internal enamel organs
E. Pulp of an enamel organ

9. Examination of a bronchial tissue sample revealed atrophy of mucous membrane, cystic degeneration of glands, focal metaplastic changes of lining prismatic epitheli-

al cells into multilayer squamous cells; increase in goblet cell number; in some parts of the bronchial wall and especially in the mucous membrane there was marked cellular inflammatory infiltration and growth of granulation tissue bulging into the bronchial lumen in the form of a polyp. What is the most likely diagnosis?
A. Chronic bronchitis
B. Lobar pneumonia
C. Acute bronchitis
D. Bronchopneumonia
E. Interstitial pneumonia

10. An embryo had its external layer of dental saccule experimentally destroyed. What dental structure won't have any further development?
A. Periodontium
B. Enamel
C. Dentin
D. Cement
E. Pulp

11. A 70-year-old patient is diagnosed with brainstem hemorrhage. Examination revealed increased tonus of flexor muscles accompanied by decreased tonus of extensor muscles. Such changes in muscle tonus can be explained by the irritation of the following brain structures:
A. Red nuclei
B. Vestibular nuclei
C. Quadrigeminal plate
D. Black substance
E. Reticular formation

12. Inflammation is characterized by the dilatation of blood capillaries in the region of injury, reduced circulation, increased permeability of vessel walls. What cells play the main part in the development of these changes?
A. Tissue basophils
B. Fibroblasts
C. Plasmocytes
D. Eosinophils
E. Macrophages

13. Inside a human cell, the informational RNA containing both exons and introns was delivered to the granular endoplasmic reticulum to the ribosomes. What process does NOT take place?
A. Processing
B. Replication
C. Transcription
D. Translation
E. Prolongation

14. A 35-year-old patient with chronic periodontitis underwent excision of a cyst 3 cm in diameter found at the root of the 15th tooth. Histological examination revealed that it had a thin wall formed by mature connective tissue infiltrated by lymphocytes and plasmatic cells. Its internal surface was lined with multilayer pavement epithelium with no signs of keratinization; the cavity contained serous exudate. What is the most likely diagnosis?
A. Radicular cyst
B. Follicular cyst
C. Primordial cyst
D. Cherubism
E. Follicular ameloblastoma

15. Two weeks after haemotransfusion, a patient has developed a fever. What protozoal disease can be suspected?
A. Malaria
B. Toxoplasmosis
C. Leishmaniasis
D. Amebiasis
E. Trypanosomiasis

16. Histological study of two different tooth specimens revealed acellular and cellular cement, respectively. The second specimen comes from the following tooth part:
A. Root apex
B. Dental cervix
C. Superior subgingival part

D. Tooth crown
E. The border between root and crown

17. A cell with vitamin E deficit had been affected by ionizing radiation. It induced an intensified release of hydrolytic enzymes into the cytoplasm and thus complete destruction of intracellular structures - autolysis. What organelles caused this phenomenon?
A. Lysosomes
B. Endoplasmic reticulum
C. Golgi complex
D. Microbodies
E. Mitochondrions

18. A victim who had been rescued from under the ruins was found to have a confused mental state, multiple subcutaneous hemorrhages on his head and neck, a small wound on the face. There was a scalping in the posterosuperior parts of the head and a significant deformation of head contours. What bones might have been damaged?
A. Parietal and occipital bone
B. Sphenoid bone and mandible
C. Frontal and nasal bones
D. Temporal bone and maxilla
E. Malar and lacrimal bones

19. In the process of tooth tissue histogenesis dentin wasn't formed in time for some reasons. What process of further histogenesis will be delayed or will not take place at all?
A. Enamel formation
B. Pulp formation
C. Predentinal space formation
D. Cellular cement formation
E. Acellular cement formation

20. A 20-year-old patient complains of morbid thirst and huperdiuresis (up to 10 l daily). Glucose concentration in blood is normal, but it is absent in urine. The patient has been diagnosed with diabetes insipidus. What hormonal drug is the most appropriate for the management of this disorder?
A. Vasopressin
B. Cortisol
C. Thyroxin
D. Oxytocin
E. Insulin

21. Before the cells can utilize the glucose, it is first transported from the extracellular space through the plasmatic membrane inside them. The following hormone stimulates this process:
A. Insulin
B. Glucagon
C. Thyroxin
D. Aldosterone
E. Adrenalin

22. A 57-year-old patient experiences periodical uterine haemorrhages. Diagnostic biopsy of the lining of the uterus has revealed among the blood elements some glandular complexes of different forms and sizes made by atypic cells having hyperchromic nuclei with multiple mitoses (including pathological ones). What is the most likely diagnosis?
A. Adenocarcinoma
B. Uterus fibromyoma
C. Chorioepithelioma
D. Glandular endometrium hyperplasia
E. Endometritis

23. Older people often complain of joint pain that can be associated with age-related changes of tissue covering the joint surface. What tissue is it?
A. Hyaline cartilage
B. Bone tissue
C. Connective tissue proper
D. Epithelial
E. Elastic cartilage

24. A child presents with symptoms of psychic and physical retardation (cretinism). It is usually associated with the following hormone deficiency:

A. Thyroxin
B. Somatotropic
C. Calcitonin
D. Insulin
E. Testosterone

25. It is known that people who permanently live in highland have an increased concentration of erythrocytes per each blood volume unit. Owing to this fact, blood can optimally fulfill the following function:
A. Gas transport
B. Amino acid transport
C. Hemostasis participation
D. Maintenance of acid-base balance
E. Maintenance of ionic equilibrium

26. One of the protein synthesis stages is recognition. The first iRNA triplet starts with UAUtriplet. What complementary triplet is found in tRNA?
A. AUA
B. AAA
C. GUG
D. UGU
E. CUC

27. Shortly before death, a patient got an electrocardiographically based diagnosis of acute myocardial infarction. The autopsy revealed that the myocardial cavity contained 200 ml of liquid blood and 400 g of clots; the posterior wall of the left ventricle had a perforation up to 2 cm long. What complication of myocardial infraction is it?
A. Myocardial rupture with cardiac tamponade
B. Stone heart
C. Hemorrhagic pericarditis
D. Exudative pericarditis
E. Idiopathic myocarditis

28. Electronic microphotography of a sense organ shows some hair cells with short microvilli -stereocilia - located on their apical surface and a polar kinocilium. What sense organ are these cells typical for?
A. Organ of equilibrium
B. Organ of vision
C. Olfactory organ
D. Acoustic organ
E. Gustatory organ

29. As a result of chest trauma, the costal cartilage was damaged. The cartilage regenerates due to the following layer of perichondrium:
A. Chondrogenic
B. Fibrous
C. Elastic
D. Collagen
E. Sharpey's fibers

30. A 70-year-old man has developed prosphetic stomatitis. Apart from this, he was found to have an evident lesion of mouth corners. Microscopical examination revealed large ovoid gram-positive cells. What microorganisms are most likely to be the leading etiological agent of such a lesion?
A. Candida fungi
B. Streptococci
C. Staphylococci
D. Neisseria
E. Corynebacteria

31. After a severe trauma of visceral cranium, a patient has a deglutition disorder with food getting to the nasopharynx. It is the result of the following muscle's disfunction:
A. M.levatorvelipalatini
B. M.palatopharyngeus
C. M.stylopharyngeus
D. M.genioglossus
E. M.palatoglossus

32. A specimen of the cerebral cortex impregnated with silver nitrate shows some gigantic neurons of pyramidal form. These cells make the following layer of cortex:
A. Ganglionic
B. Pyramidal

C. Molecular
D. Exterior granular
E. Interior granular

33. After severe viral hepatitis, a 4-year-old boy presents with vomiting, occasional loss of consciousness, convulsions. The blood test revealed hyperammonaemia. Such condition is caused by a disorder of the following biochemical hepatic process:
A. Disorder of ammonia neutralization
B. Disorder of biogenic amines neutralization
C. Protein synthesis inhibition
D. Activation of amino acid decarboxylation
E. Inhibition of transamination enzymes

34. A patient with a trigeminus inflammation has been suffering from progressing parodontitis for the last few years. What is the leading factor in parodontitis development in this case?
A. Neurodystrophical changes in parodentium
B. Hypoactivity of leukocytic elastase
C. Low immunoglobulin production
D. Increase of vagus tonus
E. Hypoactivity of the kallikrein-kinin system

35. A child has an abnormal formation of tooth enamel and dentin as a result of the low concentration of calcium ions in the blood. The deficiency of the following hormone might cause such abnormalities:
A. Parathormone
B. Thyrocalcitonin
C. Thyroxin
D. Somatotropic hormone
E. Triiodothyronine

36. A 2-day-old baby has yellowish skin and mucous membranes. It might be caused by the temporary lack of the following enzyme:
A. UDP-glucuronil transferase
B. Sulfotransferase
C. Haemsynthetase
D. Hemoxygenase
E. Biliverdine reductase

37. A patient who has been treated for viral hepatitis B developed symptoms of hepatic insufficiency. What changes indicating disorder in protein metabolism are likely to be observed in this case?
A. Absolute hypoalbuminemia
B. Absolute hyperalbuminemia
C. Absolute hyperfibrinogenemia
D. Protein rate in blood will stay unchanged
E. Absolute hyperglobulinemia

38. A 50-year-old male patient suffers from chronic bronchitis, complains about dyspnea during physical activity, sustained cough with sputum. After examination, he was diagnosed with pulmonary emphysema. This complication is caused by:
A. Decrease in lung elasticity
B. Decrease in alveolar ventilation
C. Decrease in lung compliance
D. Decrease in lung perfusion
E. Ventilation-perfusion disbalance

39. As a result of a cold, a patient has the abnormal pain and temperature sensitivity of the frontal 2/3 of his tongue. Which nerve must have been damaged?
A. Trigeminus
B. Sublingual
C. Accessory
D. Vagus
E. Glossopharyngeal

40. A patient under test was subjected to moderate physical stress. His minute blood volume amounted 10 l/min. What blood volume was pumped through his lung vessels every minute?
A. 10 l/min
B. 5 l/min
C. 4 l/min

D. 6 l/min
E. 7 l/min

41. A 50-year-old man sustained great stress. It caused a dramatic increase in adrenalin and noradrenaline concentration. What enzymes catalyze the inactivation of the latter?
A. Monoamine oxidases
B. Glycosidases
C. Peptidases
D. Carboxylase
E. Tyrosinase

42. A 25-year-old patient has been diagnosed with chronic hepatitis. The patient complains of 10kg weight loss within two months. Objectively: the patient has dry peeling skin, pale with yellow shade, petechial hemorrhages, stomatorrhagia. Petechial hemorrhages and stomatorrhagia are caused by the disturbance of the following hepatic function:
A. Protein synthesizing
B. Chromogenic
C. Glycogen synthesizing
D. Detoxication
E. Depositing

43. There is a strict time limit for people to stay at the height of 8000 m above sea level without oxygen cylinders. Specify the life-limiting factor in this case:
A. Partial pressure of oxygen in air
B. Rate of ultraviolet radiation
C. Humidity rate
D. Temperature
E. Earth gravity

44. In spring, a patient experiences petechial hemorrhages, loosening of teeth, high liability to colds. A doctor suspects hypovitaminosis C. In this respect, loosening of teeth can be explained by:
A. Structural failure of collagen in the periodontal ligaments
B. Structural change of glycosaminoglycans
C. Increased permeability of periodont membranes
D. Mechanical damage of teeth
E. Disturbed oxidation-reduction process in the periodont

45. For infection prevention, a patient who underwent appendectomy was prescribed a cephalosporin antibiotic. Antimicrobial activity of these antibiotics is called forth by the disturbance of the following process:
A. Microbial wall formation
B. Nucleic acid synthesis
C. Ribosomal protein synthesis
D. Energy metabolism
E. Cholinesterase block

46. A patient underwent the extraction of his superior medial incisor. It is supplied with blood by the branches of the following artery:
A. A.infraorbitalis
B. A.buccalis
C. A.palatinadescendens
D. A.sphenopalatina
E. A.alveolaris inferior

47. A patient suffering from glomerulonephritis was found to have anasarca, AP of 185/105 mmHg, anaemia, leukocytosis, hyperazotemia, hypoproteinemia. What factor indicates that the nephrotic syndrome has complicated glomerulonephritis?
A. Hypoproteinemia
B. Leukocytosis
C. Hyperazotemia
D. Arterial hypertension
E. Anaemia

48. In the course of an experiment, a white rat was being stimulated with a stress factor (electric current). The researchers could observe muscle hypotonia, arterial hypotension, hypothermia. What period of general adaptation syndrome is it?
A. Shock phase

B. Antishock phase
C. Resistance stage
D. Exhaustion stage
E. –

49. A month after a serious operation, a 38-year-old patient has recovered and now has a positive nitrogen balance. The urine of this patient may be found to have a low concentration of the following nitrogen-containing substance:
A. Urea
B. Lactate
C. Stercobilinogen
D. Galactose
E. 17-ketosteroids

50. After the traumatic tooth extraction, a patient is complaining of acute, dull, poorly -localized pain in the gingiva, and body temperature rises up to 37,5°C. The patient has been diagnosed with alveolitis. Specify the kind of a pain in this patient:
A. Protopathic
B. Epicritic
C. Visceral
D. Heterotopic
E. Phantom

51. A patient has been delivered to a hospital with a provisional diagnosis of progressing muscle dystrophy. This diagnosis can be confirmed by the increased concentration of the following substance found in urine:
A. Kreatine
B. Pyruvate
C. Carnosine
D. Troponin
E. Hydroxyproline

52. While examining a blood smear taken from a patient and stained by Romanovsky's method, a doctor revealed some protozoa and diagnosed the patient with Chagas disease. What protozoan is the causative agent of this disease?
A. Trypanosomacruzi
B. Toxoplasma gondii
C. Leishmaniadonovani
D. Leishmaniatropica
E. Trypanosomabrucei

53. A patient with a history of chronic glomerulonephritis presents with azotemia, oliguria, hypoandisosthenuria, proteinuria. What is the leading factor in the pathogenesis of thesesymptoms development under chronic renal failure?
A. Mass decrease of active nephrons
B. Intensification of glomerular filtration
C. Tubular hyposecretion
D. Disturbed permeability of glomerular membranes
E. Intensification of sodium reabsorption

54. A man has a considerable decrease in diuresis as a result of 1,5 l blood loss. The primary causeof such diuresis disorder is the hypersecretion of the following hormone:
A. Vasopressin
B. Corticotropin
C. Natriuretic
D. Cortisol
E. Parathormone

55. 10 years ago, a patient underwent extraction of his right kidney on account of a tumour. Afterthat the volume of his left tumour grew by 50%. What process was developed in the kidney?
A. Vicarious hypertrophy
B. Neurohumoral hypertrophy
C. Pseudohypertrophy
D. Functional hypertrophy
E. Hypertrophic enlargement

56. A patient with obliterating endarteritis underwent ganglionic sympathectomy. What type of arterial hyperemia should have developed as a result of the surgery?
A. Neuroparalytic
B. Neurotonic

C. Metabolic
D. Functional
E. Reactive

57. A 29-year-old patient was delivered to a hospital because of intoxication with carbonmonoxide. Objectively: the patient presents with symptoms of severe hypoxia – evidentdyspnea, cyanosis, tachycardia. What compound is produced as a result of intoxication withcarbon monooxide?
A. Carboxyhemoglobin
B. Methemoglobin
C. Carbhemoglobin
D. Sulfhemoglobin
E. Oxyhemoglobin

58. Microscopic examination of a parenchymatous organ revealed that its epithelial cords formedglomerular, fascicular and reticular zones. The central part of the organ was presented byaccumulations of chromaffin cells. Specify this organ:
A. Adrenal gland
B. Thyroid gland
C. Epiphysis
D. Liver
E. Hypophysis

59. Before a tooth extraction, a 48-year-old female patient received an injection of diazepam. The anxiolytic effect of this drug can be explained by:
A. Interaction with benzodiazepine receptors
B. 3-adrenoreceptor block
C. M-cholinoreceptor activation
D. Dopamine receptor block
E. ^-adrenoreceptor block

60. A 25-year-old man has a saucershaped ulcer 0,8 cm in diameter on the upper left surface oftongue. The ulcer's floor and edges are dense with the smooth and glistening surface, painless on palpation. Microscopical examination of the ulcer floor revealed an infiltration consisting of lymphoid, plasmatic, and epithelioid cells with a lot of vessels affected by endovasculitis. What is the most likely diagnosis?
A. Primary syphilis
B. Decubital ulcer
C. Cancerous ulcer
D. Tuberculosis
E. Setton's aphtha

61. Autopsy of a 67-year-old man who died after presenting with hypoglycemic coma revealedsome areas of connective tissue growth and necrosis foci, atrophy of Langerhans islets inpancreas. What disease might have induced such changes in the pancreas?
A. Diabetes mellitus
B. Mucoviscidosis
C. Acute pancreatitis
D. Cancer of the head of the pancreas
E. Pancreas hypoplasia

62. A victim has a trauma resulting from the direct blow to the internal surface of the middle thirdof shin. What anatomic formation is most likely to be broken?
A. Tibial shaft
B. Distal epiphysis of fibular bone
C. Distal epiphysis of tibial bone
D. Proximal epiphysis of tibial bone
E. Proximal epiphysis of fibular bone

63. A 42-year-old patient came to a first-aid post because of a cut wound in the lower part of the anterior shoulder surface. Objectively: the patient has difficulties with forearm flexion. What muscles are most likely to be damaged?
A. M.brachialis, m.bicepsbrachii
B. M.bicepsbrachii, m.anconeus
C. M.coracobrachialis, m.supraspinatus
D. M.deltoideus, m.infraspinatus
E. M.deltoideus, m.bicepsbrachii

64. A 35-year-old patient consulted a dentist about the low density of dental tissues, increased fragility of teeth on eating solid

food. In order to determine Ca/P relation, a scrape of enamel was sent to the laboratory. What value of this index is suggestive of intensified demineralization?
A. 0,9
B. 1,67
C. 1,85
D. 2,5
E. 1,5

65. A couple has a son with hemophilia. The parents are healthy, but the maternal grandfather also has hemophilia. Specify the type of inheritance:
A. Recessive sex-linked
B. Recessive autosomal
C. Dominant sex-linked
D. Semidominance
E. Autosomal dominant

66. A patient was delivered to a hospital with the fracture of mandible and considerable bleeding in the region of fracture. What artery is likely to be dameged?
A. Inferior alveolar artery
B. Ascending pharyngeal artery
C. Lingual artery
D. Ascending palatine artery
E. Superior alveolar artery

67. A 40-year-old male patient had a tumour-like formation 8x7 cm large on his neck. A surgeon removed it only partially because of the close connection with large vessels. Microscopical examination revealed marked cellular and tissue atypism, lipoblast-type cells in different stages of maturity, with polymorphism and nuclear hyperchromia, pathological mitoses, necrosis foci. Specify the histological form of the tumour:
A. Liposarcoma
B. Lipoma
C. Fibroma
D. Fibrosarcoma
E. Hibernoma

68. HIV has gp41, and gp120 on its surface interacts with the target cells of an organism. Which of the following human lymphocyte antigens is gp120 complementary bound with?
A. CD 4
B. CD 3
C. CD 8
D. CD 19
E. CD 28

69. A patient has a trauma of sternocleidomastoid muscle. It caused a decrease in the value of the following indicator of external respiration:
A. Inspiratory reserve volume
B. Expiratory reserve volume
C. Respiratory capacity
D. Residual volume
E. Functional residual lung capacity

70. A patient with a serious trauma of his upper extremity has an impaired regeneration of cartilaginous tissue as a result of damage done to poorly differentiated cells of cartilage lineage. What cells have been damaged?
A. The cells of the internal perichondrium
B. The cells of the external perichondrium
C. The cells constituting isogenic groups
D. The cells of the young cartilage
E. The cells coming from the blood vessels

71. While under barbituric anesthesia, a 65-year-old male patient developed respiratory inhibition. The anesthesiologist made him a 10 ml intravenous injection of 0,5% bemegride solution. The patient's condition got better; the pulmonary ventilation volume increased. What phenomenon underlies the interaction of these medications?
A. Direct antagonism
B. Indirect antagonism
C. Unilateral antagonism
D. Direct synergism
E. Indirect synergism

72. The immunoblot detected gp120 protein in the blood serum. This protein is typical for the following disease:
A. HIV-infection
B. Virus B hepatitis
C. Tuberculosis
D. Syphilis
E. Poliomyelitis

73. During postembryonal hemopoiesis in the red bone marrow, the cells of one of the cellular differons demonstrate a gradual decrease in cytoplasmic basophilia as well as an increase in oxyphilia, the nucleus is being forced out. Such morphological changes are typical for the following hemopoiesis type:
A. Erythropoiesis
B. Lymphopoiesis
C. Neutrophil cytopoiesis
D. Eosinophil cytopoiesis
E. Basophil cytopoiesis

74. A man with a long-term history of bronchial asthma died from asphyxia. Histologicalexamination of his lungs revealed that the lumens of bronchioles and minor bronchi containeda lot of mucus with some eosinophils. There was also sclerosis of interalveolar septa, dilatation of alveole lumens. What mechanism accounts for the development of hypersensitivity reaction?
A. Reagine reaction
B. Cytotoxic reaction
C. Immune complex reaction
D. Lymphocyte-mediated cytolysis
E. Granulomatosis

75. A patient with a tumour of thymus presents with cyanosis, expansion of the subcutaneous venous network, and soft tissue edema of the face, neck, upper trunk, and upper extremities. What vein is compressed by the tumour?
A. Precava
B. Exterior jugular vein
C. Subclavicular vein
D. Interior jugular vein
E. Anterior jugular vein

76. A 30-year-old woman has subnormal concentration of enzymes in the pancreatic juice. This might be caused by the hyposecretion of the following gastrointestinal hormone:
A. Cholecystokinin-pancreozymin
B. Somatostatin
C. Secretin
D. Gastro-inhibiting peptide
E. Vaso-intestinal peptide

77. A sample taken from the pharynx of a patient with angina was inoculated on the blood-telluriteagar. It resulted in the growth of grey, radially striated (in the form of rosettes) colonies up to 4-5 mm in diameter. Microscopically there can be seen gram-positive rods with club-shaped ends arranged in the form of spread fingers. What microorganisms are these?
A. Corynebacteriadiphtheriae
B. Clostridium botulinum
C. Diphtheroids
D. Streptococci
E. Streptobacilli

78. A 32-year-old female patient suffers from gingivitis accompanied by gum hypoxia. What metabolite of carbohydrate metabolism is produced in the periodontium tissues more actively in this case?
A. Lactate
B. Ribose 5-phosphate
C. Glycogen
D. Glucose 6-phosphate
E. NADPH-H

79. Analysis of a newborn's urine revealed phenylpyruvic acid. Its presence in urine is associated with the following pathology:
A. Phenylketonuria
B. Alkaptonuria
C. Albinism
D. Tyrosinosis

E. Gout

80. On examination, a male patient was diagnosed with acute radiation disease. Laboratory examination revealed an abrupt decrease in serotonin found in blood platelets. A likely cause of the decrease in serotonin concentration would be a metabolic imbalance of the following substance:
A. 5-oxytryptophane
B. Tyrosine
C. Histidine
D. Phenyl alanine
E. Serine

81. An embryo has a disturbed development of the blood-vascular system caused by a teratogenic factor. This disturbance occurred in the following germ layer:
A. Mesoderm
B. Entoderm
C. Exoderm
D. Ento- and mesoderm
E. Ento- and ectoderm

82. A male patient waiting for tooth extraction has developed a strong sense of anxiety. Which drug should be given to him in order to relieve him of this discomfort?
A. Diazepam
B. Aminazine
C. Analgin
D. Aethimizolum
E. Carbamazepine

83. After the inoculation of feces sample into the 1% alkaline peptonic water and 8-hour incubation in the thermostat at a temperature of 37oC a culture in the form of a tender bluish film has grown. Such cultural properties are typical for the causative agent of the following disease:
A. Cholera
B. Plague
C. Typhoid fever
D. Paratyphoid fever A
E. Dysentery

84. In the course of parallel experiments, some rats were being subjected to continuous, direct solar irradiation, and some were being irradiated while placed into a glass box. The animals thatreceived a doze of direct irradiation got tumours on parts of their skin not coated with hair. This phenomenon is associated with the influence of the following factor:
A. Ultraviolet radiation
B. Endogenous chemical carcinogens
C. Biological carcinogens
D. Exogenous chemical carcinogens
E. Infrared radiation

85. A patient lost consciousness as a result of cerebral trauma. It might be caused by damaging the following zones of the cerebral cortex:
A. Occipital
B. Temporal
C. Frontal
D. Parietal
E. Temporal and parietal

86. A patient of the oral surgery department has developed a purulent complication. Bacteriological analysis of the wound discharge allowed to isolate a culture producing a blue-and-green pigment. Which of the listed microorganisms may be a causative agent of the infection?
A. Pseudomonas aeruginosa
B. Proteus vulgaris
C. Bacillus subtilis
D. Klebsiellapneumoniae
E. Staphylococcus epidermidis

87. Autopsy of a 75-year-old patient who had been suffering from disseminated atherosclerosis and died under chronic cardiac failure revealed constriction and deformation of coronary arteries, tuberous intima, whose section appeared to be white and petrosal. Specify the stage of atherosclerosis morphogenesis:
A. Atherocalcinosis

B. Lipoidosis
C. Liposclerosis
D. Bilipid
E. Atheromatosis

88. After a tourniquet application, a patient was found to have petechial hemorrhages. The reasonfor it is the dysfunction of the following cells:
A. Platelets
B. Eosinophils
C. Monocytes
D. Lymphocytes
E. Neutrophils

89. A 46-year-old inveterate smoker has a white crateriform ulcer with dense edges in the right corner of the mouth. Eosi-ne staining and microscopical examination revealed cords of atypical multilayer epithelium in growing into the adjacent tissues and making clusters. In the centre of these clusters, some roundish pink concentric formations can be seen. What is the most likely diagnosis?
A. Keratinizing squamous cell carcinoma
B. Basal cell carcinoma
C. Squamous cell nonkeratinous carcinoma
D. Leukoplakia
E. Adenocarcinoma

90. After prolonged exercising, people usually experience intense muscle pain. What is its most likely cause?
A. Accumulation of lactic acid in muscles
B. Intensified disintegration of muscle proteins
C. Accumulation of creatinine in muscles
D. Increased muscle excitability
E. Increased concentratioon of ADP in muscles

91. Obliterating atherosclerosis causes changes in the vessels of the lower extermities. A histological specimen of such a vessel evidently presents both internal and external elastic membranes, middle membrane contains a lot of myocytes. What vessel is affected in case of this disease?
A. Artery of muscular type
B. Artery of elastic type
C. Artery of mixed type
D. Vein with strongly developed muscles
E. Lymph node

92. A married couple complains of the inability to have children. Examination revealed that the husband had his spermatogenetic epithelium of a testicle damaged, which caused the absence of spermatozoons in his sperm and infertility as a result. Which part of the testicle was damaged?
A. Convoluted seminiferois tubules
B. Straight seminiferois tubules
C. Network of testis
D. Epididymis ducts
E. Efferent ducts

93. A 46-year-old female patient complaining of having alveolar hemorrhage for 6 hours after a tooth extraction, general weakness, and dizziness was delivered to a hospital. The patient has ahistory of essential hypertension. Objectively: pale skin and mucous membranes. In blood: Hb -80 g/l, Ht - 30%, bleeding and coagullation time is normal. What complication had been provoked by the hemorrhage?
A. Acute posthaemorrhagicanaemia
B. Iron deficiency anaemia
C. Chronic posthaemorrhagicanaemia
D. Folic acid deficiency anaemia
E. Haemolyticanaemia

94. A cell has been treated with a substance that blocks nucleotide phosphorylation in the mitochondrions. What process of cell activity will be disturbed in the first place?
A. ATP resynthesis
B. Synthesis of mitochondrial proteins
C. Oxidative phosphorilation
D. Integration of functional protein molecules
E. Fragmentation of big mitochondrions

into lesser ones

95. A 35-year-old female patient with a chronic renal disease has developed osteoporosis. The cause of this complication is the deficiency of the following substance:
A. 1,25-dihydroxy-D3
B. 25-hydroxy-D3
C. D3
D. D2
E. Cholesterol

96. Examination of a kidney tissue sampling revealed leukocyte infiltration of interstitial tissue; miliary abscesses; dystrophic tubules filled with desquamated epithelium and leukocytes. What is the most likely diagnosis?
A. Pyelonephritis
B. Glomerulonephritis
C. Pyelitis
D. Necrotic nephrosis
E. Nephrolithiasis

97. Cystinuria in humans shows itself in the form of cystine stones in kidneys (homozygotes) or else an increased rate of cystine in the urine (heterozygotes). Cystinuria is a monogenic disease. Specify the type of interaction between cystinuria genes and the normal rate of cystine in urine:
A. Semidominance
B. Epistasis
C. Complete dominance
D. Complementarity
E. Codomination

98. A 65-year-old patient with chronic heart failure has been taking digitoxin in self-administered dosages for a long time. She was admitted to the hospital for general health aggravation, arrhythmia, nausea, reduced diuresis, insomnia. What is the primary action to be taken?
A. To withhold digitoxin
B. To reduce digitoxin dosage
C. To administer strophanthine intravenously
D. To administer digoxin
E. To give an intravenous injection of calcium gluconate solution

99. Examination of newborns in one of the Ukrainian cities revealed a baby with phenylketonuria. The baby's parents don't suffer from this disease and have two other healthy children. Specify the most likely parents' genotype with phenylketonuria gene:
A. AaxAa
B. AA x aa
C. aax aa
D. Aa x aa
E. AaxAA

100. Children often have laboured nasal breathing, which is caused by overdevelopment of lymphoid tissue of the pharyngeal mucous membrane. This phenomenon may cause enlargement of the following tonsils:
A. Tonsillapharyngea
B. Tonsillapalatina
C. Tonsillalingualis
D. Tonsillatubaria
E. All above-mentioned

101. Indirect calorimetry allowed to establish that a 30-year-old male patient had a 30% decrease in basal metabolic rate. It might be caused by the reduced concentration of the following hormones in blood plasma:
A. Triiodothyronine, tetraiodothyronine
B. Thyrocalcitonin, parathormone
C. Glucocorticoids
D. Catecholamines
E. Somatoliberin, somatostatin

102. A 1,7-year-old child with a developmental delay and manifestations of self-aggression has the concentration of uric acid in blood at the rate of 1,96 millimole/l. What metabolic disorder is this typical for?
A. Lesch-Nyhan syndrome

B. Podagra
C. Acquired immunodeficiency syndrome
D. Gierke's disease
E. Cushing's basophilism

103. In order to reduce salivation before a stomatological procedure, a dentist gave his patient 10drops of 0,1% solution of atropine sulfate perorally. Thirty minutes later, the patient started complaining of acute pain in the eyeballs, misty vision, headache, palpitation. These symptoms were eliminated by means of the following drug:
A. Physostigmine
B. Aceclidine
C. Cytiton
D. Carbacholine
E. Phosphacol

104. A 30-year-old male patient consulted a dentist about a mastication disorder and pain provoked by pulling the jaw backwards. The dentist diagnosed the patient with inflammation of one of the masticatory muscles. Which muscle is inflamed?
A. Temporal (posterior fibers)
B. Lateral pterygopalatine
C. Temporal (anterior fibers)
D. Medial pterygopalatine
E. Masticatory

105. A surgeon concluded that the biggest space for examination and surgical procedures on the pancreas could be created by dissection of lig. gastrocolicum. It allows penetrating the following space of the abdominal cavity:
A. Omental bursa
B. Right lateral canal
C. Left lateral canal
D. Pregastric bursa
E. Hepatic bursa

106. A teenager had his tooth extracted under novocain anesthesia. Ten minutes later, he presented with skin pallor, dyspnea, hypotension. When this reaction is developed, and the allergen achieves tissue basophils, it reacts with:
A. IgE
B. IgA
C. IgD
D. IgM
E. T-lymphocytes

107. A patient has been admitted to the oral surgery department with a fracture of the malar arch. The patient presents with a difficult mouth opening. The dysfunction of the following muscle causes this state:
A. Masticatory
B. Medial pterygoid
C. Lateral pterygoid
D. Digastric
E. Zygomatic

108. In order to administer general health-improving therapy, a parodontist intends to study factors of nonspecific resistance of saliva and mucous secretion. Which of the following factors of nonspecific resistance should be studied in the first line?
A. Lysozyme
B. Secretory IgA
C. Properdin
D. Interferon
E. Complement

109. Among the specific hypocholesterolemic drugs, the most effective are those blocking the synthesis of endogenic cholesterol in the liver. Which of the below-listed drugs has such a mechanism of hypocholesterolemic action?
A. Lovastatin
B. Probucol
C. Clofibrate
D. Linaethol
E. Allilcepum

110. A female patient with a tumour of the pancreas has developed mechanic jaundice resulting from compression of a bile-excreting duct. Which duct is compressed?

A. Ductus choledochus
B. Ductus cysticus
C. Ductus hepaticuscommunis
D. Ductus hepaticusdexter
E. Ductus hepaticus sinister

111. A patient complains of frequent gingival hemorrhages he has been experiencing since his childhood. The blood test revealed a deficiency in blood-coagulation factor VIII. It means that the patient has an impairment of:
A. Prothrombinase generation
B. Thrombin generation
C. Fibrin generation
D. Thrombocyte adhesion
E. Thrombocyte aggregation

112. On the 2-3 day after stomach resection, a patient is still experiencing a failure of intestinal peristalsis. In order to stimulate the motility of the gastrointestinal tract, the following drug should be administered:
A. Proserin
B. Prazosin
C. Cyclodolum
D. Atropine sulphate
E. Noradrenaline hydrotartrate

113. A patient has myocardial infarction in the region of the anterior wall of the left ventricle. Circulatory dysfunction occurred in the following vascular basin:
A. Anterior interventricular branch of the left coronary artery
B. Anterior ventricular branch of the right coronary artery
C. Circumflex branch of the left coronary artery
D. Marginal branch of the left coronary artery
E. Atrioventricular branch of the left coronary artery

114. In the third period of fever, a patient had a critical body temperature drop accompanied by tachycardia and arterial pressure drop down to 80/60 mm Hg. Specify a type of collapse developed as a result of these changes:
A. Infectious-and-toxical collapse
B. Orthostatic
C. Haemorrhagic
D. Cardiogenic
E. Pancreatic

115. A nurse accidentally injected a nearly double dose of insulin to a patient with diabetes mellitus. The patient lapsed into a hypoglycemic coma. What drug should be injected in order to help him out of the coma?
A. Glucose
B. Lidase
C. Insulin
D. Somatotropin
E. Noradrenaline

116. A victim has a left-sided comminuted fracture of cheekbone accompanied by loss of skin sensitivity above it. What nerve is damaged?
A. Zygomaticofacial
B. Infraorbital
C. Pes anserinus minor
D. Facial
E. Buccal

117. A patient presents with the following motor activity disturbances: tremor, ataxia, and asynergia movements, dysarthria. The disturbances are most likely to be localized in:
A. Cerebellum
B. Basal ganglions
C. Limbic system
D. Brainstem
E. Medulla oblongata

118. A viral process caused considerable sclerosis of the parenchyma of submandibular salivary glands as well as reduced production of biologically active hormonal substances. It resulted in the impairment of oral mucosa regeneration. The reason for it

is an insufficient concentration of the following saliva component:
A. Epithelial growth factor
B. Insulin-like growth factor
C. Thymocyte-transforming factor
D. Lysozyme
E. Parotin

119. Autopsy of a 42-year-old man revealed a distinctly dilated lumen of small intestine filled with rice-water-like liquid. The intestine wall was edematic with lots of petechial hemorrhages on the mucosa. What infectious disease is the described enteritis typical for?
A. Cholera
B. Dysentery
C. Salmonellosis
D. Amebiasis
E. Typhoid fever

120. A 26-year-old patient was found to have a big furuncle of soft tissues of the face by the root of the nose and inferior eyelid. This disease can be seriously complicated by the infection spreading along veins of this region to the sinuses of dura brain mater. What sinus is most likely to be affected?
A. Cavernous
B. Superior sagittal
C. Occipital
D. Sigmoid
E. Petrosal

121. Autopsy of a man, who died from typhoid fever on the 5th day of disease, revealed the following changes: aggregated follicles of ileum were enlarged and plethoric; they protruded over the mucous membrane, and multiple sulci and convolutions could be seen on their surface. Histological examination revealed plethority and edema of tissues, presence of granulomas composed of big cells with light cytoplasm, and containing typhoid bacilli. These local changes are compliant with the following period of typhoid fever:
A. Stage of medullary swelling
B. Stage of necrosis
C. Stage of ulcer healing
D. Stage of clean ulcers
E. Stage of ulceration

122. A victim has been delivered to a hospital with an open fracture of mandible ramus and profuse bleeding in the region of fracture. What artery is most likely to be damaged?
A. Inferior alveolar
B. Median temporal
C. Facial
D. Lingual
E. Ascending palatine

123. A 5-month-old boy was hospitalized for tonic convulsions. He has a lifetime history of this disease. Examination revealed coarse hair, thinned and fragile nails, pale and dry skin. In blood: calcium - 1,5 milli-mole/l, phosphor - 1,9 milli-mole/l. These changes are associated with:
A. Hypoparathyroidism
B. Hyperparathyroidism
C. Hyperaldosteronism
D. Hypoaldosteronism
E. Hypothyroidism

124. A patient with diabetes mellitus lapsed into a diabetic coma as a result of acid-base disbalance. Specify the type of disbalance:
A. Metabolic acidosis
B. Metabolic alkalosis
C. Respiratory acidosis
D. Gaseous alkalosis
E. Non-gaseous alkalosis

125. A child has acute renal failure. What biochemical factor found in saliva can confirm this diagnosis?
A. Increase in urea concentration
B. Increase in glucose concentration
C. Decrease in glucose concentration
D. Increase in concentration of higher fatty

acids
E. Decrease in nucleic acid concentration

126. Power inputs of a man are being measured on an empty stomach, in the lying position, at physical and psychic rest, under comfortable temperature. The highest power inputs will be observed in the following daypart:
A. 5-6 p.m.
B. 7-8 a.m.
C. 10-12 a.m.
D. 8-12 p.m.
E. 3-4 a.m.

127. A patient was delivered to a hospital after having been exposed to ionizing radiation. He presents with vomiting, anorexia, pain in a different region of the abdomen, bloody feces, the elevation of body temperature, inertness. Such clinical presentations are typical for the following form of acute radiation disease:
A. Intestinal
B. Bone-marrow
C. Cerebral
D. Combined
E. Toxemic

128. During a visit to a dentist, a patient has developed a collapse. What drug can be applied to manage this situation?
A. Mesaton
B. Strophanthine
C. Propanolol
D. Nitroglycerine
E. Seduxen

129. Purulent discharges of a patient with a mandibulofacial phlegmon contain spheroid microorganisms making S-shaped colonies with golden pigment that produce lecithinase, plasmocoagulase, hemolysin and decompose mannitol under anaerobic conditions. Specify the kind of microorganisms that had caused the suppuration:
A. S. aureus
B. Str. pyogenes
C. Str. mutans
D. S. epidermidis
E. Str. Sanguis

130. Electronic microphotography shows epidermis with some dendritic cells among common cubic cells. These cells have a well-developed Golgi complex, a lot of ribosomes, and melanosomes. These cells are called:
A. Melanocytes
B. Keratinocytes
C. Langerhans' cells
D. Merkel's cells
E. Tissue basophils

131. Dwellers of a village noticed mass mortality of rats on some farms. It was suspected that the animals might have died from the plague. What postmortal analyses should be conducted in order to establish the causative agent of the infection as soon as possible?
A. Ring precipitation reaction
B. Agglutination reaction
C. Passive agglutination reaction
D. Complement-binding reaction
E. Neutralization reaction

132. In the course of an experiment, thalamocortical tracts of an experimental animal were cut through. The animal didn't lose the following sensations:
A. Olfactory
B. Auditory
C. Exteroceptive
D. Visual
E. Nociceptive

133. A patient with bronchial asthma has been administered inhalations of 0,5% isadrin solution. It helped to relieve bronchospasms, but the patient started complaining of heart pain and palpitation. What is the cause of these presentations?
A. 3i-adrenoreceptor stimulation

B. 32-adrenoreceptor stimulation
C. ^-adrenoreceptor stimulation
D. M-cholinoreceptor activation
E. Inhibition of acetylcholine synthesis

134. A 60-year-old male patient is unable to urinate after surgery and needs a catheter installation. When a manipulator is not skilled enough, he can pierce the ureter in its following part (normally it's the most narrow part):
A. Pars membranacea
B. Ostium uretraeexternum
C. Fossa navicularis
D. Pars spongiosa
E. Pars prostatica

135. Emotional stress induces the activation of hormone-sensitive triglyceride lipase in the adipocytes. What secondary mediator takes part in this process?
A. Cyclic adenosine monophosphate
B. cGMP
C. AMP
D. Diacylglycerol
E. Ca2+ ions

136. A section of pulmonary tissue has a large-meshed look due to the sacciform and cylindric dilatation of the bronchi; microscopical examination of the bronchial wall reveals a leucocytalin filtration with neutrophil prevalence; elastic, muscle fibers as well as cartilage plates are partly destroyed and replaced by the connective tissue. The adjacent pulmonary tissue has inflammation foci, fibrosis areas, vascular sclerosis, and signs of emphysema. The right ventricle hypertrophy is present. What is the most likely diagnosis?
A. Multiple bronchiectasis
B. Pulmonary emphysema
C. Interstitial pneumonia
D. Pneumofibrosis
E. Chronic bronchitis

137. A patient complains of skin itch, especially between fingers, in the inguinal creases, on the lower abdomen. Examination of these regions revealed there some small vesicles. Laboratory diagnostics allowed establishing that a representative of Arthropoda had caused this condition. Specify the disease caused by this arthropod:
A. Scabies
B. Demodicosis
C. Myiasis
D. Pediculosis
E. Dermatotropicleishmaniasis

138. A 29-year-old female patient complains of gingival hemorrhage and lower front teeth mobility she has been experiencing for the last six months. Objectively: the mucous membrane in the region of the front lower teeth is hyperemized, edematic, bleeds when touched. From under the gingival mucosa, foul-smelling pus is discharged, tooth roots are exposed. The patient has been diagnosed with the III stage of parodontitis. What factor allowed to establish the stage of disease progress?
A. Tooth root exposure
B. Mucosa inflammation
C. Nature of purulent discharge
D. Disease duration
E. Teeth mobility

139. A patient diagnosed with morphinism has been admitted to the narcological department. A doctor noted a decrease in the pharmacological activity of morphine. Repetitive use of a drug may result in tolerance to its effect, and this phenomenon is called:
A. Addiction
B. Cumulation
C. Tachyphylaxis
D. Antagonism
E. Allergy

140. During the examination of first-grade pupils, a dentist revealed that one child had

brown-yellow teeth and two split teeth. According to the child, previously, he had been treated for pneumonia with "some" pills. What drug might have had such a negative impact on teeth?
A. Doxycycline
B. Oxacillin
C. Erythromycin
D. Ampicillin
E. Biseptol

141. After a trauma of soft tissues in the region of the posterior surface of the medial condyle of the humerus, a patient has got a skin prickle of medial forearm surface. Which of the listed nerves is located in the affected region?
A. N.ulnaris
B. N.musculocutaneu
C. N.dorsalisscapularis
D. N.subscapularis
E. N.radialis

142. The examination of a 45-year-old man who had kept to a vegetarian diet for a long time revealed a negative nitrogen balance. Which peculiarity of his diet is the cause of this phenomenon?
A. Lack of proteins
B. Lack of fats
C. Excess of water
D. Excess of carbohydrates
E. Lack of vitamins

143. A patient has a lacrimal gland secretory dysfunction induced by a disorder of its vegetative innervation. Which of the ganglia of the vegetative nervous system gives it postganglionic parasympathetic fibers?
A. Ganglion pterygopalatinum
B. Ganglion ciliare
C. Ganglion oticum
D. Ganglion submandibulare
E. –

144. A 29-year-old female patient has a moon face, upper body obesity, striae on her anterior abdominal wall, hirsutism; urine shows an increased rate of 17-oxy ketosteroids. What disease are these presentations typical for?
A. Itsenko-Cushing syndrome
B. Pheochromocytoma
C. Conn's syndrome
D. Primary aldosteronism
E. Secondary aldosteronism

145. Depressions and emotional disorders result from noradrenaline, serotonin, and other biogenic amines deficiency in the brain. The concentration of these compounds in synapses can be increased by means of antidepressants that inhibit the activity of the following enzyme:
A. Monoamine oxidase
B. Diamine oxidase
C. L-amino acid oxidase
D. D-amino acid oxidase
E. Phenylalanine-4-monooxygenase

146. A boy has fallen from a tree. Now he finds it difficult to abduct his arm into the horizontal position. Which muscle is most likely to be injured?
A. M.deltoideus
B. M.tricepsbrachii
C. M.anconeus
D. M.coracobrachialis
E. M.supinator

147. A patient has a first-degree atrioventricular block accompanied by the prolongation of P-Qinterval up to 0,25 s. Under such conditions the following myocardial function will be disturbed:
A. Conduction
B. Automatism
C. Excitability
D. Contractibility
E. –

148. A 58-year-old female patient complains of rapid fatigability, performance decrement, sleepiness, dyspnea during fast

walking. In blood: RBCs - 4,0 • 10^{12}/l, Hb - 80 g/l, CI -0,6; a large number of annulocytes and microcytes. What anemia are these presentations typical for?
A. Iron-deficient
B. Posthemorrhagic
C. Haemolytic
D. Pernicious
E. Sickle-cell

149. Blood test of a patient suffering from atrophic gastritis gave the following results: RBCs - 2,0 •1012//, Hb - 87 g/l, colour index -1,3, WBCs - 4,0 • 109//, thrombocytes - 180 • 109//. The following substance deficiency might have caused anemia:
A. Vitamin B12
B. Vitamin A
C. Vitamin K
D. Iron
E. Zinc

150. Electronic microphotography shows a renal corpuscle with dendritic cells between the capillaries of choroid glomus. Their cytoplasm contains a large number of filaments. Specify these cells:
A. Mesangial
B. Adventitional
C. Juxtaglomerular
D. Juxtavascular
E. Fibroblasts

151. A mother consulted a pediatrician about small white filiform worms about 1 cm long with pointed ends that she found on her child's underwear. According to the mother, the child sleeps badly, grits his teeth, scratches the area of the anus. Specify the helminth type:
A. Pinworm
B. Ascarid
C. Trichuris
D. Armed tapeworm
E. Hookworm

152. While examining an extracted stomach, a researcher revealed that its antral part along the lesser curvature had a deep, roundish, even-edged defect up to 1,5 cm in diameter reaching the myenteron. On the defect floor, one could see a dense semitransparent area resembling of hyaline cartilage. Specify the process observed on the floor of the mucosa defect?
A. Local hyalinosis
B. Amyloidosis
C. Mucoid swelling
D. Fibrinoid changes
E. General hyalinosis

153. In order to establish the level of antidiphtheritic immunity in a child, it was decided to use a passive hemagglutination test. This task can be completed by the sensibilization of erythrocytes by:
A. Diphtheria anatoxin
B. Diphtheria antitoxin
C. Diphtheria bacillus antigens
D. Antidiphtheric serum
E. Hemolytic serum

154. After a long training session, a sportsman has developed fatigue accompanied by abrupt performance decrement. What link of the reflex arch was the fatigue initiated in?
A. Nerve centres
B. Afferent conductor
C. Receptors
D. Efferent conductor
E. Muscles

155. A patient with essential hypertension has been prescribed captopril. What is its mechanism of action?
A. Inhibition of angiotensin-converting enzyme activity
B. 3-adrenoreceptor block
C. ^-adrenoreceptor block
D. Angiotensin II receptor block
E. Peripheral vasodilatation effect

156. Such presentations as catarrhal con-

junctivitis, pharyngitis, laryngo tracheo brotis, white spots on the buccal mucosa in the region of lower premolar teeth, maculopapular rash on face, body and extremities are typical for the following disease:
A. Measles
B. Spotted fever
C. Scarlet fever
D. Meningococcal infection
E. Influenza

157. A patient with herpetic stomatitis was prescribed acyclovir for topical application. What is its mechanism of action?
A. It inhibits synthesis of nucleic acids of viruses
B. It inhibits virus penetration into cells
C. It inhibits virus maturation
D. It increases the resistance of macroorganism cells to the viruses
E. It inhibits virion assembly

158. Premolar teeth absence is inherited as an autosomal dominant factor. Parents with a normal dental system gave birth to a child with lacking premolar teeth. What is the probability of giving birth to children without this pathology (%) in this family?
A. 75%
B. 50%
C. 25%
D. 12,5%
E. 0%

159. A 71-year-old man had been presenting with diarrhea for ten days. The feces had admixtures of blood and mucus. He was delivered to a hospital in grave condition and died two days later. Autopsy of the body revealed the following: diphtheritic colitis with multiple irregularly-shaped ulcers of different depth in both sigmoid colon and rectum. The bacteriological analysis revealed Shigella. What was the main disease?
A. Dysentery
B. Typhoid fever
C. Salmonellosis
D. Nonspecific ulcerous colitis
E. Yersiniosis

160. A man is eating dry food. Which salivary glands secrete the largest amount of saliva in this case?
A. Parotid
B. Buccal
C. Submandibular
D. Sublingual
E. Palatine

161. In order to anesthetize superior incisors, an anesthetic should be injected in the region of the incisive foramen. What nerve is located in this place?
A. N.nasopalatinus
B. N.pharyngeus
C. N.palatinus major
D. Rr.nasalesposterioresinferiores
E. Nn.palatiniminors

162. A veterinary attendant working at a cattle farm complains of joint pain, fever, indisposition, and sweating at nighttime that he has been experiencing for a month. Giving regard to such presentations and occupational history, the doctor suspected brucellosis. What material taken from this patient is to be analyzed in a common microbiological laboratory?
A. Blood serum
B. Spinal fluid
C. Vomit mass
D. Urine
E. Feces

163. A patient consulted a dentist about the temporomandibular joint arthritis. The dentist administered an ointment containing diclofenac sodium. What is its mechanism of action?
A. Cyclooxygenase inhibition
B. Phospholipase inhibition
C. Opiate receptor activation
D. Opiate receptor block

E. Cyclooxygenase activation

164. It is known that patients with diabetes mellitus are more subject to inflammatory processes; they have low regeneration and slower wound healing. What is the reason for this?
A. Decrease in protheosynthesis
B. Increase in lipolysis
C. Accelerated gluconeogenesis
D. Decrease in lipolysis
E. Intensification of catabolism

165. A 23-year-old patient complains of increased salivation. Production of a large amount of serous saliva is caused by the stimulation of the following vegetative ganglion:
A. Ganglion oticum
B. Ganglion pterygopalatinum
C. Ganglion ciliare
D. Ganglion submandibulare
E. Ganglion sublinguale

166. A shepherd who has tended sheep together with dogs presents with chest pain and blood-spitting. X-ray examination revealed a roundish neoplasm in his lungs. Immunological reactions confirmed the provisional diagnosis. Specify the helminth that might have caused this disease:
A. Echinococcus
B. Dwarf tapeworm
C. Broad tapeworm
D. Common liver fluke
E. Armed tapeworm

167. While playing, a child got a punch in the presternum region. As a result of this trauma, an organ located behind the presternum was damaged. Name this organ:
A. Thymus
B. Thyroid gland
C. Heart
D. Pericardium
E. Larynx

168. During manipulations aimed at the treatment of mandible dislocation, a physician should pay particular attention to a muscle that pulls a capsule and interarticular disc of temporomandibular articulation exteriorly. What muscle is it?
A. M. pterygoideuslateralis
B. M. masseter
C. M. pterygoideusmedialis
D. M. temporalis
E. M. mylohyoideus

169. After a fall, a patient got unable to extend his knee joint. What muscle is likely to be damaged?
A. Quadriceps
B. Semitendinous
C. Semimembranous
D. Biceps muscle of the thigh
E. Triceps muscle of the calf

170. A 60-year-old patient consulted a doctor about retrosternal pain arising immediately after physical exercise. He was prescribed nitroglycerin. The medication relieved retrosternal pain, but the patient got an acute headache. What is the likely mechanism of this side effect?
A. Intracranial pressure rise
B. ^-adrenoreceptor block
C. Phosphodiesterase block
D. Reduced accumulation of calcium ions
E. Inhibited formation of mediators in the brain

171. A patient who has been taking tetracycline for a long time has developed candidosis of mucous membranes. What drug should be administered for its treatment?
A. Itraconazole
B. Griseofulvin
C. Nitrofungin
D. Amphotericin
E. Nitrofurantoin

172. A histological specimen of an oral cavity organ represents three zones: adi-

pose, glandular, and fibrous. Specify this organ:
A. Hard palate
B. Gum
C. Soft palate
D. Lip
E. Cheek

173. As a result of a road accident, a 26-year-old man is in the torpid phase of shock. Blood count:leukocytes - 3,2 • 109/l. What is the leading mechanism of leukopenia development?
A. Leukocyte redistribution in the bloodstream
B. Leukopoiesis inhibition
C. Faulty release of mature leukocytes from the bone marrow into the blood
D. Leukocyte destruction in the hematopoietic organs
E. Increased excretion of the leukocytes from the organism

174. A 12-year-old child presents with intolerance to some foodstuffs. Their consumption causes an allergic reaction in the form of itching skin eruption. What antihistaminic drug should be administered that won't have any negative impact on the child's school studies (with no sleepiness effect)?
A. Loratadine
B. Dimedrol
C. Sodium diclofenac
D. Aminophylline
E. Mesatonum

175. After an attack of bronchial asthma, a patient had his peripheral blood tested. What changes can be expected?
A. Eosinophilia
B. Leukopenia
C. Lymphocytosis
D. Thrombocytopenia
E. Erythrocytosis

176. Examination of a 30-year-old man's mandible revealed in the region of his molar a dense tumour-like formation that significantly deformed the mandible. Here and there, the formation wasn't fully detached from the bone tissue. Microscopical examination of a tissue sampling revealed that stroma had some cords and follicles with odontogenouscylindric epithelial cells in the periphery and stellate cells resembling of the enamel oragan pulp in the centre. What is the most likely diagnosis?
A. Ameloblastoma
B. Adenomatoidtumourch
C. Primary intraosteal cancer
D. Adenocarcinoma
E. Osteoclastoma

177. A patient has some vesicles on the mucous membrane of the oral cavity, lips, and nose. A dentist suspected vesicular stomatitis. What analysis will allow confirming the diagnosis?
A. Recovery of virus from the vesicular fluid
B. Allergy test
C. Recovery of bacteria from the vesicular fluid
D. Contamination of animals with the vesicular fluid
E. Microscopy of the vesicular fluid

178. A child suspected of tuberculosis underwent a Mantoux test. Twenty-four hours after allergen injection, there appeared a swelling, hyperemia, and tenderness. What are the main components in the development of this reaction?
A. Mononuclears, T-lymphocytes and lymphokines
B. Granulocytes, T-lymphocytes and IgG
C. Plasmatic cells, T-lymphocytes and lymphokines
D. B-lymphocytes, IgM
E. Macrophages, B-lymphocytes and monocytes

179. A patient's blood shows an increased

concentration of pyruvate, which is excreted with urine for the most part. It is typical for the following vitamin deficiency:
A. B_1
B. E
C. B_3
D. B_6
E. B_2

180. A patient has a craniocerebral trauma. X-ray examination revealed a fracture of the skull base. The fracture line passes through the spinous and round foramens. What bone is damaged?
A. Sphenoid
B. Temporal
C. Ethmoid
D. Frontal
E. Occipital

181. In the second week of being ill wit viral hepatitis, a patient presented with the sleep disorder, headache, aggressiveness, unbearable skin itch. Objectively: AP drop, decrease in blood coagulation and reflectory activity, bradycardia. What is the cause of these changes?
A. Cholemia
B. Hyperlipemia
C. Urobilinemia
D. Hypercholesterolemia
E. Stercobilinemia

182. A histological specimen shows an extraembryonic organ in the form of a vesicle linked to the entodermal canal. Its wall is lined with epithelium, exteriorly it is made up of connective tissue. In the early stages of embryogenesis, this organ has a hematopoietic function. Name this organ:
A. Vitelline sac
B. Allantois
C. Amnion
D. Umbillical cord
E. Placenta

183. A 49-year-old woman spent a lot of time standing. As a result of it, she got leg edema. What is the most likely cause of the edema?
A. Increase in hydrostatic pressure of blood in veins
B. Decrease in hydrostatic pressure of blood in veins
C. Decrease in hydrostatic pressure of blood in arteries
D. Increase in oncotic pressure of blood plasma
E. Increase in systemic arterial pressure

184. Before the infiltration anesthesia, a patient had been tested for sensitivity to novocaine. Their action turned out to be positive. Which of the below-listed drugs can be used for anesthetization in this case?
A. Lidocaine
B. Procainamide hydrochloride
C. Trimecaine
D. Anesthezin
E. Tetracaine

185. According to the phenotypic diagnosis, a female patient has been provisionally diagnosed with X-chromosome polysomia. This diagnosis can be confirmed by a cytogenetic method. Whatkaryotype will allow confirming the diagnosis?
A. 47(XXX)
B. 48(XXXY)
C. 48(XXYY)
D. 47(XXY)
E. 46(XX)

186. A patient has a spasm of smooth muscles of bronchi. As the first aid, it would be physiologically appropriate to inject the patient the antagonists of the following receptors:
A. M-cholinoreceptors
B. /alpha-adrenoreceptors
C. N-cholinoreceptors
D. /beta-adrenoreceptors
E. Adenosine receptors

187. Curarelike substances (dithylinum) make it impossible for skeletal muscles to contract because they block:
A. Neuromuscular synapses
B. Central synapses
C. Ganglionic synapses
D. Membrane conduction of excitement
E. Proprioceptors

188. A 47-year-old female patient was diagnosed with a tumour of the tongue apex. Metastases are likely to spread into the following regional lymph nodes:
A. Submandibular
B. Parotid
C. Mastoid
D. Occipital
E. Retropharyngeal

189. Inflammation of the tympanic cavity got complicated by the mastoid bone inflammation. Which wall of the tympanic cavity did the pus penetrate through?
A. Posterior
B. Anterior
C. Medial
D. Lateral
E. Superior

190. A man is in the state of rest. He has been forcing himself to breathe deeply and frequently for3-4 minutes. What effect will it have upon the acid-base balance of the organism?
A. Respiratory alkalosis
B. Respiratory acidosis
C. Metabolic alkalosis
D. Metabolic acidosis
E. There will be no change in acid-base balance

191. An infectious patient manifests sensibilization to penicillin. Which of the following antibiotics is the safest to be applied in this case?
A. Erythromycin
B. Bicillin
C. Ampicillin
D. Amoxicillin
E. Oxacillin

192. A male patient consulted a dentist about an acute toothache. Examination revealed a carious cavity in the upper premolar on the right. The carious cavity reaches the pulp. What is the most likely caries complication causing the toothache?
A. Pulpitis
B. Periodontitis
C. Parodontitis
D. Tooth erosion
E. –

193. A 50-year-old patient suffers from essential hypertension. After physical stress, he experienced muscle weakness, breathlessness, cyanosis of lips, skin, and face. Distinctly heard bubbling rales accompanied respiration. What mechanism underlies the development of this syndrome?
A. Acute left-ventricular failure
B. Chronic right-ventricular failure
C. Chronic left-ventricular failure
D. Collapse
E. Cardiac tamponade

194. Dehelmintization of a patient revealed some long fragments of a helminth with a segmented structure. Mature segments were rectangular, 30x12 mm large, closed-type matrix was informed of a stem with 17-35 lateral branches. Specify this helminth:
A. Hookless tapeworm
B. Alveococcus
C. Echinococcus
D. Dwarf tapeworm
E. Armed tapeworm

195. A 45-year-old female patient underwent an excision of a 2,5x2 cm large tumour located in the region of the submandibular salivary gland. Microscopic examination revealed that it consisted of glandular structures and contained solid epithelial

complexes as well as mucoid, chondroid, and myxoid foci. Specify this tumour:
A. Polymorphous adenoma
B. Salivary gland carcinoma
C. Ameloblastoma
D. Osteoclastoma
E. Cementoma

196. A patient suffering from stenocardia takes 100 mg of acetylsalicylic acid daily. What is the effect of acetylsalicylic acid on this patient?
A. Inhibition of thrombocyte aggregation
B. Inhibition of blood coagulation
C. Dilatation of coronary vessels
D. Prothrombin rate reduction
E. Cholesterol rate reduction

197. Dentists commonly practice local anaesthetization by applying novocain solution with a 0,1% adrenalin solution. The added adrenalin induces:
A. Local vasoconstriction
B. Local vasodilatation
C. Arterial pressure drop
D. Decrease in vascular resistance
E. Arterial pressure rise

198. A patient has a right-sided fracture in the region of the frontal third of mandible accompanied by a hematoma in the region of the chin. The injury of the following artery causes it:
A. Mental
B. Inferior labial
C. Lingual
D. Facial
E. Palatine

199. During an acute experiment, some of the diluted solution of hydrochloric acid was injected into the duodenal cavity of an experimental animal. It will result in hypersecretion of the following hormone:
A. Secretin
B. Gastrin
C. Motilin
D. Neurotensin
E. Histamine

200. During brain surgery, it was noticed that stimulation of certain zones of the cerebral cortex caused tactile and thermal sensations in the patient. Which zone was being stimulated?
A. Postcentral gyrus
B. Precentral gyrus
C. Superior lateral gyrus
D. Cingulate gyrus
E. Parahippocampal gyrus

1. Examination of a patient revealed II grade obesity. It is known that he consumes a lot of sweets and rich food, has a sedentary way of life. That's why anabolic metabolism has a priority in his organism. Which of the following pathways is amphibolic?
A. Cycle of tricarboxylic acids
B. Glyconeogenesis
C. Lipolysis
D. Glycolysis
E. Fatty acids oxidation

2. Parodontitis is treated with calcium preparations and a hormone that stimulates tooth mineralization and inhibits tissue resorption. What hormone is it?
A. Calcitonin
B. Parathormone
C. Adrenalin
D. Aldosterone
E. Thyroxine

3. Histological examination of a lymph node removed from the posterior triangle of the neck of an 18-year-old patient revealed some cell agglomerations that included single multinuclear Reed-Sternberg cells, major Hodgkin's cells, minor Hodgkin's cells, and many lymphocytes, single plasmatic cells, eosinophils. What is the most likely diagnosis?
A. Lymphogranulomatosis
B. Nodular lymphoma
C. Burkittstumour
D. Lymphocytic lymphoma
E. Chronic lymphoid leucosis

4. Bacterioscopy of nasopharyngeal mucus taken from a 2,5-year-old child with nasopharyngitis revealed gram-positive diplococci looking like coffee grains. What organs of the child are most likely to be affected if these microorganisms penetrate the blood?
A. Brain tunics
B. Cardiac valves
C. Renal glomeruli
D. Urogenital tracts
E. Lymph nodes

5. Cytogenetic examination of a patient with dysfunction of the reproductive system revealed normal karyotype 46, XY in some cells, but most cells have Klinefelter's syndrome karyotype -47, XXY Such phenomenon of cell inhomogeneity is called:
A. Mosaicism
B. Inversion
C. Transposition
D. Duplication
E. Heterogeneity

6. Autopsy of a man who had tuberculosis revealed a 3x2 cm large cavity in the superior lobe of the right lung. The cavity was interconnected with a bronchus, its wall was dense and consisted of three layers: the internal layer was pyogenic, the middle layer was made by tuberculous granulation tissue, and the external one was made by connective tissue. What is the most likely diagnosis?
A. Fibrous cavernous tuberculosis
B. Fibrous focal tuberculosis
C. Tuberculoma
D. Acute focal tuberculosis
E. Acute cavernous tuberculosis

7. Histologic analysis of uterus mucous membrane revealed twisting glands, serrated, and spinned, they were extended by stroma growth with the proliferation of its cells. Formulate a diagnosis:
A. Glandular hyperplasia of endometrium
B. Acute endometritis
C. Leiomyoma
D. Cystic mole
E. Placental polyp

8. As a result of a road accident, a 26-year-old man is in the torpid phase of shock. Blood count:leukocytes - 3,2 • 10^9/l. What

is the leading mechanism of leukopenia development?
A. Leukocyte redistribution in the bloodstream
B. Leukopoiesis inhibition
C. Faulty release of mature leukocytes from the bone marrow into the blood
D. Leukocyte destruction in the hematopietic organs
E. Increased excretion of the leukocytes from the organism

9. After prolonged exercising, people usually experience intense muscle pain. What is its most likely cause?
A. Accumulation of lactic acid in muscles
B. Intensified disintegration of muscle proteins
C. Accumulation of creatinine in muscles
D. Increased muscle excitability
E. Increased concentration of ADP in muscles

10. A woman consulted an otolaryngologist about an olfactory disorder. Examination revealed atrophic alterations of regio olfactoria of the nasal cavity mucosa. Where is it located?
A. In the region of superior nasal meatus
B. In the region of median nasal meatus
C. In the region of inferior nasal meatus
D. In the region of common nasal meatus
E. –

11. For infection prevention, a patient who underwent an appendectomy was prescribed a cephalosporin antibiotic. Antimicrobial activity of these antibiotics is called forth by the disturbance of the following process:
A. Microbial wall formation
B. Nucleic acid synthesis
C. Ribosomal protein synthesis
D. Energy metabolism
E. Cholinesterase block

12. A comatose patient has been delivered to a hospital. He has a 5-year history of type 2 diabetes mellitus. Objectively: breathing is deep and noisy, there is a smell of acetone around the patient. The concentration of glucose in the blood is 15,2 millimole/l, of ketone bodies – 100 micromole/l. These disorders are typical for the following complication of this disease:
A. Ketoacidotic coma
B. Hepatic coma
C. Hyperglycemic coma
D. Hypoglycemic coma
E. Hyperosmolar coma

13. During cytoscopy mucous membrane of urinary bladder normally makes folds except for a single triangular area with smooth mucosa. This triangle is located in the following part of the urinary bladder:
A. Bladder floor
B. Bladder cervix
C. Bladder apex
D. Bladder body
E. Bladder isthmus

14. Osteolaterism is characterized by a decrease in collagen strength caused by much less intensive formation of crosslinks in collagen fibrils. This phenomenon is caused by the low activity of the following enzyme:
A. Lysyl oxidase
B. Monoamino-oxidase
C. Prolyl hydroxylase
D. Lysyl hydroxylase
E. Collagenase

15. Examination of a 32-year-old patient revealed disproportional skeleton size, enlargement of superciliary arches, nose, lips, tongue, jawbones, feet. What gland's function was disturbed?
A. Hypophysis
B. Epiphysis
C. Pancreas
D. Thyroid
E. Suprarenal

16. A patient suffering from chronic myeloleukemia has got the following symptoms of anemia: decreased number of erythrocytes and low hemoglobin concentration, oxyphilic and polychromatophilic normocytes, microcytes. What is the leading pathogenetic mechanism of anemia development?
A. Substitution of haemoblast
B. Intravascular hemolysis of erythrocytes
C. Deficiency of vitamin B12
D. Reduced synthesis of erythropoietin
E. Chronic hemorrhage

17. A 46-year-old female patient needs surgery in the maxillofacial region. It is known that the patient is disposed to increased hemocoagulation. What natural anticoagulant can be used in order to prevent thrombosis?
A. Heparin
B. Hirudin
C. Sodium citrate
D. Fibrinolysin
E. None of the listed drugs

18. A 60-year-old patient has problems with the formation and moving of food mass, it disturbs the eating process. His tongue is stiff, speaking is impossible. What nerve is damaged?
A. XII
B. V
C. IX
D. XI
E. VII

19. On examination, a male patient was diagnosed with acute radiation disease. Laboratory examination revealed an abrupt decrease in serotonin found in blood platelets. A likely cause of the decrease in serotonin concentration would be a metabolic imbalance of the following substance:
A. 5-oxytryptophane
B. Tyrosine
C. Histidine
D. Phenylalanine
E. Serine

20. A patient presents with the following motor activity disturbances: tremor, ataxia, and asynergia movements, dysarthria. The disturbances are most likely to be localized in:
A. Cerebellum
B. Basal ganglions
C. Limbic system
D. Brainstem
E. Medulla oblongata

21. Analysis of sputum taken from a patient with suspected pneumonia revealed rather elongated gram-positive diplococci with somewhat pointed opposite ends. What microorganisms were revealed in the sputum?
A. Streptococcus pneumonia
B. Staphylococcus aureus
C. Klebsiella pneumonia
D. Neisseria meningitidis
E. Neisseria gonorrhoeae

22. The value of the basal metabolism of a man under examination exceeds the due value by 8%. It means that the man has the following intensity of energy metabolism processes:
A. Normal
B. Moderately increased
C. Moderately decreased
D. Considerably increased
E. Considerably decreased

23. Microscopic examination of a parenchymatous organ revealed that its epithelial cords formed glomerular, fascicular and reticular zones. Accumulations of chromaffin cells presented the central part of the organ. Specify this organ:
A. Adrenal gland
B. Thyroid gland
C. Epiphysis
D. Liver
E. Hypophysis

24. Autopsy of a man, who died from typhoid fever on the 5th day of disease, revealed the following changes: aggregated follicles of ileum were enlarged and plethoric; they protruded over the mucous membrane, and multiple sulci and convolutions could be seen on their surface. Histological examination revealed plethority and edema of tissues, presence of granulomas composed of big cells with light cytoplasm, and containing typhoid bacilli. These local changes are compliant with the following period of typhoid fever:
A. Stage of medullary swelling
B. Stage of necrosis
C. Stage of ulcer healing
D. Stage of clean ulcers
E. Stage of ulceration

25. A patient with chronic bronchitis has been administered an expectorant that disintegrates disulfide bonds of sputum glycosaminoglycan, thus reducing its viscosity. The patient has also been warned about possible bronchospasm. What drug has been administered?
A. Acetylcysteine
B. Libxine
C. Bromhexine
D. Thermopsis herb
E. Sodium hydrocarbonate

26. A patient has been diagnosed with transmural myocardial infarction. What drug should be given in order to prevent cardiogenic shock?
A. Promedol
B. Reserpin
C. Octadine
D. Phentolamine
E. Analgin

27. A patient has a slowly healing fracture. What medicine can be used to accelerate the formation of a connective tissue matrix?
A. Methyluracil
B. Prednisolone
C. Cyclophosphan
D. Methotrexate
E. Cyclosporine

28. A blood sample of a pregnant woman was typed. Erythrocyte-agglutination reaction was present with standard sera 0a, ft (I), Ba(lII), the reaction was absent with the serum Aft(II). The blood under examination relates to the following group:
A. Ap(II)
B. Ba(III)
C. 0a, p(I)
D. AB (IV)
E. –

29. A patient suffering from non-insulin-dependent diabetes mellitus was prescribed glibenclamide internally. What is the mechanism of its hypoglycemic action?
A. It stimulates the generation of endogenous insulin by beta cells
B. It inhibits gluconeogenesis in the liver
C. It intensifies the utilization of glucose by peripheral tissues
D. It inhibits glucose absorption in the bowels
E. It inhibits alpha-glucosidase and polysaccharide breakdown

30. Harmful stimulations of tooth tissues resulted in the formation of denticle structures along the peripheral zone of pulp. This phenomenon induces the following risk for the tooth:
A. Loss of dentine regenerability
B. Loss of pulp regenerability
C. Loss of cement regenerability
D. Loss of tooth innervation
E. Loss of enamel regenerability

31. A 65-year-old patient with chronic heart failure has been taking digitoxin in self-administered dosages for a long time. She was admitted to the hospital for general health aggravation, arrhythmia, nausea, reduced diuresis, insomnia. What is the pri-

mary action to be taken?
A. To withhold digitoxin
B. To reduce digitoxin dosage
C. To administer strophanthin intravenously
D. To administer digoxin
E. To give an intravenous injection of calcium gluconate solution

32. A child presents with body shortness, mental deficiency, mongoloid palpebral fissures, epicanthal fold, enlarged grooved tongue protruding from the mouth, high palate, maldentition, diastema, cross striation of lips. What hereditary disease are these presentations typical for?
A. Down syndrome
B. Patau's syndrome
C. Edwards' syndrome
D. Turner's syndrome
E. Klinefelter's syndrome

33. A few days before an operation, a patient should be administered vitamin K or its synthetic analogue Vicasol. Vitamin K takes part in the following posttranslational modification of the II, VII, IX, X blood clotting factors:
A. Carboxylation
B. Decarboxylation
C. Deamination
D. Transamination
E. Glycosylation

34. A 20-year-old patient has multiple yellow-brown and black erosions of tooth enamel. The teeth crumble and break, some of them are decayed. Make a diagnosis:
A. Fluorosis
B. Deep caries
C. Teeth erosion
D. Acidic necrosis of teeth
E. –

35. In the process of tooth tissue, histogenesis dentin wasn't formed in time for some reason. What process of further histogenesis will be delayed or will not take place at all?
A. Enamel formation
B. Pulp formation
C. Predentinal space formation
D. Cellular cement formation
E. Acellular cement formation

36. A female patient suffering from secondary syphilis got foci of skin depigmentation in the upper parts of her back. What pathological process is it?
A. Leukoderma
B. Metaplasia
C. Leukoplasia
D. Dysplasia
E. Parakeratosis

37. As a result of a cold, a patient has the abnormal pain and temperature sensitivity of the frontal 2/3 of his tongue. Which nerve must have been damaged?
A. Trigeminus
B. Sublingual
C. Accessory
D. Vagus
E. Glossopharyngeal

38. A 30-year-old driver complains of allergic rhinitis that usually exacerbates in spring. He has been administered an antihistamine drug with a slight sedative effect and a 24-hour period of action. Which of the listed drugs has been administered?
A. Loratadine
B. Dimedrol
C. Heparin
D. Vicasol
E. Oxytocin

39. A patient has myocardial infarction with thrombosis of the left coronary artery. What pharmocological preparation group should be used to reestablish blood flow?
A. Fibrinolysis activators
B. Narcotic analgesics
C. ^-adrenergic blockers

D. Angiotensin-converting enzyme inhibitors
E. Glucocorticoids

40. A man got poisoned with mushrooms. They contain muscarine that stimulates muscarinic cholinoreceptors. What symptom is typical for poisoning with inedible mushrooms?
A. Miosis
B. Mydriasis
C. Bronchi dilation
D. Heart rate rise
E. Arterial pressure rise

41. A man has a considerable decrease in diuresis as a result of 1,5 l blood loss. The primary cause of such diuresis disorder is the hypersecretion of the following hormone:
A. Vasopressin
B. Corticotropin
C. Natriuretic
D. Cortisol
E. Parathormone

42. While a 24-year-old woman was waiting for tooth extraction, tonus of sympathetic part of the autonomic nervous system rose. What reaction will the patient display?
A. Increased frequency of heartbeat
B. Hyperperistalsis
C. Hypersecretion of digestive juices
D. Bronchus constriction
E. Miotic pupils

43. A man permanently lives high in the mountains. What changes in blood characteristics can be found in his organism?
A. Increase of erythrocytes number
B. Decrease of hemoglobin content
C. Erythroblasts in blood
D. Decrease of reticulocytes number
E. Decrease of colour index of blood

44. As a result of a chest trauma, the costal cartilage was damaged. The cartilage regenerates due to the following layer of perichondrium:
A. Chondrogenic
B. Fibrous
C. Elastic
D. Collagen
E. Sharpey's fibers

45. A 30-year-old woman has a subnormal concentration of enzymes in the pancreatic juice. It might be caused by the hyposecretion of the following gastrointestinal hormone:
A. Cholecystokinin-pancreozymin
B. Somatostatin
C. Secretin
D. Gastro-inhibiting peptide
E. Vaso-intestinal peptide

46. Obliterating atherosclerosis causes changes in the vessels of the lower extremities. A histological specimen of such a vessel presents both internal and external elastic membranes, middle membrane contains a lot of myocytes. What vessel is affected in the case of this disease?
A. Artery of muscular type
B. Artery of elastic type
C. Artery of mixed type
D. Vein with strongly developed muscles
E. Lymph node

47. A patient was delivered to a hospital with the fracture of mandible and considerable bleeding in the region of fracture. What artery is likely to be damaged?
A. Inferior alveolar artery
B. Ascending pharyngeal artery
C. Lingual artery
D. Ascending palatine artery
E. Superior alveolar artery

48. Examination of a bronchial tissue sample revealed atrophy of mucous membrane, cystic degeneration of glands, focal metaplastic changes of lining prismatic epithelial cells into multilayer squamous cells; increase in goblet cell number; in some parts

of the bronchial wall and especially in the mucous membrane there was marked cellular inflammatory infiltration and growth of granulation tissue bulging into the bronchial lumen in the form of a polyp. What is the most likely diagnosis?
A. Chronic bronchitis
B. Lobar pneumonia
C. Acute bronchitis
D. Bronchopneumonia
E. Interstitial pneumonia

49. While examining a blood smear taken from a patient and stained by Romanovsky's method, a doctor revealed some protozoa and diagnosed the patient with Chagas disease. What protozoan is the causative agent of this disease?
A. Trypanosomacruzi
B. Toxoplasma gondii
C. Leishmaniadonovani
D. Leishmaniatropica
E. Trypanosomabrucei

50. Chronic overdosage of glucocorticoids leads to the development of hyperglycemia. What process of carbohydrate metabolism is responsible for this effect?
A. Gluconeogenesis
B. Glycogenolysis
C. Aerobic glycolisis
D. Pentose-phosphate cycle
E. Glycogenesis

51. In order to prevent wound infection associated with surgical procedures, a patient was given a synthetic antiprotozoal drug with high activity against Helicobacter pylori. Specify this drug:
A. Metronidazole
B. Doxycycline hydrochloride
C. Chingamin
D. Acyclovir
E. Isoniazid

52. Specific prophylaxis involved the application of a vaccine containing microorganisms and exotoxin-detoxicated by formalin. It relates to the following type of vaccine:
A. Combined
B. Genetically engineered
C. Anatoxin
D. Chemical
E. Live

53. The trauma of the occipital region of the head resulted in a crack fracture in the region of the transverse sinus. What part of the occipital bone is damaged?
A. Squama
B. Left lateral
C. Right lateral
D. Proximal
E. Condyle

54. In the course of an experiment, researchers stimulate a branch of a sympathetic nerve that innervates heart. What changes in cardiac activity should be registered?
A. Increase in heart rate and heart force
B. Decrease in heart force
C. Increase in heart rate
D. Increase in heart force
E. Increase in arterial pressure

55. A 30-year-old comatose patient with type I diabetes mellitus had been admitted to a hospital. Laboratory tests revealed hyperglycemia, ketonemia. Which of the following metabolic disorders might be found in this patient?
A. Metabolic acidosis
B. Metabolic alkalosis
C. Respiratory acidosis
D. Respiratory alkalosis
E. Normal acid-base state

56. A patient in grave condition has been delivered to the admission ward. Examination revealed pupil mydriasis, no reaction to the light, considerable reddening, and dryness of skin and mucous membranes. What drug might have caused the intoxication

symptoms?
A. Atropine sulphate
B. Proserin
C. Adrenalin hydrochloride
D. Pilocarpine hydrochloride
E. Dithylinum

57. During postembryonal hemopoiesis in the red bone marrow, the cells of one of the cellular differons demonstrate a gradual decrease in cytoplasmic basophilia as well as an increase inoxyphilia, the nucleus is being forced out. Such morphological changes are typical for the following hemopoiesis type:
A. Erythropoiesis
B. Lymphopoiesis
C. Neutrophil cytopoiesis
D. Eosinophil cytopoiesis
E. Basophil cytopoiesis

58. When water affects the mucous membrane of the inferior nasal meatuses, this causes "diver reflex" that provokes:
A. Reflectory apnea
B. Reflectrory dyspnea
C. Reflectoryhyperpnea
D. Cough
E. Bronchospasm

59. After surgery on the thyroid gland, a patient complains of a hoarse voice. What nerve has been damaged during the surgery?
A. N. laryngeusreccurens
B. N. laryngeus superior
C. N. glossopharyngeus
D. N. hypoglossus
E. N. accessories

60. Serological diagnostics of infectious diseases is based upon specific interaction with antigenes. Specify the serological reaction that underlies adhesion of microorganisms when they are affected by specific antibodies in the presence of an electrolyte:
A. Agglutination reaction
B. Precipitation reaction
C. Complement-binding reaction
D. Hemadsorption reaction
E. Neutralization reaction

61. Autopsy of a woman with cerebral atherosclerosis revealed in the left cerebral hemisphere a certain focus that is presented by flabby, anhistic, greyish, and yellowish tissue with indistinct edges. What pathological process is the case?
A. Ischemic stroke
B. Multifocal tumor growth with cystic degeneration
C. Multiple foci of a fresh and old cerebral hemorrhage
D. Focal encephalitis
E. Senile encephalopathy

62. A histological specimen shows terminal secretory parts of glands made by conic cells with basophilic cytoplasm and a roundish nucleus in the centre. Specify the type of terminal secretory parts by the type of secretion:
A. Serous
B. Sebaceous
C. Combined
D. Mucous
E. Seromucous

63. After the restoration of blood circulation in damaged tissue accumulation of lactate comes to a stop, and the speed of glucose consumption slows down. These metabolic changes are caused by activation of the following process:
A. Aerobic glycolysis
B. Anaerobic glycolysis
C. Lipolysis
D. Gluconeogenesis
E. Glycogen biosynthesis

64. A 62-year-old patient with cerebral hemorrhage was admitted to the neurological department in grave condition. Objectively: increase of respiration depth and rate

with its following reduction to apnoea, after that respiration cycle restores. What respiration type is it?
A. Cheyne-Stokes
B. Kussmaul's
C. Biot's
D. Gasping
E. Apneustic

65. After a hemorrhage into the brainstem, a patient has lost reflex of myosis as a reaction to increase of illumination. What structure was damaged?
A. Vegetative nuclei of oculomotor nerve
B. Lateral reticular nuclei
C. Medial reticular nuclei
D. Red nuclei
E. Black substance

66. A patient at the early stage of diabetes mellitus was found to have polyuria. What is its cause?
A. Hyperglycemia
B. Ketonemia
C. Hypocholesterolemia
D. Hypercholesterolemia
E. Hyperkaliemia

67. Microelectrode technique allowed registering a potential following "all-or-none" law and being able of undecremental spreading. Specify this potential:
A. Action potential
B. Excitatory postsynaptic potential
C. Rest potential
D. Inhibitory postsynaptic potential
E. Receptor potential

68. An infectious disease unit admitted a patient with signs of jaundice caused by the hepatitis virus. Select an indicator that is specific only for parenchymatous jaundice:
A. Increase in ALT and AST rate
B. Hyperbilirubinemia
C. Bilirubinuria
D. Cholaemia
E. Urobilinuria

69. A 35-year-old patient diagnosed with sterility came to gynecological department for diagnostic biopsy of the endometrium. Microscopic examination revealed that the mucous membrane is edematous, uterine glands are convoluted and filled with thick secreta. An excess of the following hormone causes such changes in the endometrium:
A. Progesterone
B. Estrogen
C. Testosterone
D. Somatotropin
E. ACTH

70. A 12-year-old child presents with intolerance to some foodstuffs. Their consumption causes an allergic reaction in the form of itching skin eruption. What antihistaminic drug should be administered that won't have any negative impact on the child's school studies (with no sleepiness effect)?
A. Loratadine
B. Dimedrol
C. Sodium diclofenac
D. Aminophylline
E. Mesatonum

71. Deficiency of linoleic, and linolenic acids in an organism induces skin damages, hair loss, slow wound healing, thrombocytopenia, low resistance to infectious diseases. These symptoms are most likely to be caused by the disturbed synthesis of the following substances:
A. Eicosanoids
B. Interleukins
C. Interferons
D. Catecholamines
E. Corticosteroids

72. A patient with an acydic gastritis has the following blood formula: erythrocytes - $2,5 \cdot 10^{12}$/l;Hb - 50 g/l; colour index - 0,6; reticulocytes - 0,02%; microcytosis. What type of anemia is it?

A. Iron-deficient
B. Protein-deficient
C. Folic acid-deficient
D. Aplastic
E. Hypoplastic

73. After a trauma of soft tissues in the region of the posterior surface of the medial condyle of humerus, a patient has got a skin prickle of medial forearm surface. Which of the listed nerves is located in the affected region?
A. N.ulnaris
B. N.musculocutaneu
C. N.dorsalisscapularis
D. N.subscapularis
E. N.radialis

74. A 67-year-old patient ordered a full functional denture. It was necessary to extract his left upper canine. After infraorbital anesthesia, a patient presented with a progressing hematoma in the frontal part of his face. The patient was found to have an injury of an artery which is the branch of:
A. A. maxillaris
B. A. facialis
C. A. temporalis superficialis
D. A. ophthalmica
E. A. labialis superior

75. A woman with A (II), Rh-negative blood had a child with B (III), Rh-positive blood. The child was diagnosed with congenital anemia of newborns. What is the most likely cause of its development?
A. Rhesus incompatibility
B. Hereditary chromosomal pathology
C. AB0-incompatibility
D. Intrauterine intoxication
E. Intrauterine infection

76. Examination of a patient revealed that dental hypoplasia was caused by hypovitaminosis of vitamins A and D. These vitamins were administered perorally but they didn't have any medicinal effect. What is the probable cause of disturbed vitamin assimilation?
A. Bile acid deficiency
B. Hypochlorhydria
C. Hyperchlorhydria
D. Achylia
E. Achlorhydria

77. In the course of evolution, there appeared molecular mechanisms for the correction of damaged DNA molecules. This process is called:
A. Reparation
B. Transcription
C. Translation
D. Replication
E. Processing

78. A 34-year-old patient has low endurance of physical loads. At the same time, skeletal muscles have increased concentration of glycogen. It is caused by the reduced activity of the following enzyme:
A. Glycogen phosphorylase
B. Glucose-6-phosphate dehydrogenase
C. Phosphofructokinase
D. Glycogen synthase
E. Glucose-6-phosphatase

79. A patient has been delivered to a hospital with a provisional diagnosis of progressing muscle dystrophy. This diagnosis can be confirmed by the increased concentration of the following substance found in urine:
A. Kreatine
B. Pyruvate
C. Carnosine
D. Troponin
E. Hydroxyproline

80. A child has an abnormal formation of tooth enamel and dentin as a result of the low concentration of calcium ions in the blood. The deficiency of the following hormone might cause such abnormalities:
A. Parathormone

B. Thyrocalcitonin
C. Thyroxin
D. Somatotropic hormone
E. Triiodothyronine

81. An electron microphotograph of the duodenal epithelium clearly shows a cell with electron-dense granules in the basal pole. What cell is it?
A. Endocrine
B. Prismatic with a limbus
C. Poorly differentiated
D. Goblet
E. Parietal

82. A patient has roundish ulcers on his face, inflammation, and enlargement of lymph nodes. These symptoms turned up as a result of mosquito bites. Laboratory examination of discharge from the ulcers revealed unicellular aflagellar organisms. What is the most probable diagnosis?
A. Dermatotropicleishmaniasis
B. Toxoplasmosis
C. Scabies
D. Trypanosomiasis
E. Myasis

83. A patient under test was subjected to moderate physical stress. His minute blood volume amounted to 10 l/min. What blood volume was pumped through his lung vessels every minute?
A. 10 l/min
B. 5 l/min
C. 4 l/min
D. 6 l/min
E. 7 l/min

84. To prevent possible negative effect upon the gastric mucsa, a patient with rheumatoid arthritis was administered a nonsteroid anti-inflammatory drug - a COX-2 selective inhibitor. Specify this drug:
A. Celecoxib
B. Analgine
C. Acetylsalicinic acid
D. Butadion
E. Ibuprofen

85. An 18-year-old boy applied to a geneticist. The boy has an asthenic constitution: narrow shoulders, broad pelvis, nearly hairless face. Evident mental deficiency. The provisional diagnosis was Klinefelter's syndrome. What method of clinical genetics will enable the doctor to confirm this diagnosis?
A. Cytogenetic
B. Genealogical
C. Twin study
D. Dermatoglyphics
E. Population-and-statistical

86. In the second week of being ill wit viral hepatitis, a patient presented with the sleep disorder, headache, aggressiveness, unbearable skin itch. Objectively: AP drop, decrease in blood coagulation and reflectory activity, bradycardia. What is the cause of these changes?
A. Cholemia
B. Hyperlipemia
C. Urobilinemia
D. Hypercholesterolemia
E. Stercobilinemia

87. A 26-year-old pregnant woman is under treatment at an in-patient hospital. After a continuous attack of vomiting, she was found to have a reduced volume of circulating blood. What kind of change in general blood volume is the case?
A. Polycythemic hypovolemia
B. Simple hypovolemia
C. Oligocythemic hypovolemia
D. Polycythemic hypervolemia
E. Oligocythemic hypervolemia

88. A patient presented to a hospital with complaints about quick fatigability and significant muscle weakness. Examination revealed an autoimmune disease that causes functional disorder of receptors in the neu-

romuscular synapses. It will result in the disturbed activity of the following mediator:
A. Acetylcholine
B. Noradrenaline
C. Dopamine
D. Serotonin
E. Glycine

89. After implantation of a cardiac valve, a young man constantly takes indirect anticoagulants. His state was complicated by hemorrhage. What substance content has decreased in blood?
A. Prothrombin
B. Haptoglobin
C. Heparin
D. Creatin
E. Ceruloplasmin

90. A 45-year-old male died from disseminated tuberculosis. On autopsy, the symptoms of tuberculosis were confirmed by both microscopical and histological analyses. All the affected organs had epithelioid cell granulomas with caseous necrosis in the centre. What kind of hypersensitivity reaction underlies the process of granuloma development?
A. Delayed
B. Antibody-dependent cytotoxicity
C. Complement-dependent cytotoxicity
D. Anaphylactic
E. Immune complex

91. After the traumatic tooth extraction, a patient is complaining of acute, dull, poorly -localized pain in the gingiva, body temperature rises up to 37,5oC. The patient has been diagnosed with alveolitis. Specify the kind of a pain in this patient:
A. Protopathic
B. Epicritic
C. Visceral
D. Heterotopic
E. Phantom

92. Dentists are at increased risk of being infected with type B hepatitis. What preparation should be used for reliable active prevention of this disease?
A. Recombinant vaccine of HBsAg proteins
B. Live type B hepatitis vaccine
C. Specific immunoglobulin
D. Anti hepatitis serum
E. Monoclonal HBsAg antibodies

93. For the purpose of the disinfection of nonmetallic surgical instruments, the formaldehyde solution was used. What group does this antiseptic preparation belong to according to its chemical structure?
A. Aliphatics
B. Aromatics
C. Alcohols
D. Halogenated compounds
E. Detergents

94. Leukoses are treated with antimetabolite methotrexate. What vitamin is its antagonist?
A. Folic acid
B. Cyanocobalamin
C. Phyllochinone
D. Piridoxine
E. Rutin

95. There was a record of some anthrax cases among animals in the countryside. The spread of disease can be prevented by means of immunization. What kind of vaccine should be used?
A. STI live vaccine
B. BCG vaccine
C. Salk vaccine
D. Sabin's vaccine
E. Diphtheria and tetanus toxoids and pertussis vaccine

96. A 42-year-old woman has been administered propranolol for ischemic heart disease. Yet she has been found to have a disease in case of which the use of propranolol

is contraindicated. What disease is it?
A. Bronchial asthma
B. Cholecystitis
C. Arterial hypertension
D. Duodenal ulcer
E. Myasthenia

97. Toxic affection of liver results in dysfunction of protein synthesis. The following kind of dysproteinemia usually accompanies it:
A. Absolute hypoproteinemia
B. Relative hypoproteinemia
C. Absolute hyperproteinemia
D. Relative hyperproteinemia
E. Paraproteinemia

98. As a result of the dysfunction of protein synthesis in the liver, a patient with hepatic insufficiency has disturbed synthesis of procoagulants, prothrombin, fibrinogen. Which of the listed syndromes can be expected in this patient?
A. Haemorrhagic
B. Portal hemorrhagic syndrome
C. Hepatolienal syndrome
D. Acholia syndrome
E. Cholaemia syndrome

99. In order to prevent massive hemorrhage in the region of the oral cavity floor, it is required to ligate an artery that is located within Pirogov's triangle. What artery is it?
A. Lingual artery
B. Superior thyroid artery
C. Facial artery
D. Ascending pharyngeal artery
E. Maxillary artery

100. Studying the mitotic cycle phases of an onion root, the researchers revealed a cell with chromosomes lying in the equatorial plane in the form of a star. What phase of mitosis is it?
A. Metaphase
B. Prophase
C. Anaphase
D. Telophase
E. Interphase

101. HIV has gp41 and gp120 on its surface interacts with target cells of an organism. Which of the following human lymphocyte antigens is gp120 complementary bound with?
A. CD 4
B. CD 3
C. CD 8
D. CD 19
E. CD 28

102. A 55-year-old man had been suffering from chronic glomerulonephritis. He died from chronic renal failure. Macroscopical examination revealed on the surface of epicardium and pericardium some greyish-white villous depositions. After their removal, dilated and plethoric vessels were uncovered. What process took place in the pericardium?
A. Fibrinous inflammation
B. Organization
C. Proliferative inflammation
D. Haemorrhagic inflammation
E. Arterial hyperemia

103. A 45-year-old woman has been diagnosed with endemic goiter. What mechanism has caused hyperplasia of the thyroid gland in this patient?
A. Increased thyrotropin production
B. Increased thyroxine production
C. Increased iodine absorption
D. Increased hydration of derma and hypodermic cellulose
E. Increased catecholamine production

104. A patient presents with dysfunction of the cerebral cortex accompanied by epileptic seizures. He has been administered a biogenic amine synthesized from glutamate and responsible for central inhibition. What substance is it?
A. Gamma-amino butyric acid

B. Serotonin
C. Dopamine
D. Acetylcholine
E. Histamine

105. Morphological examination of an amputated gangrenous extremity revealed that the lumen of the femoral artery was constricted due to stony, partly ulcerated plaques with obturating thrombi. What is the most likely diagnosis?
A. Atherosclerosis
B. Obliterating endarteritis
C. Non-specific aortoartheriitis
D. Obliterating thromboangiitis
E. Nodular periarthritis

106. The immunoblot detected gp120 protein in the blood serum. This protein is typical for the following disease:
A. HIV-infection
B. Virus B hepatitis
C. Tuberculosis
D. Syphilis
E. Poliomyelitis

107. A patient has a right-sided fracture in the region of the frontal third of mandible accompanied by a hematoma in the region of the chin. The injury of the following artery causes it:
A. Mental
B. Inferior labial
C. Lingual
D. Facial
E. Palatine

108. An oncological patient had been administered methotrexate. With time target cells of the tumour lost sensitivity to this drug. At the same time, the change in gene expression of the following enzyme is observed:
A. Dehydropholate reductase
B. Thiaminase
C. Deaminase
D. Folate oxidase
E. Folate decarboxylase

109. A 42-year-old patient complains of pain in the epigastric area, vomiting; vomit masses have the colour of "coffee-grounds", the patient also has melena. Anamnesis records gastric ulcer. Bloodformula: erythrocytes - 2,8 • 1012/l, leukocytes - 8 • 109/l, Hb- 90 g/l. What complication is it?
A. Hemorrhage
B. Penetration
C. Perforation
D. Canceration
E. Pyloric stenosis

110. An embryo has signs of the disturbed process of dorsal mesoderm segmentation and somite generation. What part of the skin is most likely to have developmental abnormalities?
A. Derma
B. Hair
C. Sebaceous glands
D. Epidermis
E. Sudoriferous glands

111. While under barbituric anesthesia, a 65-year-old male patient developed respiratory inhibition. The anesthesiologist made him a 10 ml intravenous injection of a 0,5% bemegride solution. The patient's condition got better, the pulmonary ventilation volume increased. What phenomenon underlies the interaction of these medications?
A. Direct antagonism
B. Indirect antagonism
C. Unilateral antagonism
D. Direct synergism
E. Indirect synergism

112. There is a strict time limit for people to stay at the height of 8000 m above sea level without oxygen cylinders. Specify the life-limiting factor in this case:
A. Partial pressure of oxygen in air
B. Rate of ultraviolet radiation

C. Humidity rate
D. Temperature
E. Earth gravity

113. According to the phenotypic diagnosis, a female patient has been provisionally diagnosed with X-chromosome polysomia. This diagnosis can be confirmed by a cytogenetic method. Whatkaryotype will allow confirming the diagnosis?
A. 47(XXX)
B. 48(XXXY)
C. 48(XXYY)
D. 47(XXY)
E. 46(XX)

114. A 32-year-old patient who lives in the countryside consulted a doctor about a painful swelling and a fistula in the submandibular region. Examination revealed an infiltration with a fistula discharging thick pus and containing white granules. On dissection, the infiltration tissues turned out to be dense, yellow-green, and had honeycomb structure because of multiple abscesses. What is the most likely diagnosis?
A. Actinomycosis
B. Tuberculosis
C. Lepra
D. Syphilis
E. Submandibular abscess

115. As a result of a trauma, a patient has damaged anterior roots of the spinal cord. What structures have been affected?
A. Axons of motoneurons and axons of neurons of lateral horns
B. Central processes of sensitive neurons of spinal ganglions
C. Peripheral processes of sensitive spinal ganglions
D. Axons of neurons of lateral horns
E. Dendrites of neurons of spinal ganglions

116. After four months of treatment for tuberculosis, the patient began complaining of toes and fingers numbness, the sensation of creeps. He was diagnosed with polyneuritis. What antituberculous drug might have caused these complications?
A. Isoniazid
B. Rifampicin
C. Ciprofloxacin
D. Sodium salt of benzylpenicillin
E. Alcohol iodine solution

117. A man got into ice-cold water and died soon as a result of abrupt exposure to cold. In such cases, an organism loses heat most intensively by way of:
A. Heat conduction
B. Radiation
C. Convection
D. Heat conduction and radiation
E. –

118. An employee was working with radioactive substances, and as a result of an incident, he was irradiated with 4 Gy. He complains about headaches, nausea, dizziness. What changes in blood formula can be expected 10 hours after irradiation?
A. Neutrophilic leukocytosis
B. Lymphocytosis
C. Leukopenia
D. Agranulocytosis
E. Neutropenia

119. A patient with evident pneumosclerosis that developed after infiltrative pulmonary .tuberculosis presents with respiratory failure. What is its pathogenetic type?
A. Restrictive
B. Obstructive
C. Disregulative
D. Reflectory
E. Apneustic

120. After severe psychoemotional stress, a 48-year-old patient suddenly developed acute heartache irradiating to the left arm. Nitroglycerine relieved pain after 10 minutes. What is the leading pathogenetic mechanism of this process development?

A. Spasm of coronary arteries
B. Dilatation of peripheral vessels
C. Obstruction of coronary vessels
D. Compression of coronary vessels
E. Increase in myocardial oxygen consumption

121. A patient suffering from stomatitis was prescribed oral rinsing. Which antiseptic from the oxidant group is the most suitable for this purpose?
A. Potassium permanganate
B. Boric acid
C. Alcoholic iodine solution
D. Ethyl alcohol
E. Chloramine

122. Histological examination of the myocardium of a 47-year-old patient with rheumatic heart disease(section material) revealed some big, visually empty vacuoles within the cardiomyocytes. They turn black when stained with osmic acid, and yellow-red when stained with sudan III. What pathological process is it?
A. Adipose degeneration
B. Hyaline drop degeneration
C. Hydropic degeneration
D. Carbohydrate degeneration
E. Dysproteinosis

123. A group of students who were climbing up a mountain presented with euphoria, tachypnea, tachycardia. Specify the immediate reason for hypocapnia accompanying mountain sickness:
A. Increase in respiration rate and depth
B. Decrease in respiration depth
C. Erythrocytosis
D. Anemia
E. Increase in heart rate

124. The contents of vesicles that appeared on the mucous membrane of a patient with variola were sent to a virological laboratory. Which of the listed changes were revealed during the smear microscopy?
A. Paschen bodies
B. Babes-Negri bodies
C. Guarnieri bodies
D. Babes-Ernst bodies
E. Syncytium

125. A patient of the oral surgery department has developed a purulent complication. Bacteriological analysis of the wound discharge allowed to isolate a culture producing a blue-and-green pigment. Which of the listed microorganisms may be a causative agent of the infection?
A. Pseudomonas aeruginosa
B. Proteus vulgaris
C. Bacillus subtilis
D. Klebsiellapneumoniae
E. Staphylococcus epidermidis

126. Examination of a 30-year-old man's mandible revealed in the region of his molar a dense tumour-like formation that significantly deformed the mandible. Here and there, the formation wasn't fully detached from the bone tissue. Microscopical examination of a tissue sampling revealed that stroma had some cords and follicles with odontogenous cylindric epithelial cells in the periphery and stellate cells resembling of the enamel organ pulp in the centre. What is the most likely diagnosis?
A. Ameloblastoma
B. Adenomatoid tumour
C. Primary intraosseous carcinoma
D. Adenocarcinoma
E. Osteoclastoma

127. A woman had taken synthetic hormones during her pregnancy. Her newborn girl presents with excessive hairiness, which has a formal resemblance to adrenogenital syndrome. This sign of variability is called:
A. Phenocopy
B. Mutation
C. Recombination
D. Heterosis

E. Replication

128. A patient with a fracture of mandibular angle has been admitted to a hospital. A hematoma in the region of the fracture usually results from the injury of the following artery:
A. Inferior alveolar
B. Lingual
C. Facial
D. Maxillary
E. Internal carotid

129. A histological specimen of the ovary cortex shows a follicle with a large cavity. The first-order ovocyte is located in the region of cumulus oophorus, it is surrounded by a transparent zone and radiate crown. Specify the type of follicle:
A. Tertiary
B. Secondary
C. Primary
D. Atertiary
E. Primordial

130. A 67-year-old patient complains of periodic heartache, dyspnea during light physical activities.ECG reveals extraordinary contractions of heart ventricles. Such arrhythmia is called:
A. Extrasystole
B. Bradycardia
C. Tachycardia
D. Flutter
E. Fibrillation

131. A patient with a trigeminus inflammation has been suffering from progressing parodontitis for the last few years. What is the leading factor in parodontitis development in this case?
A. Neurodystrophical changes in parodentium
B. Hypoactivity of leukocytic elastase
C. Low immunoglobulin production
D. Increase of vagus tonus
E. Hypoactivity of kallikrein kinin system

132. An elderly patient has chronic constipation induced by large intestine hypotonia. What drug should be administered?
A. Bisacodyl
B. Sodium sulfate
C. Castor oil
D. Atropine
E. Novocaine amide

133. A month after surgical constriction of the rabbit's renal artery, the considerable increase of systematic arterial pressure was observed. What of the following regulation mechanisms caused the animal's pressure change?
A. Angiotensin-II
B. Vasopressin
C. Adrenaline
D. Noradrenaline
E. Serotonin

134. A patient consulted a dentist about itching and burning in the oral cavity; high temperature. The patient was diagnosed with trichomonal gingivostomatitis. What drug should be chosen for his treatment?
A. Metronidazole
B. Ampicillin
C. Doxycycline hydrochloride
D. Gentamicin sulfate
E. Nystatin

135. An electron microphotograph of an enamel organ shows a prismatic cell with developed granular endoplasmatic reticulum and Golgi complex. The apical part of the cell has Tomesprocess containing secretory granules and small vesicles. Specify the cell:
A. Secretory active enameloblast
B. Pre-enameloblast
C. External cell of an enamel organ
D. Cell of enamel organ pulp
E. Cell of the intermediate layer of the enamel organ

136. A 50-year-old male patient suffers

from chronic bronchitis, complains about dyspnea during physical activity, sustained cough with sputum. After examination, he was diagnosed with pulmonary emphysema. This complication is caused by:
A. Decrease in lung elasticity
B. Decrease in alveolar ventilation
C. Decrease in lung compliance
D. Decrease in lung perfusion
E. Ventilation-perfusion disbalance

137. A shepherd who has tended sheep together with dogs consulted a doctor about pain in his right subcostal area, nausea, vomiting. Roentgenoscopy revealed a tumour-like formation. What kind of helminthiasis might be suspected?
A. Echinococcosis
B. Ascaridiasis
C. Enterobiasis
D. Taeniarhynchosis
E. Taeniasis

138. As a result of a development anomaly, a newborn has a malformation of major salivary glands. This anomaly is caused by the damage of the following embryonal structure:
A. Ectoderm
B. Splanchnotom
C. Somites
D. Entoderm
E. Mesenchyme

139. A shepherd who has tended sheep together with dogs presents with chest pain and blood-spitting. X-ray examination revealed a roundish neoplasm in his lungs. Immunological reactions confirmed the provisional diagnosis. Specify the helminth that might have caused this disease:
A. Echinococcus
B. Dwarf tapeworm
C. Broad tapeworm
D. Common liver fluke
E. Armed tapeworm

140. A patient with ischemic heart disease has been administered an anti-anginal drug that reduces the myocardial oxygen consumption and improves the blood supply of myocardium. What drug is it?
A. Nitroglycerine
B. Validol
C. Propranolol
D. Promedol
E. Retabolil

141. The autopsy revealed that the upper lobe of the right lung was enlarged, grey, airless; the surface of incision was dripping with turbid liquid; pleura had a lot of fibrinous plicae. Microscopical examination of alveoli revealed exudate containing neutrophils, desquamated alveolocyte sand fibrin fibers. Bronchus wall was intact. What is the most probable diagnosis?
A. Croupous pneumonia
B. Interstitial pneumonia
C. Pulmonary abscess
D. Focal pneumonia
E. Influenzal pneumonia

142. Autopsy of a man who died from ethylene glycol poisoning revealed that his kidneys are a little bit enlarged, edematic; their capsule can be easily removed. The cortical substance is broad and light-grey. The medullary substance is dark- red. What pathology had this man?
A. Necrotic nephrosis
B. Acute pyelonephritis
C. Acute glomerulonephritis
D. Acute tubular-interstitial nephritis
E. Lipoid nephrosis

143. Examination of a child who hasn't got fresh fruit and vegetables during winter revealed numerous subcutaneous hemorrhages, gingivitis, carious cavities in teeth. What vitamin combination should be prescribed in this case?
A. Ascorbic acid and rutin
B. Thiamine and pyridoxine

C. Folic acid and cobalamin
D. Riboflavin and nicotinamide
E. Calciferol and ascorbic acid

144. A sportsman needs to improve his sporting results. He was recommended a drug containing carnitine. What process is activated by this compound in the first place?
A. Transport of fatty acids
B. Transport of amino acids
C. Transport of calcium ions
D. Transport of glucose
E. Transport of vitamin K

145. A micro specimen of the heart shows rectangular cells from 50 to 120 mcm large with the central position of the nucleus, developed myofibrils. Intercalated discs connect the cells. These cells are responsible for the following function:
A. Function of heart contractions
B. Function of impulse conduction
C. Endocrine
D. Protective
E. Regeneratory

146. The skin of patients with pigment xeroderma is very sensitive to sun radiation, there is a risk of skin cancer development. The reason for this is the hereditary deficiency of UF-endonuclease. As a result of this defect, the following process is disturbed:
A. DNA reparation
B. Transcription
C. DNA replication
D. Translation
E. Initiation

147. A stomatologist examined first-grade pupils and revealed that one of the children had yellowish brown teeth, two of them were split. Heretofore the pupil was treated with "some pills" on account of pneumonia. What medication could have had such a negative effect upon teeth?
A. Doxycycline
B. Oxacillin
C. Erythromycin
D. Ampicillin
E. Biseptol

148. Wound healing is accompanied by the development of a connective tissue cicatrice, which is formed on the site of the tissue defect. What cells are responsible for this process?
A. Fibroblasts
B. Macrophages
C. Fibrocytes
D. Mastocytes
E. Melanocytes

149. A 67-year-old patient underwent extraction of a tumour of the right parotid region. Macroscopical examination revealed a soft encapsulated node up to 35 cm in diameter, the tissue was whitish-grey and included many small cysts. Microscopical examination revealed that the duct structures of large diameter were lined with bilayer prismatic epithelium, they had eosinophilic cytoplasm, the duct lumens contained papillary structures, the stroma was infiltrated with lymphocytes, there were some solitary lymphoid follicles. Specify the kind of tumour:
A. Adenolymphoma
B. Pleomorphic adenoma
C. Mucoepidermaltumour
D. Monomorphic carcinoma
E. Adenocystic carcinoma

150. A preventive examination of a 55-year-old patient revealed type II diabetes mellitus. An endocrinologist revealed an increase in body weight and liver enlargement. The man is a nonsmoker and doesn't abuse alcohol but likes to have a good meal. Histological examination by means of diagnostic liver puncture revealed that the hepatocytes were enlarged mostly on the lobule periphery, their cytoplasm had

transparent vacuoles showing positive reaction with sudan III. What liver pathology was revealed?
A. Fatty hepatosis
B. Acute viral hepatitis
C. Chronic viral hepatitis
D. Alcohol hepatitis
E. Portal liver cirrhosis

151. Autopsy of a 75-year-old patient who had been suffering from disseminated atherosclerosis and died under chronic cardiac failure revealed constriction and deformation of coronary arteries, tuberous intima, whose section appeared to be white and petrosal. Specify the stage of atherosclerosis morphogenesis:
A. Atherocalcinosis
B. Lipoidosis
C. Liposclerosis
D. Bilipid
E. Atheromatosis

152. A patient with diabetes mellitus lapsed into a diabetic coma as a result of acid-based imbalance. Specify the type of disbalance:
A. Metabolic acidosis
B. Metabolic alkalosis
C. Respiratory acidosis
D. Gaseous alkalosis
E. Non-gaseous alkalosis

153. The microscopic study of an endocrine gland revealed that its parenchyma consisted of follicular structures. Their wall was formed by monolayer cubic epithelium, and their cavity was filled up with oxyphilic substance. What hormone is secreted by this gland?
A. Thyroxin
B. Aldosterone
C. Cortisol
D. Parathyrin
E. Oxytocin

154. Microspecimen of a child's finger skin reveals the subnormal development of epidermis. What embryonic leaf was damaged in the course of development?
A. Ectoderm
B. Mesoderm
C. Entoderm
D. Mesenchyma
E. Ectomesenchyma

155. A 28-year-old woman has been diagnosed with extrauterine pregnancy complicated by the fallopian tube rupture. The blood is most likely to penetrate the following peritoneal space:
A. Rectouterine
B. Vesicouterine
C. Right mesenteric sinus
D. Left mesenteric sinus
E. Intersigmoid sinus

156. A child with renal insufficiency exhibits delayed teeth eruption. This is most likely caused by the abnormal formation of the following substance:
A. 1,25 (OH)2D3
B. Glycocyamine
C. Glutamate
D. o-ketoglutarate
E. Hydroxylysine

157. A patient underwent the extraction of his superior medial incisor. It is supplied with blood branches of the following artery:
A. A.infraorbitalis
B. A.buccalis
C. A.palatinadescendens
D. A.sphenopalatina
E. A.alveolaris inferior

158. Roentgenologically confirmed obstruction of the common bile duct resulted in preventing bile from inflowing to the duodenum. What process is likely to be disturbed?
A. Fat emulgation
B. Protein absorption

C. Carbohydrate hydrolysis
D. Hydrochloric acid secretion in the stomach
E. Salivation inhibition

159. A patient complains of difficulty in the closing of jaws during chewing. He has been found to have atrophy of masticatory muscles. This indicates the dysfunction of the following nerve:
A. N. trigeminus
B. N. glossopharyngeus
C. N. facialis
D. N. vagus
E. N. ophthalmicus

160. Autopsy of a 68-year-old man who died from chronic cardiac insufficiency revealed deformed, thickened, conjoined cusps of the mitral valve. Along the edge of joining, there were small (1-2mm) thrombs. What form of endocarditis caused the development of chronic cardiac insufficiency?
A. Recurrent verrucous
B. Diffuse
C. Acute verrucous
D. Fibroplastic
E. Polypoulcerous

161. A 35-year-old patient with chronic periodontitis underwent excision of a cyst 3 cm in diameter found at the root of the 15th tooth. Histological examination revealed that it had a thin wall formed by mature connective tissue infiltrated by lymphocytes and plasmatic cells. Its internal surface was lined with multilayer pavement epithelium with no signs of keratinization; it contained serous exudate. What is the most likely diagnosis?
A. Radicular cyst
B. Follicular cyst
C. Primordial cyst
D. Cherubism
E. Follicular ameloblastoma

162. Examination of patients with periodontitis revealed the interdependence between the rate of affection of periodontal tissues and the amount of lysozymes in saliva and gingival liquid. These results can be obtained during studying the following protection system of an organism:
A. Non-specific resistance
B. Humoral immunity
C. Cellular immunity
D. Autoresponsiveness
E. Tolerance

163. After a car accident, a patient has been diagnosed with a fracture of the spine. He is unable to move his lower extremities. This form of the motor disorder is called:
A. Paraplegia
B. Hemiplegia
C. Quadriplegia
D. Paresis
E. Paralysis

164. A female patient with a tumour of the pancreas has developed mechanic jaundice resulting from compression of a bile-excreting duct. Which duct is compressed?
A. Ductus choledochus
B. Ductus cysticus
C. Ductus hepaticuscommunis
D. Ductus hepaticusdexter
E. Ductus hepaticus sinister

165. A 57-year-old patient experiences periodical uterine hemorrhages. Diagnostic biopsy of the lining of the uterus has revealed among the blood elements some glandular complexes of different forms and sizes made by atypic cells having hyperchromic nuclei with multiple mitoses (including pathological ones). What is the most likely diagnosis?
A. Adenocarcinoma
B. Uterus fibromyoma
C. Chorioepithelioma
D. Glandular endometrium hyperplasia
E. Endometritis

166. An oral surgery unit admitted a woman with a phlegmon on the anterior surface of the neck in the region of the carotid triangle. What muscle demarcates the posterior wall of this triangle?
A. Sternocleidomastoid
B. Thyrohyoid
C. Sternohyoid
D. Omohyoid
E. Sternothyroid

167. After a tourniquet application, a patient was found to have petechial hemorrhages. The reason for it is the dysfunction of the following cells:
A. Platelets
B. Eosinophils
C. Monocytes
D. Lymphocytes
E. Neutrophils

168. A woman who had taken alcohol during her pregnancy had a child with a cleft palate and upper lip. These presentations are indicative of some chromosomal anomalies. What process do they result from?
A. Teratogenesis
B. Carcinogenesis
C. Mutagenesis
D. Phylogenesis
E. Ontogenesis

169. Examination of a 40-year-old man ill with stenosing (without metastases) esophageal carcinoma revealed the following changes: atrophy of skeletal muscles and fatty tissue. His skin is sallow, epidermis is attenuated, the heart has grown smaller. Myocardium and liver are brown. What is the most probable diagnosis?
A. Alimentary cachexia
B. Myasthenia
C. Cancerous cachexia
D. Brown atrophy
E. Addison's disease

170. A patient who abuses smoking has chronic bronchitis. Biopsy of his primary bronchus revealed multilayer pavement epithelium. What pathological process was revealed in the bronchus?
A. Metaplasia
B. Physiological regeneration
C. Reparative regeneration
D. Hyperplasia
E. Dysplasia

171. It is required to anesthetize the right lower molars. The proper injection site for the conduction anesthesia is:
A. The region of the right mandibular foramen
B. The gums to the right of the mandible
C. The region of the right mental foramen
D. The region of the suborbital foramen
E. The region of the oval foramen

172. A 39-year-old man who had been operated for the stomach ulcer died seven days after the surgery. The autopsy revealed that peritoneal leaves were dull, plephoric, covered with massive yellow-greenish films, the peritoneal cavity contained for about 300 ml of thick yellow-greenish liquid. What pathologic process was revealed in the peritoneal cavity?
A. Fibrinous suppurative peritonitis
B. Serous peritonitis
C. Fibrinous serous peritonitis
D. Peritoneal commissures
E. Fibrinous hemorrhagic peritonitis

173. Macroscopic examination of lung tissue revealed areas of high airiness with small bubbles, histological examination revealed thinning and rupture of alveolar septa accompanied by the formation of large diversiform cavities. What disease was revealed in a lung?
A. Pulmonary emphysema
B. Multiple bronchiectasis
C. Cavernous tuberculosis
D. Chronic bronchitis
E. Fibrosing alveolitis

174. Before the infiltration anesthesia, a patient had been tested for sensitivity to novocaine. Their action turned out to be positive. Which of the below-listed drugs can be used for anesthetization in this case?
A. Lidocaine
B. Procainamide hydrochloride
C. Trimecaine
D. Anesthezin
E. Tetracaine

175. A 5-month-old boy was hospitalized for tonic convulsions. He has a lifetime history of this disease. Examination revealed coarse hair, thinned and fragile nails, pale and dry skin. In blood: calcium - 1,5 millimole/l, phosphor - 1,9 milli-mole/l. These changes are associated with:
A. Hypoparathyroidism
B. Hyperparathyroidism
C. Hyperaldosteronism
D. Hypoaldosteronism
E. Hypothyroidism

176. A 38-year-old man died all of a sudden. Autopsy revealed myocardial infarction in the posterior wall of the left ventricle. What are the most likely alterations in myocardiocyte structure that can be revealed microscopically in the infarction focus?
A. Karyolysis
B. Adipose degeneration
C. Carbohydrate degeneration
D. Calcification
E. Protein degeneration

177. A sample taken from the pharynx of a patient with angina was inoculated on the blood-tellurite agar. This resulted in the growth of grey, radially striated (in the form of rosettes) colonies up to 4-5mm in diameter. Microscopically there can be seen gram-positive rods with club-shaped ends arranged in the form of spread fingers. What microorganisms are these?
A. Corynebacteriadiphtheriae
B. Clostridium botulinum
C. Diphtheroids
D. Streptococci
E. Streptobacilli

178. Examination of duodenal contents revealed some pyriform protozoa with twin nuclei and four pairs of flagella. There were two supporting filaments between the nuclei and a suctorial disc on the ventral side. What representative of protozoa was revealed in this patient?
A. Lamblia
B. Toxoplasma
C. Leishmania
D. Intestinal trichomonad
E. Trypanosome

179. As a result of a trauma a patient has developed traumatic shock. The patient is fussy, talkative, pale. AP- 140/90 mm Hg, Ps- 120 bpm. This condition is consistent with the following shock phase:
A. Erectile
B. Latent
C. Terminal
D. Torpid
E. –

180. A histological specimen of the kidney shows a structure consisting of a glomerulus of fenestrated capillaries and a bilayer epithelial capsule. Specify this structure:
A. Renal corpuscle
B. Proximal tubule
C. Distal tubule
D. Henle’s loop
E. Receiving tube

181. Before the cells can utilize the glucose, it is first transported from the extracellular space through the plasmatic membrane inside them. The following hormone stimulates this process:
A. Insulin
B. Glucagon
C. Thyroxin

D. Aldosterone
E. Adrenalin

182. A boy has fallen down from a tree. Now he finds it difficult to abduct his arm into the horizontal position. Which muscle is most likely to be injured?
A. M.deltoideus
B. M.tricepsbrachii
C. M.anconeus
D. M.coracobrachialis
E. M.supinator

183. In order to fix dislocated mandible, it is necessary to pull it down. What anatomic structure requires this action?
A. Articulate tubercule of temporal bone
B. Condylar process of mandible
C. Mandibular fossa of temporal bone
D. Mandibular incisure
E. Coronal process of mandible

184. A 14-year-old patient has been diagnosed with Hutchinson's triad: screwdriver-shaped teeth, parenchymatous keratitis, and deafness. What disease are these signs typical for?
A. Syphilis
B. Toxoplasmosis
C. Lepra
D. Tuberculosis
E. Opisthorchiasis

185. A worker of a cattle farm consulted a surgeon about fever up to 40oC, headache, weakness. An objective examination of his back revealed hyperemia and a dark red infiltration up to 5 cm in diameter with a black bottom in the centre and some pustules. What disease are these presentations typical for?
A. Anthrax
B. Plaque
C. Tularemia
D. Furuncle
E. Abscess

186. A patient was delivered to a hospital after having been exposed to ionizing radiation. He presents with vomiting, anorexia, pain in a different region of the abdomen, bloody feces, the elevation of body temperature, inertness. Such clinical presentations are typical for the following form of acute radiation disease:
A. Intestinal
B. Bone-marrow
C. Cerebral
D. Combined
E. Toxemic

187. For relief of hypertensive crisis, a doctor administered a patient a drug that, apart from the antihypertensive effect, also has sedative, spasmolytic, and anticonvulsive effect. The drug was taken parenterally. When it is taken enterally, it acts as a laxative and cholagogue. What drug was administered?
A. Magnesium sulfate
B. Dibasolum
C. Reserpine
D. No-spa
E. Apressin

188. A cell of the granular endoplasmatic reticulum is at the stage of translation when mRNA advances to the ribosomes. Amino acids get bound by peptide bonds in a certain sequence, thus causing polypeptide biosynthesis. The sequence of amino acids in a polypeptide corresponds with the sequence of:
A. mRNA codons
B. tRNA nucleotides
C. tRNA anticodons
D. rRNA nucleotides
E. rRNA anticodons

189. A man is in the state of rest. He has been forcing himself to breathe deeply and frequently for3-4 minutes. What effect will it have upon the acid-base balance of the organism?

A. Respiratory alkalosis
B. Respiratory acidosis
C. Metabolic alkalosis
D. Metabolic acidosis
E. There will be no change in acid-base balance

190. A sportsman was examined after an intensive physical activity. The examination revealed the disorder of movement coordination, but the force of muscle contractions remained the same. The retarded speed of excitement conduction can explain it through:
A. Central synapses
B. Neuromuscular synapses
C. Efferent nerves
D. Afferent nerves
E. Conduction tracts

191. A patient with epilepsy and the depressive reaction has been administered a drug that reduced epilepsy manifestations and improved the patient's psychic condition.
A. Sodium valproate
B. Ethosuxemide
C. Amitriptyline
D. Phenytoin
E. Phenobarbital

192. A patient underwent esophagogastroduoder analysis of the biopsy material enabled doctors to diagnose him with helicobacteriosis. What property of the bacteria found in this patient had to be obligatory taken into account during their cultivation?
A. Microaerophilic ability
B. Presence of urease
C. Colonisation of gastral cells
D. Absence of spores and capsules
E. Presence of six polar flagella

193. A 60-year-old patient was found to have a dysfunction of the main digestive enzyme of saliva. This causes the disturbance of primary hydrolysis of:
A. Carbohydrates
B. Fats
C. Proteins
D. Cellulose
E. Lactose

194. A patient with diabetes mellitus complicated by angiopathy has been recommended a drug, which is a sulphonyl urease derivate of the second generation. It improves microcirculation and is known for its relatively good tolerance. What drug is it?
A. Glibenclamide
B. Glibutidum
C. Insulin
D. Acarbose
E. Adrenalin

195. A 67-year-old patient has atherosclerosis of cardiac and cerebral vessels. Examination revealed hyperlipidemia. What class of blood plasma lipoproteids is most important in atherosclerosis pathogenesis?
A. Low-density lipoproteids
B. Chylomicrons
C. a-lipoproteids
D. High-density lipoproteids
E. –

196. A patient consulted an otolaryngologist about voice changes. Examination revealed a tumour within the posterior part of rima vocalis. This part is located between the following cartilages of larynx:
A. Cartilagoarytenoidea
B. Cartilagocricoidea
C. Cartilagothyroidea
D. Cartilagocorniculata
E. Cartilagocuneiformis

197. A patient has been diagnosed with acute glomerulonephritis that developed after he had had the streptococcal infection. It is most likely that the affection of basal glomerular membrane is caused by an allergic reaction of the following type:

A. Immune complex
B. Anaphylactic
C. Cytotoxic
D. Delayed
E. Stimulating

198. After the second abortion, a 23-year-old woman has been diagnosed with toxoplasmosis. Which drug should be used for toxoplasmosis treatment?
A. Co-trimoxazole
B. Itraconazole
C. Mebendazole
D. Azidothimidine
E. Acyclovir

199. Gastroscopy of a patient revealed a lack of mucus coating the mucous membrane. This may be caused by the dysfunction of the following cells of the gastric wall:
A. Cells of prismatic glandular epithelium
B. Parietal cells of gastric glands
C. Main exocrinocytes
D. Cervical cells
E. Endocrinocytes

200. A patient consulted a dentist about the temporomandibular joint arthritis. The dentist administered an ointment containing diclofenac sodium. What is its mechanism of action?
A. Cyclooxigenase inhibition
B. Phospholipase inhibition
C. Opiate receptor activation
D. Opiate receptor block
E. Cyclooxigenase activation

1. A patient is 59 years old and works as director of a private enterprise. After the inspection by tax authorities, he developed intense burning retrosternal pain radiating to the left arm. After15 minutes the patient returned to normal. What is the leading mechanism for the development of stenocardia in this patient?
A. Increased level of blood catecholamines
B. Coronary atherosclerosis
C. Intravascular aggregation of blood corpuscles
D. Coronary thrombosis
E. Functional overload of the heart

2. A patient of the neurological department has a sensitivity loss caused by the damage to pseudounipolar neurocytes. Pseudounipolar neurons are a kind of bipolar neurons, and the only place of their localization in the human body is:
A. Spinal ganglions
B. Retina
C. Spiral ganglion
D. Intramural vegetative ganglia
E. Thalamic tubercle

3. As a result of an injury, the patient is unable to move his tongue forward and downward. Which of the following muscles is damaged?
A. Genioglossal
B. Stylohyoid
C. Hyoglossal
D. Superior longitudinal
E. Inferior longitudinal

4. A specimen of the pia mater shows a vessel with no middle membrane in its wall; its outer membrane adheres to the surrounding tissues, the inner membrane is made up of the basal membrane and endothelium. Specify this vessel:
A. Fibrous vein
B. Muscular vein with weakly developed muscular elements
C. Muscular artery
D. Arteriola
E. Mixed artery

5. Nucleolus organizers of human chromosomes 13-15, 21, 22 include about 200 gene clusters that synthesize RNA. These chromosomal regions contain information on the following type of RNA:
A. rRNA
B. tRNA
C. mRNA
D. snRNA
E. tRNA + rRNA

6. In the armpits of a patient, the small (1-1,5 mm), dorsoventrally flattened, wingless, bloodsucking insects. Their larvae developed in the armpits too. What disease is caused by these insects?
A. Phthiriasis
B. Sleeping sickness
C. Chagas' disease
D. Plague
E. Relapsing fever

7. A patient has air embolism as a result of a skin injury in the middle portion of the sternocleidomastoid muscle. Which cervical vein was injured?
A. External jugular vein
B. Anterior jugular vein
C. Internal jugular vein
D. Posterior auricular vein
E. Transverse cervical vein

8. A patient has secretory dysfunction of the submandibular salivary gland. Which nerve is responsible for its vegetative innervation?
A. Chorda tympani
B. N.auriculotemporalis
C. N.mandibularis
D. N.petrosus major
E. N.petrosus minor

9. A 10-year-old child cut his leg with a piece of glass and was sent to a clinic for an

piece of glass and was sent to a clinic for an anti-tetanus serum injection. In order to prevent the development of anaphylactic shock, the Besredkadesensitisation method was applied. What mechanism underlies this method?
A. Binding to IgE fixed to mast cells
B. Inhibited synthesis of mast cells mediators
C. Stimulation of the immunological antigen tolerance
D. Stimulation of antigen-specific IgG2 synthesis
E. Binding of IgE receptors on mast cells

10. An attack of tachycardia was stopped by pressing on the eyeballs. Which of the following reflexes underlies this phenomenon?
A. Aschner reflex
B. Holtz reflex
C. Bainbridge reflex
D. Hering reflex
E. Bernard reflex

11. A patient with a craniocerebral injury presents with respiration characterized by progressively deeper respiratory movements followed by a gradual decrease that results in a temporary stop in breathing. What pattern of abnormal respiration are these features typical for?
A. Cheyne-Stokes
B. Biot's
C. Kussmaul's
D. Gasping
E. Apneustic

12. A 65-year-old patient had been treated for three days in the resuscitation unit for cardiac pathology. Suddenly he developed ventricular fibrillation, which turned out to be the immediate cause of death. Microscopy of the left ventricular myocard revealed a large focus of cardiomyocyte karyolysis demarcated by the zone of hyperemia. What cardiac pathology was the cause of death?
A. Acute myocardial infarction
B. Ischemic myocardial degeneration
C. Acute myocarditis
D. Diffuse cardiosclerosis
E. Postinfarction cardiosclerosis

13. Following treatment with a highly-efficient anti-tuberculosis drug, a 48-year-old female developed optic nerve neuritis, memory impairment, cramps. Which of these anti-TB drugs had the patient taken?
A. Isoniazid
B. PASA
C. Rifampicin
D. Ethambutol
E. Kanamycin sulfate

14. In the course of surgery, the surgeon needs to expose spatium antescalenum. What structure forms the posterior border of this space?
A. M. scalenus anterior
B. M. scalenusmedius
C. M. scalenus posterior
D. M. longus colli
E. M. longus capitis

15. The total number of leukocytes in the patient's blood is 90 • 109/l. Leukogram: eosinophils – 0%,basophils – 0%, juvenile – 0%, stab neutrophils – 2%, segmentonuclear cells – 20%,lymphoblasts–1%, prolymphocytes– 2%, lymphocytes – 70%, monocytes – 5%, Botkin-Gumprecht cells. Clinical examination revealed enlarged cervical and submandibular lymph nodes. Such clinical presentations are typical for the following pathology:
A. Chronic lympholeukosis
B. Acute lympholeukosis
C. Lymphogranulomatosis
D. Infectious mononucleosis
E. Chronic myeloleukosis

16. A patient underwent lobectomy of the right middle lobe of a lung. What segments

of the lung were affected?
A. Lateral and medial
B. Apical, anterior
C. Basal medial and anterior
D. Basal posterior and lateral
E. Apical posterior and anterior

17. During manipulations aimed at the treatment of mandible dislocation, a physician should pay particular attention to a muscle that pulls a capsule and interarticular disc of temporomandibular articulation exteriorly. What muscle is it?
A. M. pterygoideuslateralis
B. M. masseter
C. M. pterygoideusmedialis
D. M. temporalis
E. M. mylohyoideus

18. A histological specimen represents an organ made up of skeletal cross striated muscle tissue. The organ has cutaneous, intermediate, and mucosal sections. The skin of the organ is stratified squamous keratinizing epithelium passing into nonkeratinizing epithelium in the mucosal section. Specify this organ:
A. Lip
B. Hard palate
C. Cheek
D. Gum
E. Tongue

19. When processing a molar tooth with a dental cutter, the dentist has, by accident, deeply wounded the patient's cheek and damaged not only the mucosa but also a muscle. Which muscle was hurt?
A. Buccal muscle
B. Greater zygomatic muscle
C. Masticatory muscle
D. Orbicular muscle of the mouth
E. Mylohyoid muscle

20. A patient with mandibular osteomyelitis has been administered an antibiotic from the tetracycline group. Specify this drug:
A. Doxycycline hydrochloride
B. Rifampicin
C. Streptomycin
D. Oxacillin
E. Amikacin

21. Cationic glycoproteins are the major components of parotid saliva. What amino acids are responsible for their positive charge?
A. Lysine, arginine, histidine
B. Aspartate, glutamate, glycine
C. Aspartate, arginine, glutamate
D. Glutamate, valine, leucine
E. Cysteine, glycine, proline

22. A patient with inflammation of tongue mucosa (glossitis) complains of taste sensitivity disorder in the two anterior thirds of the tongue. The lesion of the following nerve causes this:
A. Tympanichord
B. Tympanic
C. Lesser petrosal
D. Lingual
E. Glossopharyngeal

23. A 50-year-old woman with myocardial infarction has been delivered to the intensive care unit. Which enzyme's activity will be most increased during the first two days?
A. Aspartate aminotransferase
B. Alanine aminotransferase
C. Alanine aminopeptidase
D. LDH4
E. LDH5

24. A 26-year-old patient was found to have a big furuncle of soft tissues of the face by the root of the nose and inferior eyelid. This disease can be seriously complicated by the infection spreading along veins of this region to the sinuses of dura brain mater. What sinus is most likely to be affected?
A. Cavernous
B. Superior sagittal

C. Occipital
D. Sigmoid
E. Petrosal

25. During allergic rhinitis (inflammation of the nasal mucosa), the number of basophils in the connective tissue of the mucosa increases, which is accompanied by tissue edema. This phenomenon is associated with the following function of tissue basophils:
A. Histamine synthesis
B. Production of intercellular substance
C. Phagocytosis
D. Antibody formation
E. Heat production

26. Curarelike substances (dithylinum) make it impossible for skeletal muscles to contract because they block:
A. Neuromuscular synapses
B. Central synapses
C. Ganglionic synapses
D. Membrane conduction of excitement
E. Proprioceptors

27. A tumor pressing upon the vegetative nucleus of a cranial nerve causes saliva secretion by the parotid gland. What nucleus does the tumor press upon?
A. N.salivatorius inferior
B. N.salivatorius superior
C. N.dorsalisnervivagi
D. N.intermediolateralis
E. N.accessorius

28. Calcification of the intercellular substance of bone tissue is accompanied by the deposition of hydroxyapatite crystals along the collagen fibers. This process requires the presence of alkaline phosphatase in the intercellular substance. What cell produces this enzyme?
A. Osteoblast
B. Osteocyte
C. Osteoclast
D. Chondroblast
E. Chondrocyte

29. The vestibular surface of the left lower incisor has a pink fungoid formation up to 2 cm large, which is fixed to the supra-alveolar tissue by a wide pedicle. Histological examination revealed branched capillary vessels with multiple hemorrhages and foci of hemosiderosis. What is the most likely diagnosis?
A. Angiomatous epulis
B. Fibrous epulis
C. Giant cell epulis
D. Gingival fibromatosis
E. Cavernous hemangioma

30. In the framework of complex treatment of gingivitis, a patient has been administered a drug that stimulates leucopoiesis, accelerates wound healing, enhances the growth and proliferation of cells, has the anti-inflammatory effect. It is applied for the treatment of leukopenia of different genesis; in the dental practice, it is used for the treatment of inflammatory diseases of the oral mucosa. Identify the drug:
A. Pentoxylum
B. Mercaptopurine
C. Methotrexate
D. Cyanocobalamin
E. Coamide

31. A 26-year-old woman at 40 weeks' gestation was admitted to the maternity ward. Examination revealed that the cervix was open, but uterine contractions were absent. The doctor gave her a hormonal drug to induce labor. Specify this drug:
A. Oxytocin
B. Hydrocortisone
C. Estrone
D. Testosterone
E. ACTH

32. A 71-year-old man had been presenting with diarrhea for ten days. The feces had admixtures of blood and mucus. He was delivered to a hospital in grave condition and died two days later. Autopsy of the

body revealed the following: diphtheritic colitis with multiple irregularly-shaped ulcers of different depth in both sigmoid colon and rectum. The bacteriological analysis revealed Shigella. What was the main disease?
A. Dysentery
B. Typhoid fever
C. Salmonellosis
D. Nonspecific ulcerous colitis
E. Yersiniosis

33. From the fecal sample of a patient, Shigella sonnei was isolated. What additional studies are required to identify the source of infection?
A. Phage-typing of the isolated pure culture
B. Antibiogram
C. Precipitation reaction
D. Complement-fixation reaction
E. Neutralization reaction

34. A patient with chronic heart failure had been taking digitoxin for several months, during digitalization, the following symptoms developed: headache, nausea, diarrhea, loss of appetite, impaired color vision, bradycardia. What antidote should be administered to reduce the intoxication symptoms?
A. Unithiol
B. Atropine sulfate
C. Prednisolone
D. Adrenalin hydrochloride
E. Naloxone

35. A prolonged bleeding complicated tooth extraction in a patient with chronic persistent hepatitis. What is the cause of hemorrhagic syndrome?
A. Decreased production of thrombin
B. Increased production of thromboplastin
C. Decreased production of fibrin
D. Increased synthesis of fibrinogen
E. Increased fibrinolysis

36. After the extraction of the lower first premolar, the patient had a dentoalveolar hemorrhage. What artery did the bleeding occur from?
A. Inferior alveolar
B. Mental
C. Transverse facial artery
D. Lingual
E. Buccal

37. Certain infections caused by bacteria are treated with sulphanilamides that block the synthesis of bacterial growth factor. What is the mechanism of these drugs' action?
A. They are antivitamins of p-aminobenzoic acid
B. They inhibit the folic acid absorption
C. They are allosteric enzyme inhibitors
D. They are involved in redox processes
E. They are allosteric enzymes

38. Oral mucosa of a patient was treated with hydrogen peroxide. Instead of foaming, the blood turned brown. That is possible in case of reduced concentration of the following enzyme:
A. Catalase
B. Pseudocholinesterase
C. Glucose-6-phosphate dehydrogenase
D. Acetyltransferase
E. Methemoglobin reductase

39. A patient from Prykarpattia (at the foot of the Carpathian mountains) with endemic goiter consulted a doctor about the suppuration of gingival angles and loosening of teeth. What is a major factor in periodontitis development in this case?
A. Endocrine disorders
B. Stress effects
C. Hypersalivation
D. Violation of swallowing
E. Malnutrition

40. After a person had drunk 1,5 liters of water, the amount of urine increased significantly, and its relative density decreased to

icantly, and its relative density decreased to 1,001. These changes are a result of decreased water reabsorption in the distal nephron portion due to reduced secretion of:
A. Vasopressin
B. Aldosterone
C. Angiotensin II
D. Renin
E. Prostaglandins

41. In order to eliminate occupational risks, dental workers underwent vaccination. The vaccine should protect them from a viral infection, whose pathogen may be found in the blood of dental patients who had had this infection or who are its chronic carriers. What vaccine was used?
A. Genetically engineered HBs antigen
B. Inactivated hepatitis A vaccine
C. Live measles vaccine
D. Subunit influenza vaccine
E. Anti-rabies vaccine

42. A patient with severe maxillofacial trauma has been delivered to the emergency department. What drug should be given to this patient to relieve pain shock?
A. Promedol
B. Sydnocarb
C. Ibuprofen
D. Pantogam
E. Mydocalm

43. Enamel hypoplasia is caused by a dominant gene localized in the X chromosome. Mother has a normal enamel, and the father has enamel hypoplasia. Which of the children will have this anomaly?
A. Only the daughters
B. All the children
C. Only the sons
D. Half of the daughters
E. Half of the sons

44. A patient has been prescribed a salt-free diet. What changes to the salt taste sensitivity threshold should be expected?
A. Decrease
B. No changes
C. Little change
D. Increase
E. Increase followed by a decrease

45. A patient has been preliminarily diagnosed with paragonimiasis. Lung flukes cause this disease. The causative agent entered into the patient's body through:
A. Eating half-cooked lobsters and crabs
B. Eating unwashed vegetables
C. Contact with an infected cat
D. Eating half-cooked or dried fish
E. Drinking raw water from open reservoirs

46. In a bacteriological laboratory, some bacterial smears had to be stained by Gram's method. For this purpose, the following reagents were prepared: gentian violet, Lugol's solution, aqueous fuchsin solution. What other reagent is required?
A. 96% ethanol
B. 5% sulfuric acid
C. Methylene blue solution
D. Carbolic fuchsin
E. 3% hydrogen peroxide

47. Continuous treatment of cancer patients with methotrexate over time reduces the target cell's sensitivity to the drug. In this case, gene amplification of the following enzyme is observed:
A. Dihydrofolate reductase
B. Thiaminase
C. Deaminase
D. Thioredoxin reductase
E. –

48. A patient has petechial hemorrhages on the gums, hard and soft palate, buccal mucosa. This is caused by the dysfunction of the following blood corpuscles:
A. Platelets
B. Eosinophils
C. Monocytes

D. Lymphocytes
E. Erythrocytes

49. A patient with marked manifestations of exsicosis died in the infectious disease hospital. Postmortem examination results: the corpse with contracted muscles, dry skin, and mucous membranes, thick and dark blood in veins, edematous plethoric mucosa, distended bowel loops, the lumen contains about 4 liters of rice-water fluid. What is the most likely diagnosis?
A. Cholera
B. Enteric fever
C. Dysentery
D. Anthrax, intestinal form
E. Yersiniosis

50. Following the tooth extraction for acute pulpitis complicated by purulent periodontitis, a patient developed osteomyelitis of the mandible. Ten days later, the patient died with symptoms of severe intoxication. The autopsy revealed a 2x2 cm large abscess of the right frontal lobe of the brain, bilateral abscessed pneumonia, myeloid hyperplasia of the spleen. What is the most likely diagnosis?
A. Pyosepticemia
B. Septicemia
C. Chroniosepsis
D. Secondary septic endocarditis
E. –

51. An unconscious patient had been delivered to a hospital by the ambulance. Objectively: absent reflexes, occasional convulsions, irregular breathing. After a laboratory examination, he was diagnosed with hepatic coma. What metabolite accumulation is essential for the development of the central nervous system disorders?
A. Ammonia
B. Urea
C. Glutamine
D. Bilirubin
E. Histamine

52. When a wound heals, a scar takes its place. What substance is the main component of its connective tissue?
A. Collagen
B. Elastin
C. Keratan sulfate
D. Chondroitin sulfate
E. Hyaluronic acid

53. A 12-year-old male patient has tetanic convulsions. Which gland function may be impaired in this case?
A. Glandulaeparathyroidae
B. Hypophysis
C. Glandulathyroidea
D. Thymus
E. Glandulapinealis

54. Throughout a year, a 37-year-old woman periodically got infectious diseases of bacterial origin; their course was extremely lingering, remissions were short. Examination revealed a low-level of major classes of immunoglobulins. The direct cause of this phenomenon may be following cell dysfunction:
A. Plasmocytes
B. Phagocytes
C. Neutrophils
D. Macrophages
E. Lymphocytes

55. On the base of the clinical data, a child was diagnosed with atypical pneumonia resistant to the effects of beta-lactam antibiotics. The patient's sputum was cultured and incubated in a special medium, which resulted in the growth of microorganisms, forming microscopic colonies with a dense center (looking like fried eggs). What microorganisms caused the disease?
A. Mycoplasma pneumoniae
B. Klebsiella pneumonia
C. Streptococcus pneumoniae
D. Legionella pneumophila
E. Chlamidiapneumonia

56. A patient has sustained a traumatic injury of the greater pectoral muscle. This resulted in a decrease of:
A. Inspiratory reserve volume
B. Expiratory reserve volume
C. Tidal volume
D. Residual volume
E. Functional residual lung capacity

57. An examination of a 26-year-old patient involved histological analysis of bone marrow punctate, which revealed a significant decrease in the number of megakaryocytes. At the same time the following blood corpuscles should be decreased in number:
A. Platelets
B. Erythrocytes
C. Eosinophils
D. Neutrophils
E. B-lymphocytes

58. During ventricular systole, the muscle does not respond to additional stimulation because it is in the phase of:
A. Absolute adiaphoria
B. Relative adiaphoria
C. Increased excitability
D. Subnormal excitability
E. –

59. A patient has a history of chronic obstructive bronchitis. Blood gas analysis revealed the development of hypoxemia and hypercapnia on the background of dyspnea, tachycardia, and cyanosis. What disorder of external respiration is observed in the patient?
A. Hypoventilation
B. Hypoperfusion
C. Hyperperfusion
D. Hyperdiffusion
E. Hyperventilation

60. Platelet adhesion at the site of vascular injury is of great importance for the mechanisms of primary hemostasis. Which factor plays a major part in this process?
A. Willebrand's
B. Fitzgerald's
C. Fletcher's
D. Hageman's
E. Rosenthal's

61. Histological study of a micro slide of human skin found only dense irregular connective tissue. Which layer of this organ was analyzed?
A. Reticular dermis
B. Papillary dermis
C. Subcutaneous adipose tissue
D. Epidermis
E. The basal layer of the epidermis

62. A 20-year-old male got his tongue pierced. Five months later, a dense pale pink formation appeared in the zone of puncture. Biopsy revealed growing connective tissue with focal clusters of single polymorphonuclear neutrophils, fibroblasts, foreign body cells, lymphocytes, and plasmocytes. What kind of pathological process developed in the tongue tissues?
A. Nonspecific productive inflammation
B. Fibrinous exudative inflammation
C. Purulent exudative inflammation
D. Circulatory disturbance
E. Tumour

63. Microscopy of dental plaque revealed unicellular organisms. Their cytoplasm had two distinct layers, barely visible core, wide pseudopodia. The patient is most likely to have:
A. Entamoebagingivalis
B. Lamblia
C. Trichomonas tenax
D. Entamoebahistolytica
E. Entamoeba coli

64. A histological specimen of the mandible of an embryo shows a tooth germ with the dental papilla made up of small stellate basophilic cells. What tissue forms this part of the tooth germ?

A. Mesenchyme
B. Epithelial
C. Reticular
D. Cartilaginous
E. Osseous

65. It was established that the conduction velocity in the nerve fibers was equal to 120 m/sec. Specify these fibers:
A. Motoneuron axons
B. Preganglionic sympathetic
C. Preganglionic parasympathetic
D. Postganglionic sympathetic
E. Postganglionic parasympathetic

66. A patient has a history of chronic heart failure. Which of the following hemodynamic parameters is a major symptom of cardiac decompensation development?
A. Decreased stroke volume
B. Tachycardia development
C. Tonogenic dilatation
D. Increased peripheral vascular resistance
E. Increased central venous pressure

67. A patient has symptoms of atherosclerosis. What plasma lipid transport forms should have an increased concentration?
A. LDL
B. HDL
C. IDL
D. VLDL
E. Chylomicrons

68. A patient has a systemic inflammatory lesion of connective tissue. Which anti-inflammatory drug will reduce all the inflammatory phases?
A. Prednisolone
B. Contrycal
C. Phenylbutazone
D. Indomethacin
E. Diclofenac sodium

69. The functioning of certain structures of the isolated heart was stopped by means of cooling. What structure was cooled, providing that the heart first stopped contractions and then resumed them with a frequency twice lower than the initial one?
A. Sinoatrial node
B. Atrioventricular node
C. His' bundle
D. His' bundle branches
E. Purkinje's fibers

70. A patient has pronounced pain syndrome induced by neuralgia. What drug from the group of nonsteroidal anti-inflammatory drugs will reduce pain sensitivity?
A. Diclofenac sodium
B. Codeine phosphate
C. Ketamine hydrochloride
D. Lidocaine hydrochloride
E. Droperidol

71. After severe viral hepatitis, a 4-year-old boy presents with vomiting, occasional loss of consciousness, convulsions. The blood test revealed hyperammonaemia. Such condition is caused by a disorder of the following biochemical hepatic process:
A. Disorder of ammonia neutralization
B. Disorder of biogenic amines neutralization
C. Protein synthesis inhibition
D. Activation of amino acid decarboxylation
E. Inhibition of transamination enzymes

72. A patient with periodontitis has developed gingival edema. The gums are of dark red colour. What local circulation disorder prevails in the gums of the patient?
A. Venous hyperemia
B. Arterial hyperemia
C. Ischemia
D. Thrombosis
E. Embolism

73. Injection of an anesthetic before the tooth extraction resulted in the development of anaphylactic shock accompanied by oli-

guria. What pathogenetic mechanism caused a decrease in diuresis in this case?
A. Decrease in hydrostatic pressure in the renal corpuscle capillaries
B. Increase in hydrostatic pressure in the Bowman's capsule
C. Damage of glomerular filter
D. Increase in oncotic pressure of blood plasma
E. Increase in vasopressin secretion

74. A patient has been diagnosed with a hemorrhage in the region of the lateral sulcus of the brain. As a result, the blood flow is disturbed in the following artery:
A. A. cerebri media
B. A. communicans anterior
C. A. cerebri posterior
D. A. cerebri anterior
E. A. communicans posterior

75. After starting treatment for pulmonary tuberculosis, a patient complained about red tears and urine. What drug could cause such changes?
A. Rifampicin
B. Benzylpenicillin sodium salt
C. Benzylpenicillin potassium salt
D. Biseptol-480
E. Cefazolin

76. The inhibitory effect of GABA is due to the increased permeability of the postsynaptic membrane for chloride ions. This mediator is produced as a result of decarboxylation of the following amino acid:
A. Glutamate
B. Aspartate
C. Glutamine
D. Asparagine
E. Arginine

77. The electrophoretic study of blood serum of a patient with pneumonia revealed an increase in one of the protein fractions. What fraction is it?
A. r-globulins
B. Albumins
C. a1-globulins
D. a2-globulins
E. 3-globulins

78. Some proteins of saliva have a protective function. Which of them protects the oral mucosa from the mechanical damage?
A. Mucin
B. Lysozyme
C. Catalase
D. Peroxidase
E. Renin

79. When examining a child, the dentist found the deposit on both tonsils and suspected atypical form of diphtheria. A smear was taken, and after the nutrient media inoculation, the toxicity of the pure isolated culture was determined. What reaction was used to determine the toxigenicity of the isolated strain of diphtheria bacillus?
A. Gel precipitation reaction
B. Agglutination reaction on a glass slide
C. Complement binding reaction
D. Hemolysis reaction
E. Ring precipitation reaction

80. A hospital in Donetsk region admitted the patients - members of the same family - with eyelid and face edemata, fever, eosinophilia, headache, muscle pain. The disease developed on the7-10 day after eating pork sausage sent by the patients' relatives from Khmelnytskyi region. What is your provisional diagnosis?
A. Trichinosis
B. Echinococcosis
C. Teniasis
D. Cysticercosis
E. Taeniarhynchosis

81. After a diver had dived to a depth of 60 meters, he got the following symptoms of CNSdysfunction: anxiety, euphoria, lack of attention, professional errors. These symptoms are associated with neurons being un-

der a toxic effect of:
A. Nitrogen
B. Oxygen
C. Carbon dioxide
D. Ammonia
E. Lactate

82. In the perianal folds of a 5-year-old girl, mother found white worms causing itch and anxiety, and took them to the laboratory. The study revealed white filament-like helminths 0,5-1 cm long, with pointed, sometimes twisted, ends. What diagnosis can be made?
A. Diphyllobothriasis
B. Difilobotrioz
C. Teniasis
D. Ascariasis
E. Opisthorchiasis

83. As a result of a rapid change from horizontal to vertical body position, a 16-year-old girl lost consciousness. What is the reason for it?
A. Decreased venous return
B. Increased venous return
C. Heart rate decrease
D. Arterial pressure rise
E. –

84. A patient consulted a doctor about the inflammation of the ethmoid bone cells (ethmoiditis). Examination revealed the disorder of blood supply to the bone. The ethmoidal cells are normally supplied with blood by the branches of the following artery:
A. A. ophthalmica
B. A. infraorbitalis
C. A. facialis
D. A. cerebri anterior
E. A. transversafaciei

85. A patient with a malignant neoplasm on the upper jaw had been administered morphine hydrochloride for analgesia. The injection induced respiratory depression, pupil constriction, cyanosis, hypothermia, loss of consciousness. What antidote must be used?
A. Naloxone
B. Atropine sulfate
C. Droperidol
D. Promedol
E. Adrenalin hydrochloride

86. A child is six years old. The permanent teeth have started to take the place of the primary teeth. What teeth are the first to emerge?
A. Lower first molars
B. Lower first premolars
C. Upper first premolars
D. Upper medial incisors
E. Lower canines

87. Autopsy of a man who died from intraintestinal hemorrhage revealed necrosis of grouped and solitary follicles, dead tissues imbibed with bile and blood in the ileum, sequestration, and rejection of necrotic masses with defect formation in the lower segment of the intestine. Which of the following diagnoses is most likely?
A. Typhoid fever, ulcerative stage
B. Typhoid fever, "clean ulcer" stage
C. Typhoid fever, necrosis stage
D. Abdominal typhoid salmonellosis
E. Crohn’s disease

88. After a thorough examination, the patient who had returned from Central Asia to Ukraine was diagnosed with spring-summer encephalitis. Its pathogen might have entered the body through the bite of the following arthropod:
A. Dog-louse
B. Taiga tick
C. Argasid tick (ornithodorus papillipes)
D. Itch mite
E. Mosquito

89. Before an exam, a student complained of acute dental pain, which grew less dur-

ing the exam. What inhibition caused pain abatement?
A. External
B. Protective
C. Declining
D. Differentiating
E. Delayed

90. It is known that the pentose phosphate pathway occuring in the adipocytes of adipose tissue acts as a cycle. What is the main function of this cycle in the adipose tissue?
A. NADPH2 generation
B. Ribose-phosphate production
C. Xenobiotic detoxification
D. Energy generation
E. Glucose oxidation to end products

91. A 77-year-old patient with atherosclerosis got pain in his right foot. The foot is enlarged, the skin is black and macerated, the demarcation zone is not defined clearly. What pathological process arose in the foot?
A. Wet gangrene
B. Dry gangrene
C. Noma
D. Sequestrum
E. Coagulation necrosis

92. A survey radiograph of the facial skull of a 16-year-old girl shows some hole-like foci of cranial bone destruction. Histological examination of biopsy material revealed zones of the destruction of bone trabeculae, the proliferation of connective tissue with diffuse histiocytic infiltrate, and a large number of eosinophilic leukocytes. Diagnose the disease:
A. Eosinophilic granuloma
B. Histiocytosis X
C. Fibrous dysplasia
D. Osteoclastoma
E. Cherubism

93. Children often have laboured nasal breathing, which is caused by overdevelopment of lymphoid tissue of the pharyngeal mucous membrane. This phenomenon may cause enlargement of the following tonsils:
A. Tonsillapharyngea
B. Tonsillapalatina
C. Tonsillalingualis
D. Tonsillatubaria
E. All above-mentioned

94. A woman consulted a doctor about swelling and tenderness of the lower extremity, swollen veins, and nodes on the medial surface of the thigh. Which vein was affected?
A. Great saphenous
B. Small saphenous
C. Femoral
D. Popliteal
E. Tibial

95. A patient consulted a doctor about the loss of taste at the root of the tongue. The doctor established that this was due to nerve damage. What nerve was damaged?
A. Glossopharyngeal
B. Vagus
C. Facial
D. Superlaryngeal
E. Trigeminal

96. The surgically excised connective tissue of the deformed mitral valve gives a basophilic reaction when stained with hematoxylin and eosin. When stained with toluidine blue, it turns purple (metachromasia). What changes in the connective tissue can be detected by such reactions?
A. Mucoid edema
B. Fibrinoid necrosis of connective tissue
C. Connective tissue edema
D. Petrification
E. Hyalinosis

97. Treatment of a patient with the hereditary form of immunodeficiency involved gene therapy: the enzyme gene was introduced into the cells of the patient by means

of a retrovirus. What property of the genetic code allows to use of retroviruses as vectors of functional genes?
A. Universality
B. Specificity
C. Collinearity
D. Continuity
E. Redundancy

98. A patient with acute heart failure refractory to cardiac glycosides was given an injection of dobutamine. What is the mechanism of action of this drug?
A. Stimulation of 3-1-adrenergic receptors
B. Complexation with membrane phospholipids
C. Inhibition of K+, Na+- ATPase
D. Inhibition of phosphodiesterase activity
E. Increase of n.vagus tonus

99. A patient has been diagnosed with sepsis. It was decided to treat him with a drug from the fluoroquinolone group. Specify this drug:
A. Ciprofloxacin
B. Cefpirome
C. Metronidazole
D. Ampicillin
E. Cephalexin

100. After the traumatic tooth extraction, a patient is complaining of acute, dull, poorly-localized pain in the gingiva, body temperature rises up to 37,5°C. The patient has been diagnosed with alveolitis. Specify the kind of a pain in this patient:
A. Protopathic
B. Epicritic
C. Visceral
D. Heterotopic
E. Phantom

101. It is known that many hormones act through the adenylate cyclase system, causing the enzyme activation by phosphorylation. What enzyme is activated by hormonal signals and catalyzes glycogen breakdown?
A. Phosphorylase
B. Phosphotransferase
C. Glucomutase
D. Phosphatase
E. Tyrosinase

102. Periodontitis induces the development of lipid peroxidation in the periodontal tissues, as well as an increase in malondialdehyde and hydrogen peroxide concentration in the oral cavity. Which of the following enzymes provides antioxidant protection?
A. Catalase
B. Amylase
C. Maltase
D. Lactase
E. Invertase

103. Histological study of the bronchial wall and adjacent lung segments revealed sheets and strands of squamous epithelium. The cells have moderately expressed symptoms of atypia: polymorphism, nuclear hyperchromatism, mitoses. In the center of the complex, there are concentric pink formations. What is the most likely diagnosis?
A. Keratinizing squamous cell carcinoma
B. Non-keratinizing squamous cell carcinoma
C. Adenocarcinoma
D. Scirrhus
E. Undifferentiated carcinoma

104. Examination of a chemical plant worker who had had a poisoning revealed an increase in total bilirubin concentration at the expense of indirect fraction. Feces and urine are characterized by high stercobilin concentration. The level of direct bilirubin in blood plasma is normal. What type of jaundice is the case?
A. Hemolytic
B. Obstructive
C. Hepatic
D. Parenchymatous
E. Mechanical

E. Mechanical

105. A patient consulted an immunologist about diarrhea, weight loss within several months, low-grade fever, enlarged lymph nodes. The doctor suspected HIV infection. Whatimmunocompetent cells must be studied in the first place?
A. Helper T-lymphocytes
B. Suppressor T-lymphocytes
C. B-lymphocytes
D. Monocytes
E. Plasma cells

106. Microscopy of colonic biopsy material revealed a tumor made up of prismatic epithelium and forming atypical glandular structures of various shapes and sizes. The basal membrane of glands was destroyed. Tumor cells were polymorphic, with hyperchromatic nuclei and a large number of pathological mitoses. What is the most likely diagnosis?
A. Adenocarcinoma
B. Basal cell carcinoma
C. Solid carcinoma
D. Mucosal carcinoma
E. Undifferentiated carcinoma

107. Microscopy of a smear taken from the film that appeared on the peptone water 6 hours after seeding and culturing of a fecal sample in a thermostat revealed mobile gram-negative bacteria curved in the form of a comma that didn't make spores or capsules. What microorganisms were revealed?
A. Vibrios
B. Spirochetes
C. Clostridia
D. Corynebacteria
E. Spirilla

108. A pregnant woman developed severe toxemia with exhausting recurrent vomiting throughout a day. By the end of the day, she developed tetanic convulsions and bodily dehydration. The following type of acid-base disbalance caused the described changes:
A. Nongaseous excretory alkalosis
B. Gaseous alkalosis
C. Gaseous acidosis
D. Nongaseous metabolic acidosis
E. Nongaseous excretory acidosis

109. A patient complains of a toothache. On examination, he has been diagnosed with pulpitis. Which factor played a main pathogenic role in the development of pain syndrome in this case?
A. Increased intratissular pressure in the dental pulp
B. Vasospasm
C. Inadequate stimulation of a mandibular nerve branch
D. Activation of one of the components of the complement system
E. Interleukin action

110. Anatomical dead space is the part of air that remains in the airways after the expiration. Anatomical dead space will be reduced in the following situation:
A. Tracheostomy
B. Patient's head is flexed forward
C. Lying patient is turned to his left side
D. Lying patient is turned to his right side
E. Breathing through the mouth

111. It has been revealed that intense physical exercise causes activation of gluconeogenesis in the liver of experimental rats. Which substance is a glucose precursor in this case?
A. Pyruvate
B. Glycogen
C. Palmitate
D. Urea
E. Stearate

112. A patient complains about retrosternal pain, dyspnea, and palpitation. After examination, he was diagnosed with coronary heart disease and prescribed verapamil.

What is the mechanism of its action?
A. It blocks calcium channels
B. It blocks a-adrenoreceptors
C. It blocks 3-adrenoreceptors
D. It blocks potassium channels
E. It blocks sodium channels

113. Histological examination of the grayish-pink elastic nodule of 0,3 cm in diameter found by a surgeon at the root of the extracted tooth shows granulation tissue with cords of stratified squamous epithelium. What is the most likely diagnosis?
A. Granulomatous periodontitis
B. Eosinophilic granuloma
C. Granulating pulpitis
D. Acute apical periodontitis
E. Granulating periodontitis

114. Postmortem examination of a patient with a long history of rheumatism revealed thickening and shortening of the mitral valve leaflets with abundant thrombotic deposits. Histological examination of the valve leaflets confirmed sclerosis and revealed multiple foci of connective tissue disorganization in the form of mucoid and fibrinoid swelling, as well as de-endothelization foci. Endothelium defects were covered with thrombotic deposits of 1 -2 mm. What type of valvular endocarditis is the case?
A. Recurrent verrucous endocarditis
B. Acute verrucous endocarditis
C. Fibroplastic endocarditis
D. Diffuse valvulitis
E. Polypous-ulcerative endocarditis

115. The morphological study aimed to investigate an endocrine gland with parenchyma consisting of epithelium and neural tissue. In the epithelial trabeculae, the study revealed two types of cells: chromophile and chromophobe. Identify this organ:
A. Pituitary gland
B. Adrenal gland
C. Hypothalamus
D. Thyroid gland
E. Parathyroid gland

116. Reduced activity of antioxidant enzymes enhances the peroxidation of cell membrane lipids. The following microelement deficiency causes the reduction of glutathione peroxidase activity:
A. Selenium
B. Molybdenum
C. Cobalt
D. Manganese
E. Copper

117. During gastrulation, the Hensen's node remained underdeveloped in the embryo. Which axial organ will slow down its development?
A. Chord
B. Neural crests
C. Neural groove
D. Neural tube
E. Mantle layer of the neural tube

118. Phenylketonuria is a disease caused by a recessive gene that is localized in the autosome. The parents are heterozygous for this gene. They already have two sons with phenylketonuria and one healthy daughter. What is the probability that their fourth child will have the disease too?
A. 25%
B. 0%
C. 50%
D. 75%
E. 100%

119. DNA replication occurs during the cell division when a signal is received from the cytoplasm, and a certain portion of the DNA helix is unwound and divided into two chains. The following enzyme unwinds the helix:
A. Helicase
B. RNA polymerase
C. Ligase
D. Restrictase

E. DNA polymerase

120. A student who unexpectedly met his girlfriend developed an increase in systemic arterial pressure. This pressure change was caused by the intensified realization of the following reflexes:
A. Conditional sympathetic
B. Conditional parasympathetic
C. Conditional sympathetic and parasympathetic
D. Unconditional parasympathetic
E. Unconditional sympathetic

121. After the exposure to ionizing radiation, a person was found to have a decrease in the blood granulocyte level. What mechanism underlies these changes?
A. Leikopoiesis inhibition
B. Increased passage of granulocytes into the tissues
C. Autoimmune process development
D. Increased disintegration of leucocytes
E. Disturbed release of mature leukocytes from the bone marrow

122. Blood serum of a newborn contains antibodies to the measles virus. What kind of immunity is this indicative of?
A. Natural passive
B. Natural active
C. Artificial passive
D. Artificial active
E. Heredoimmunity

123. A patient with symptoms of acute heart failure, namely pallor, acrocyanosis, and rapid shallow breathing, has been delivered to the emergency department. Which of these drugs is indicated in this case?
A. Corglycon
B. Digitoxin
C. Cordiamine
D. Nitroglycerine
E. Adrenalin hydrochloride

124. A patient with a pronounced icteritiousness of skin, sclera, and mucous membranes has urine of dark beer colour and colourless feces. Direct bilirubin in the blood is elevated, urine contains bilirubin. What type of jaundice is it?
A. Obstructive
B. Parenchymatous
C. Hemolytic
D. Conjugation
E. Excretory

125. Steatosis is caused by the accumulation of triacylglycerols in hepatocytes. One of the mechanisms of this disease is to reduce the utilization of neutral fat VLDL. What lipotropic substances prevent steatosis development?
A. Methionine, B6, B12
B. Arginine, B2, B3
C. Alanine, B1, PP
D. Valine, B3, B2
E. Isoleucine, B1, B2

126. The patient's mobile phone rang during EEG recording. What changes will be observed on the EEG?
A. Alpha rhythm will change into beta rhythm
B. Alpha rhythm will increase
C. Beta rhythm will increase
D. Beta rhythm will change into alpha rhythm
E. Alpha rhythm will change into delta rhythm

127. Mother of a 10-year-old boy with purulent gingivitis consulted a dentist about the possibility of gingivitis treatment with fluoroquinolone drugs. The doctor gave a negative answer explaining it by the fact that fluoroquinolones:
A. Damage the cartilage tissue in children
B. Damage dentin
C. Have a cauterizing effect on the mucous membranes
D. Provoke loss of calcium from bones and

teeth
E. Provoke gingival hemorrhage

128. Experimenters irritate the peripheral segment of the intersected sympathetic nerve of an experimental dog. Which of the following changes will be observed?
A. Bronchiectasis
B. Heart force decrease
C. Pupil constriction
D. Heart rate decrease
E. Increased gastric and intestinal motility

129. A patient with diabetes mellitus developed a ketoacidotic coma due to the acid-base disturbance. What type of disorder had arisen in this case?
A. Metabolic acidosis
B. Exogenous acidosis
C. Respiratory acidosis
D. Gaseous alkalosis
E. Nongaseous alkalosis

130. Histologically, the internal wall of a cyst localized on the upper jaw is lined with stratified squamous epithelium with underlying granulation tissue infiltrated by lymphocytes. The external layer is represented by loose fibrous connective tissue surrounded by cicatricial fibrous tissue. What diagnosis can be made?
A. Cystic granuloma
B. Simple granuloma
C. Epithelial granuloma
D. Keratocyst
E. Ameloblastoma

131. A 30-year-old patient with pneumonia has been administered a 3-day course of an antibiotic from the group of azalides that has a bactericidal effect, prolonged action, the ability to bind tophagocytic cells and accumulate in the infection foci. What drug has been administered?
A. Azithromycin
B. Erythromycin
C. Benzylpenicillin sodium salt
D. Isoniazid
E. Ciprofloxacin

132. The operative dentistry department admitted a newborn girl who choked during sucking. Examination revealed cleft palate arising from non-union of the middle frontal process and maxillary process of the I-st branchial arch. The cleft was located in the palate between:
A. Osincisivum et processus palatinus maxillae
B. Processuspalatinus maxillae dextrae et sinistrae
C. Lamina horizontalis os palatinum dextrum et sinistrum
D. Processuspalatinus maxillae et lamina horizontalis os palatinum
E. In the region of canalis incisivus

133. Degeneration of glycogen in the liver is stimulated by glucagon. What secondary messenger (mediator) is thus formed in the cell?
A. c-AMP
B. c-GMP
C. CO
D. NO
E. Triacylglycerol

134. A 69-year-old patient got a small plaque with subsequent ulceration on the skin of the lower eyelid. The formation was removed. The microscopic examination of dermis revealed complexes of atypical epithelial cells arranged perpendicularly to the basal membrane on the periphery. The cells were dark, of polygonal prismatic shape with hyperchromic nuclei with frequent mitoses. What is the histological form of carcinoma in this patient?
A. Basal cell carcinoma
B. Keratinizing squamous cell carcinoma
C. Nonkeratinizing squamous cell carcinoma
D. Adenocarcinoma
E. Undifferentiated

135. An 18-year-old patient complains of general weakness, fatigue, low spirits. The patient is of the asthenic constitution type. Ps- 68/min., AP- 90/60 mm Hg. She has been found to have primary neurocirculatory hypotension. What is the leading factor of the arterial pressure drop in this patient?
A. Decreased tonus of resistive vessels
B. Decreased minute blood volume
C. Hypovolemia
D. Deposition of blood in the veins of the systemic circulation
E. Decreased cardiac output

136. In hot weather, the microclimate in hot rooms is often normalized by fans. At the same radiation from the human body increases through:
A. Convection
B. Heat conduction
C. Conduction
D. Radiation
E. Evaporation

137. Examination of a teenager revealed a congenital heart disease, namely the functioning of Botallo's duct. In the prenatal period of development, this duct connects the following organs:
A. Pulmonary trunk and aorta
B. Right and left ventricle
C. Aorta and inferior vena cava
D. Right and left atrium
E. Pulmonary trunk and superior vena cava

138. A patient with periodontitis has been administered a glucocorticoid drug in the form of anointment. Specify this ointment:
A. Prednisolone
B. Tetracycline
C. Decamine
D. Ampicillin
E. Erythromycin

139. Wilson's disease is a disorder of copper transport, which leads to the accumulation of this metal in the brain and liver cells. It is associated with a disturbance in the synthesis of the following protein:
A. Ceruloplasmin
B. Metallothionein
C. Transcobalamin
D. Haptoglobin
E. Siderophilin

140. The examination of a patient revealed glycosuria and hyperglycemia. He complains of dry mouth, itchy skin, frequent urination, thirst. He has been diagnosed with diabetes mellitus. What is the cause of polyuria in this patient?
A. Increased urine osmotic pressure
B. Decreased plasma oncotic pressure
C. Increased filtration pressure
D. Decreased cardiac output
E. Increased plasma oncotic pressure

141. It is known that the gene responsible for the development of the MN blood groups has two allelic states. If the gene M is considered as the initial gene, the allelic gene N appeared due to:
A. Mutations
B. Gene combinations
C. DNA repair
D. DNA replication
E. Crossing over

142. Detection of X-chromatin in somatic cells is used for the quick diagnosis of hereditary diseases associated with a change in the sex chromosome number. The vast majority of a man's cells have three X-chromatin bodies. What is man's karyotype?
A. 49, XXXXY
B. 45,X
C. 46, XY
D. 47, XXY
E. 48, XXXY

143. A patient has acute laryngotracheitis with a nonproductive cough that is very exhaustive. Prescribe an antitussive drug:

A. Glaucine
B. Ambroxol
C. Mucaltin
D. HerbaThermopsidis
E. Acetylcysteine

144. In dental practice, the vitality of tooth tissues is estimated by the electric pulp test. What parameter is assessed?
A. Threshold stimulus intensity
B. Chronaxie
C. Productive time
D. Accommodation
E. Lability

145. A 60-year-old man consulted a doctor about an onset of chest pain. In blood, serum analysis showed a significant increase in the activity of the following enzymes: creatine kinase and its MB-isoform, aspartate aminotransferase. These changes indicate the development of the pathological process in the following tissues:
A. Cardiac muscle
B. Lungs
C. Skeletal muscles
D. Liver
E. Smooth muscles

146. A 4-year-old girl died suddenly with symptoms of asphyxia. Autopsy revealed white spots on the buccal mucosa; large blotches of rash on the skin of the face, trunk, and extremities; conjunctivitis, edema with foci of necrosis on the laryngeal mucosa; giant-cell pneumonia on microscopy. What is the most likely diagnosis?
A. Measles
B. Scarlet fever
C. Influenza
D. Meningococcal infection
E. Typhus

147. For an unknown reason, the fertilization membrane of an embryo dissolved in the fallopian tube in the first critical period. What complication of pregnancy is possible in this case?
A. Embryo implantation into the Fallopian tube
B. Embryonic death
C. Invagination of the blastocyst wall
D. Return of blastocyst back to the ampullary portion of the tube
E. Formation of two blastocysts

148. After severe stress, a patient was found to have eosinopenia. A decrease in the eosinophil number can be explained by the changed concentration of the following hormones:
A. Glucocorticoids
B. Adrenaline
C. Insulin
D. Mineralocorticoids
E. Vasopressin

149. Microscopy of a smear obtained from a patient with acute purulent periostitis revealed gram-positive bacteria arranged in clusters resembling a bunch of grapes. What microorganisms is this morphology typical for?
A. Staphylococci
B. Sarcina
C. Tetracocci
D. Candida fungi
E. Streptococci

150. X-ray of a patient in the upright position revealed the presence of air in the stomach. What part of the stomach is it located?
A. Fundus
B. Body
C. Cardia
D. Pylorus
E. Lesser curvature region

151. A 60-year-old man with a history of chronic intestinal obstruction has excessive protein putrefaction in the colon. What is the indicator of this process?
A. Indicanuria

B. Bilirubinuria
C. Hyperuricuria
D. Creatinuria
E. Glycosuria

152. A female patient presents with the ovarian hyperemia, increased permeability of the blood follicle barrier with the development of edema, infiltration of the follicle wall with segmental leukocytes. The follicle is large in volume. Its wall is thickened. What period of the sex cycle is the described situation typical for?
A. Preovulatory stage
B. Ovulation
C. Menstrual period
D. Postmenstrual period
E. Period of relative rest

153. During surgery, the anesthesiologist used a ganglionic blocker for controlled hypotension. What drug was given to the patient in this case?
A. Hygronium
B. Benzohexonium
C. Pirilenum
D. Pentaminum
E. Pachycarpinum

154. A 50-year-old patient has been examined by a dentist and found to have a smooth crimson tongue. Blood analysis revealed a decrease in RBC level and hemoglobin concentration, colour index of 1,3, symptoms of megaloblastic hematopoiesis, degenerative changes in WBCs. What blood disorder was found in this patient?
A. Bi2-folic-acid-deficiency anemia
B. Iron deficiency anemia
C. Myeloid leukemia
D. Aplastic anemia
E. Hemolytic anemia

155. A patient complains of frequent bowel movements and stool with blood admixtures ("raspberry jelly" stool). Microscopic examination revealed large mononuclear cells with absorbed red blood cells. What protozoon is this morphological structure typical for?
A. Entamoebahistolytica
B. Giardia lamblia
C. Campylobacter jejuni
D. Toxoplasma gondii
E. Balantidium coli

156. A patient has an inflammation in the pterygopalatine fossa. The infection has spread into the nasal cavity. Which anatomical structure has the infection spread through?
A. Foramen sphenopalatinum
B. Foramen rotundum
C. Canalispalatinus major
D. Canalispalatinus minor
E. Canalisptherygoideus

157. A patient has wound abscess. Bacteriological examination of the wound content revealed a gram-negative bacillus that forms semi-transparent mucous colonies of blue-green colour with a pearlescent appearance on the beef-extract agar. Culture has a specific odour of violets or jasmine. What type of pathogen was isolated from the patient's wound?
A. P aeruginosa
B. P vulgaris
C. S. aureus
D. S. pyogenes
E. S. faecalis

158. A patient with chronic heart failure has been taking digoxin for several months on an outpatient basis. At a certain stage of treatment, he got symptoms of a drug overdose. What effect underlies the development of this complication?
A. Material accumulation
B. Adaptation
C. Sensibilization
D. Functional cumulation
E. Tachyphylaxis

159. In the course of an experiment, an animal had its cornea injured. What cells will provide the regeneration of stratified epithelium?
A. Basal epithelium cells
B. Cells of the proper substance of the cornea
C. Cells of the prickle-cell layer of corneal epithelium
D. Basal membrane cells
E. Squamous cells

160. A 42-year-old man died with symptoms of severe intoxication and respiratory failure. A slide of lung tissue was heterogeneous, with multiple micro focal hemorrhages and foci of emphysema. Histological examination of lungs revealed hemorrhagic abscessing bronchopneumonia, eosinophilic and basophilic granules in the cytoplasm of epithelial cells of bronchi. What is the most likely diagnosis?
A. Influenza
B. Parainfluenza
C. Adenovirus infection
D. Respiratory syncytial virus infection
E. Staphylococcal bronchopneumonia

161. After the transfusion of the concentrated red blood cells, the patient developed post-transfusion shock. What is the leading mechanism of acute renal failure in this case?
A. Glomerular filtration disorder
B. Tubular reabsorption disorder
C. Tubular secretion disorder
D. Urinary excretion disorder
E. Impairment of the renal incretory function

162. Cytogenetic analysis established that the patient had the 47, XYY karyotype. The extra chromosome in the karyotype has a centromere located very close to one of the chromosome ends so that one chromosomal arm is much shorter than the other one. Such a chromosome is called:
A. Acrocentric
B. Metacentric
C. Submetacentric
D. Telocentric
E. Submetacentric with a satellite

163. A patient consulted a doctor about an increased pain sensitivity of the ear skin and ear canal. The palpation behind the sternocleidomastoid muscle was painful. Such clinical presentations are typical for the irritation of the following nerve:
A. N.auricularismagnus
B. N.occipitalis minor
C. Nn.supraclaviculares
D. N.vagus
E. N.transversuscolli

164. A patient has herpetic conjunctivitis. What etiotropic drug should be administered?
A. Acyclovir
B. Ampicillin
C. Methisazonum
D. Furagin
E. Tetracycline

165. After examining the patient, the doctor recommended him to eliminate rich meat and vegetable broth, spices, smoked products from the diet, since the patient was found to have:
A. Increased secretion of hydrochloric acid by the stomach glands
B. Reduced secretion of hydrochloric acid by the stomach glands
C. Reduced motility of the gastrointestinal tract
D. Reduced salivation
E. Biliary dyskinesia

166. A 40-year-old male has a hearing impairment and paresis of facial muscles resulting from a blow to his head. He was diagnosed with a hematoma of the cerebellopontine angle. What nerves had been damaged?

A. VII, VIII pair of cranial nerves
B. V, VI pairs of cranial nerves
C. VIII, IX pairs of cranial nerves
D. IX, X pair of cranial nerves
E. –

167. A patient was taken to a hospital with dizziness, dry mouth, mydriatic pupils, accommodation disorder, tachycardia, difficult urination, intestinal atony. An overdose of the following drug might have caused these symptoms:
A. Atropine sulfate
B. Furosemide
C. Clonidine
D. Captopril
E. Prazosin

168. Having recovered from angina, a 23-year-old patient developed urinary syndrome (hematuria, proteinuria, leukocyturia). The study of the puncture biopsy of a kidney revealed manifestations of intra capillary proliferative glomerulonephritis, and electron microscopy revealed large subepithelial deposits. What is the pathogenesis of this disease?
A. Immunocomplex mechanism
B. Atopy, anaphylaxis with the production of IgE and their fixation to the mast cells
C. Cytotoxic, cytolytic action of antibodies
D. Cell-mediated cytolysis
E. Granulomatosis

169. A patient with a long history of chronic periodontitis underwent removal of a maxillary cyst located at the root of the affected tooth. Microscopy shows that the bone wall is made up of fibrous tissue infiltrated by lymphocytes and plasma cells. The inner surface of the cyst is covered with stratified squamous epithelium with no signs of keratinization. What is the most likely diagnosis?
A. Radicular cyst
B. Follicular cyst
C. Primordial cyst
D. Eosinophilic granuloma
E. Gingival fibromatosis

170. A 45-year-old female patient has neurosis with irritability, insomnia, amotivational anxiety. What tranquilizer will be able to eliminate all symptoms of the disease?
A. Diazepam
B. Paracetamol
C. Piracetam
D. Caffeine-sodium benzoate
E. Levodopa

171. Histological specimen of a decalcified tooth represents richly vascularized loose fibrous connective tissue containing a variety of cells. Pyriform odontoblasts of this region are arranged in several rows. What kind of dental structure is it?
A. Coronal pulp
B. Root pulp
C. Periodontium
D. Mantle dentin
E. Vasodentin

172. Preventive examination of 1-1.5-year-old children living in an orphanage revealed focal thickening of ribs and wrists, bowed legs. The dentist pointed out delayed teething, wrong eruption order, irregular mineralization of the enamel and dentin, high-arched palate. What disease has developed in children?
A. Rickets
B. Dystrophic calcification
C. Metabolic calcification
D. Metastatic calcification
E. Osteomalacia

173. Depressions and emotional disorders result from noradrenaline, serotonin, and other biogenic amines deficiency in the brain. The concentration of these compounds in synapses can be increased by means of antidepressants that inhibit the activity of the following enzyme:

A. Monoamine oxidase
B. Diamine oxidase
C. L-amino acid oxidase
D. D-amino acid oxidase
E. Phenylalanine-4-monooxigenase

174. During the formation of mantle dentin, the synthetic activity of odontoblasts was disturbed, which will have an effect on the formation of the following fibers:
A. Radial collagen Korff's fibers
B. Tangential collagen Ebner's fibers
C. Reticular
D. Elastic
E. Nerve

175. As a result of an injury, a child developed an abscess of adipose tissue of cheek. With time the process spread to the lateral surface of the pharynx. The pus spread along the following fascia:
A. Bucco-pharyngeal
B. Temporal
C. Masticatory
D. Parotid
E. –

176. Examples of human-specific parasites are malaria plasmodium, enterobius vermicularis and some other. The source of invasion of such parasites is always a human. Such human-specific parasites cause diseases that are called:
A. Anthroponotic
B. Zoonotic
C. Anthropozoonotic
D. Infectious
E. Multifactorial

177. Following the estimation of a person's energy expenditures, it was established that the respiratory quotient was equal to 1,0. This means that the compound that is mainly oxidized in the cells is:
A. Carbohydrates
B. Proteins
C. Fats
D. Proteins and carbohydrates
E. Carbohydrates and fats

178. At a certain stage of development of a human embryo, one can observe the formation of a cavity in its structure, small light blastomeres on the periphery, and large dark blastomeres at one of the poles. The embryo at this stage of development is called:
A. Blastocyst
B. Morula
C. Zygote
D. Gastrula
E. Blastodisk

179. Analysis of biopsy material of urinary bladder mucosa revealed a tumor of epithelial origin. What kind of epithelium was the source of this tumor?
A. Stratified transitional
B. Stratified squamous nonkeratinizing
C. Simple squamous
D. Multinucleated ciliated
E. Simple cubical

180. A patient presents with dysfunction of shin muscles. He cannot raise his body by standing on tiptoe. Which muscle is affected?
A. M. triceps surae
B. M. tibialis posterior
C. M. extensor digitorum longus
D. M. flexor digitorum longus
E. M. tibialis anterior

181. The examination of the oral mucosa revealed a small nodule with the papillary surface. Histological examination revealed conjugate papillary proliferations of stratified squamous epithelium without cellular atypism and underlying stroma represented by thin-walled vessels and loose connective tissue. What formation has developed in a patient?
A. Papilloma
B. Fibroma

C. Fibrolipoma
D. Epithelium hyperplasia
E. Basal cell carcinoma

182. At the recruiting office, US examination of a 19-year-old man revealed nephroptosis. Normally the kidneys should be located at the following vertebral level:
A. XI thoracic and III lumbar
B. IX-X thoracic
C. IV-V lumbar
D. XII thoracic and I lumbar
E. IX-XII thoracic

183. Histological specimen of mandible shows ten tooth buds connected to the dental plate. Which element of tooth germ will develop out of them?
A. Enamel organ
B. Dental bulb
C. Dental sac
D. Enamel spindles
E. Enamel pearls

184. Histological examination of a tissue sample revealed that the tissue had no blood vessels, and the cells were packed tightly together, making layers. Specify this tissue:
A. Epithelial
B. Cartilaginous
C. Osseous
D. Nervous
E. Muscular

185. Ionizing radiation or vitamin E deficiency may increase the permeability of lysosome membranes. What consequences may arise from this pathology?
A. Partial or complete cell disintegration
B. Intensive protein synthesis
C. Intense energy synthesis
D. Restoration of the cytoplasmic membrane
E. Formation of cleavage spindle

186. A patient visited a dentist for acute dental pain in the lower left canine. He was diagnosed with pulpitis. What nerve innervates this tooth?
A. Inferior alveolar
B. Superior alveolar
C. Palatal
D. Zygomatic
E. Facial

187. A 37-year-old patient has lost 5 kg in weight over the past three months, he complains of hand tremor, excessive sweating, exophthalmos, tachycardia. These changes might have been caused by the increased secretion of the following hormone:
A. Thyroxine
B. Cortisol
C. Insulin
D. Glucagon
E. Thyrocalcitonin

188. A woman got infected with rubella during pregnancy. The child was born with malformations, namely cleft lip, and palate. The child's genotype is normal. These malformations are a manifestation of:
A. Modification variability
B. Polyploidies
C. Combinatory variability
D. Chromosomal mutations
E. Aneuploidies

189. Following a cold, a patient developed numbness on the right side of his face. Examination revealed a disturbance of pain and temperature sensitivity on the right side of the face. What nerve is damaged?
A. Trigeminal
B. Facial
C. Glossopharyngeal
D. Vagus
E. Hypoglossal

190. Autopsy of a 52-year-old woman with a long history of chronic glomerulonephritis revealed significantly reduced in size, dense kidneys with a surface of fine granu-

larity; fibrinous inflammation of serous and mucous membranes; dystrophic changes in parenchymatous organs; cerebral edema. The following complication causes the described changes of serous membranes and internal organs:
A. Uraemia
B. Anaemia
C. Sepsis
D. DIC syndrome
E. Thrombocytopenia

191. A female woman has been clinically diagnosed with gonorrhea. Which of the following studies can be used to confirm the diagnosis?
A. Microscopy of the pathological material
B. Disinfection of laboratory animals
C. Bacteriophage test
D. Hemagglutination reaction
E. Immobilization reaction

192. In the experiment, an animal had its brain stem cut, which caused a rapid increase of extensor muscle tone (decerebrate rigidity). This condition arose because the muscles were no more under the control of the following brain structure:
A. Red nucleus
B. Blue spot
C. Black substance
D. Striatum
E. Gray tuber

193. An animal had been intensively fed with carbohydrates. Histologic examination of its liver revealed a significant number of glycogen granules. Glycogen relates to the following group of cell structures:
A. Trophic granules
B. Secretory granules
C. Excretory granules
D. Pigment granules
E. Special organelles

194. Autopsy of a young man revealed some lung cavities with inner walls made up of granulation tissue with varying degrees of maturity, pronounced pneumosclerosis and bronchiectasis. Some cavities had caseation areas. What is your presumptive diagnosis?
A. Fibrous cavernous tuberculosis
B. Infiltrative tuberculosis
C. Caseous pneumonia
D. Acute cavernous tuberculosis
E. Bronchiectasis

195. A patient with arthritis and varicose veins has been taking a nonsteroidal anti-inflammatory drug for a long time, which caused the thrombosis of cutaneous veins. Which of the listed drugs might have caused this complication?
A. Celecoxib
B. Indomethacin
C. Aspirin
D. Phenylbutazone
E. Ibuprofen

196. A physician is planning to diagnose an infectious disease by means of an agglutination test. Whatis required for this reaction apart from the serum of a patient?
A. Diagnosticum
B. Diagnostic serum
C. Complement
D. Hemolytic serum
E. Anatoxin

197. A 70-year-old man has developed prosphetic stomatitis. Apart of this he was found to have an evident lesion of mouth corners. Microscopical examination revealed large ovoid gram-positive cells. What microorganisms are most likely to be the leading etiological agent of such a lesion?
A. Candida fungi
B. Streptococci
C. Staphylococci
D. Neisseria
E. Corynebacteria

198. A patient has enamel erosion. What vitamin should be administered for its treatment?
A. D
B. C
C. K
D. Bi
E. PP

199. A patient complains of an increased sensitivity of the posterior third of his tongue as well as of a gustatory disturbance in this region. What nerve is damaged?
A. Glossopharyngeal
B. Facial
C. Trigeminal
D. Accessory
E. Hypoglossal

200. A patient with rheumatoid arthritis has been given hydrocortisone for a long time. He has developed hyperglycemia, polyuria, glycosuria, thirst. These complications of treatment result from the activation of the following process:
A. Gluconeogenesis
B. Glycogenolysis
C. Glycogenesis

1. A 36-year-old patient with a several-year history of chronic pulpitis had undergone tooth extraction. Microscopic examination of the pulp revealed some deep-purple structureless areas which can be interpreted as:
A. Dystrophic calcification
B. Metabolic calcification
C. Metastatic calcification
D. Lithiasis
E. Dental tartar

2. A patient with inflammation of tongue mucosa (glossitis) complains of taste sensitivity disorder in the two anterior thirds of his tongue. The damage of the following nerve causes this:
A. Tympanichord
B. Tympanic
C. Lesser petrosal
D. Lingual
E. Glossopharyngeal

3. A 40-year-old patient presents with abdominal pain, frequent loose stools with mucus and blood. Stool analysis revealed vegetative forms of some protozoa sized 30 -40 microns, with short pseudopodia, containing large amounts of phagocytosed erythrocytes. What protozoan disease does the patient have?
A. Amebiasis
B. Leishmaniasis
C. Trichomoniasis
D. Giardiasis
E. Toxoplasmosis

4. A 24-year-old patient with catarrhal tonsillitis has been administered a drug from the group of sulfonamides. Specify the mechanism of sulfonamide antibacterial action:
A. Competitive antagonism of PABA
B. Disruption of the cell wall protein synthesis
C. Reduction of membrane permeability
D. Inhibition of sulfhydryl groups of thiol enzymes
E. Protein coagulation

5. The emergency department admitted a 48 -year-old male with a blunt abdominal injury on the right and a suspected rupture of the liver. Which of these peritoneal structures can be expected to include blood accumulations?
A. Rectovesical pouch
B. Superior iliocecal recess
C. Intersigmoidal recess
D. Omental sac
E. Left paracolic gutter

6. Histological examination of a tissue sample revealed that the tissue had no blood vessels, and the cells were packed tightly together, making layers. Specify this tissue:
A. Epithelial
B. Cartilaginous
C. Osseous
D. Nervous
E. Muscular

7. Stimulation of the peripheral segment of chorda tympani in an experimental animal resulted in the discharge of the following secretion from the parotid salivary fistula:
A. A lot of liquid salivae
B. A small amount of liquid saliva
C. There is no saliva
D. A small amount of viscous saliva
E. A lot of viscous salivae

8. During abdominal surgery, a 46-year-old patient working at a meat processing plant was found to have a very dense roundish formation 11 cm in diameter, which was localized in the right lobe of the liver. The cross-section of the formation has a porous appearance due to a large number of small vesicles with layers of dense connective tissue. The surrounding tissues have visible necrotic areas and proliferation of granulation tissue, including many eosinophils and foreign body giant cells. What disease can

be thought of in this case?
A. Echinococcusmultilocularis
B. Malaria
C. Hepatitis
D. Hepatic rhabdomyosarcoma
E. Calculous cholecystitis

9. A 44-year-old patient with obstructive jaundice has been admitted to a hospital with the symptoms of cholemic syndrome. On the ECG arrhythmia shows up. What kind of arrhythmia is the patient most likely to have?
A. Sinus bradycardia
B. Sinus tachycardia
C. Atrial premature contraction
D. Ventricular premature contraction
E. Atrioventricular block

10. Alterations in protein digestion in the small intestine are induced by the impairment of trypsin and chymotrypsin activity. What enzyme deficiency may be the cause of this impairment?
A. Enterokinase
B. Pepsin
C. Amylase
D. Maltase
E. Lipase

11. A 39-year-old patient with pyelonephritis has been found to have hyposthenuria combined with polyuria. According to this data, what process is most likely to be disrupted?
A. Tubular reabsorption
B. Glomerular filtration
C. Tubular secretion
D. Tubular excretion
E. –

12. A 55-year-old male patient with acute heart failure has been administered a quick-relief cardiac glycoside. Which of the following drugs has been given to the patient?
A. Strophanthin
B. Adonisidum
C. Digitoxin
D. Celanid
E. Milrinone

13. A patient consulted a doctor about difficult chewing. On examination, he was found to have the atrophy of the right temporal muscle and masticatory muscles. Upon opening the mouth, the patient's jaw deviates to the left. What nerve is affected?
A. Motor portion of the mandibular nerve
B. Facial
C. Inferior alveolar
D. Maxillary
E. Mandibulohyoid

14. A patient in a collaptoid state has been given an injection of mesatonum for the correction of blood pressure. What is the mechanism of this drug action?
A. It stimulates a-adrenergic receptors
B. It stimulates ^-adrenergic receptors
C. It blocks a-adrenergic receptors
D. It blocks 3-adrenergic receptors
E. It stimulates a- and 3-adrenergic receptors

15. A patient with a toxic paralysis of the respiratory centre has been repeatedly administered cordiamine for the centre stimulation. What side effect may occur?
A. Clonus
B. Tonic convulsions
C. Arrhythmia
D. Collapse
E. Bronchospasm

16. A 34-year-old patient underwent a tooth extraction. The tooth crown was of diamond shape and had four tubercles on the masticatory surface, the tooth had three roots. What tooth was extracted?
A. The first maxillary molar
B. The first mandibular molar
C. Second maxillary molar
D. The third maxillary molar
E. The second mandibular molar

17. A 49-year-old patient has psychotic manifestations in the form of psychomotor agitation, auditory and visual hallucinations. What drug is indicated in the described case?
A. Haloperidol
B. Sodium bromide
C. Diazepam
D. Valerian tincture
E. Chlordiazepoxide

18. A 32-year-old female has gingivitis accompanied by gingival hypoxia. At the same time, the level of the following metabolite of carbohydrate metabolism is greatly increased in periodontal tissues:
A. Lactate
B. Ribose-5-phosphate
C. Glycogen
D. Glucose-6-phosphate
E. NADPH

19. A 4-year-old child has purulent inflammation of the middle ear. The pathological process has spread to the artery that borders the anterior wall of the tympanic cavity. What vessel is involved in the pathological process?
A. A. carotisinterna
B. A. carotis externa
C. A. meningea media
D. A. auricularis posterior
E. A. temporalis superfacialis

20. Monoamine oxidase inhibitors are widely used in clinics as psychopharmacological drugs. They change the level of the following neurotransmitter in the synapses:
A. Norepinephrine
B. Acetylcholine
C. ATP
D. Substance P
E. L-glutamate

21. Examination of a patient with a brain cortex injury revealed that he had lost the tactile sensitivity. What part of the cerebral cortex is damaged?
A. Posterior central gyrus
B. Occipital lobe
C. Parietal lobe
D. Frontal lobe
E. Anterior central gyrus

22. A 68-year-old female patient with a history of glaucoma has increased intraocular pressure with normal secretion of aqueous humour by the ciliary body. The inadequate outflow of fluid from the anterior chamber is associated with the damage to the following structure of the eyeball wall:
A. Venous sinus
B. Ciliary body
C. Choroid
D. Ciliary muscle
E. Posterior corneal epithelium

23. Microscopic examination of the biopsy sample taken from a deformed upper jaw bone revealed areas of bone resorption and replacement of bone tissue by randomly arranged bundles of mature collagen fibers with spindle and stellate cells; the primitive structure of trabeculae; myxomatous foci. What is the most likely diagnosis?
A. Fibrous osteodysplasia
B. Osteoma
C. Osteoblastosarcoma
D. Osteoporosis
E. Osteosarcoma

24. The physical activity caused an increase in the cardiac output in a patient with a transplanted heart. What is the regulative mechanism responsible for these changes?
A. Catecholamines
B. Sympathetic unconditioned reflexes
C. Parasympathetic unconditioned reflexes
D. Sympathetic conditioned reflexes
E. Parasympathetic conditioned reflexes

25. What vitamin is a component of glutamic acid decarboxylase, participates in the production of GABA, and seizures

manifest its deficiency?
A. Pyridoxine
B. Cobalamin
C. Tocopherol
D. Folic acid
E. Ascorbic acid

26. A bacteriological laboratory studied the home-made dried fish, which had caused severe food poisoning. Microscopy of the culture grown on the Kitt-Tarozzi medium revealed microorganisms resembling a tennis racket. What is the most likely diagnosis?
A. Botulism
B. Salmonellosis
C. Cholera
D. Dysentery
E. Typhoid fever

27. The examination of a 6-year-old patient gave reasons to suspect the deterioration in airway patency. What is the most reliable research method to identify pathology?
A. Pneumotachometry
B. Pneumography
C. Spirometry
D. Spirography
E. Spirometabolography

28. During a hypertensive crisis, a patient has had a hemorrhagic stroke resulting in a lack of voluntary movements, increased tendon reflexes and muscle tone of the left arm and leg. Whatis this motor dysfunction called?
A. Hemiplegia
B. Paraplegia
C. Tetraplegia
D. Monoplegia
E. Flaccid paralysis

29. A man visited Lebanon. Soon after return, he felt pain and heaviness in the perineum and suprapubic region. On examination, he was diagnosed with urogenital schistosomiasis. In what way could he become infected?
A. By swimming in contaminated waters
B. By eating unwashed fruit and vegetables
C. By eating insufficiently salted fish
D. By eating undercooked meat of cattle
E. By eating undercooked meat of crayfish and crabs

30. When students pass an exam, they often complain of having a "dry mouth". The mechanism underlying the development of this condition is the activation of the following processes:
A. Conditioned sympathetic
B. Unconditioned parasympathetic
C. Conditioned parasympathetic
D. Unconditioned sympathetic
E. Unconditioned peripheral

31. A dentist examined a 5-year-old boy and found him to have a saddle nose, high-arched palate, natiform skull. Both front maxillary incisors are peg-shaped and have a crescent-shaped notch in the cutting edge. Lymph nodes are not changed. What is a provisional diagnosis?
A. Late congenital syphilis
B. Early congenital syphilis
C. Tertiary syphilis
D. Fluorosis
E. Rickets

32. A female who had been continuously taking antibiotics for an intestinal infection developed a complication manifested by inflammation of the oral mucosa and white deposit. Bacteriological study of the deposit samples revealed yeast fungi Candida albicans. Which of the following medications is indicated for the treatment of this complication?
A. Fluconazole
B. Biseptol
C. Tetracycline
D. Furazolidone
E. Polymyxin

33. A 34-year-old patient has a history of periodontitis. As a result of increased collagen degradation, there is a significantly increased urinary excretion of one of the amino acids. Which one?
A. Hydroxyproline
B. Valine
C. Alanine
D. Glycine
E. Serine

34. A 42-year-old patient with a gastric ulcer has a disbalance between the aggressive and defensive factors. Which of the following factors contributes to the development of gastric ulcer?
A. Helicobacter pylori
B. Mucin
C. Hydrocarbonate
D. Prostaglandin
E. Prostacyclin

35. Calcification of the intercellular substance of bone tissue is accompanied by the deposition of hydroxyapatite crystals along the collagen fibers. This process requires the presence of alkaline phosphatase in the intercellular substance. What cell produces this enzyme?
A. Osteoblast
B. Osteocyte
C. Osteoclast
D. Chondroblast
E. Chondrocyte

36. An animal sensitized with tuberculin had been administered tuberculin intraperitoneally. 24hours later, during laparotomy, the animal was found to have venous congestion and peritoneal edema. Impression smears from the peritoneum contained a large number of lymphocytes and monocytes. What pathological process was detected in the animal?
A. Allergic inflammation
B. Serous inflammation
C. Purulent inflammation
D. Fibrinous inflammation
E. Aseptic inflammation

37. With the purpose of analgesia, a narcotic analgesic has been used with a benzodiazepine drug. What drug has been used to potentiate analgesia?
A. Diazepam
B. Chlorprothixene
C. Triftazin
D. Carbamazepine
E. Imizinum

38. A patient with arterial hypertension has developed a bronchial asthma attack. Which of the following bronchodilators may provoke a hypertensive crisis?
A. Ephedrine hydrochloride
B. Salbutamol
C. Aminophylline
D. Berotec
E. Isadrine

39. To perform a scheduled surgery on the upper jaw, a surgeon decided to apply ataralgesia. What medications are used for this manipulation?
A. Tranquilizers
B. General anesthetics
C. Narcotic analgesics
D. Non-narcotic analgesics
E. Sedatives

40. Orthodontic treatment of a child proved to be ineffective due to the chronic mouth breathing since the nasal breathing is impaired. The hypertrophy of the following tonsil causes this:
A. Pharyngeal
B. Tubal
C. Lingual
D. Palatine
E. Palatine and tubal

41. Osteolaterism is characterized by a decrease in collagen strength caused by much less intensive formation of cross-links in

the collagen fibrils. This phenomenon is caused by hypoactivity of the following enzyme:
A. Lysyl oxidase
B. Monoamine-oxidase
C. Prolyl hydroxylase
D. Lysyl hydroxylase
E. Collagenase

42. A patient with severe maxillofacial trauma has been delivered to the emergency department. What drug should be given to this patient to relieve pain shock?
A. Promedol
B. Sydnocarb
C. Ibuprofen
D. Pantogam
E. Mydocalm

43. During anesthesia of the oral mucosa, a 37-year-old patient has had an anaphylactic reaction (widespread vasodilation, increased vascular permeability with liquid exiting the blood vessels and penetrating in the tissues). What type of hypersensitivity reaction occurred in the patient?
A. Type I (anaphylactic)
B. Type II (antibody-dependent)
C. Type III (immune complex)
D. Type IV (cell cytotoxicity)
E. Type V (granulomatosis)

44. A 34-year-old injured is unable to nod his head (impaired flexion and extension of head). This is caused by the dysfunction of the following joint:
A. Atlanto-occipital
B. Lateral atlantoaxial
C. Median atlanto-axial
D. Zygapophysial
E. –

45. A 36-year-old injured with a knife wound of the neck has bleeding. The blood is dark. During the wound management, it was revealed that a vessel in the anterior part of the neck below the hyoid bone was damaged. Identify this vessel:
A. V jugularis anterior
B. V jugularisinterna
C. A. carotis externa
D. A. carotiscommunis
E. V. jugularis externa

46. In some anaerobic bacteria, the pyruvate produced by glycolysis is converted to the ethyl alcohol (alcoholic fermentation). What is the biological significance of this process?
A. NAD+ replenishment
B. Lactate production
C. ADP production
D. Providing the cells with NADPH
E. ATP production

47. Vitamin-like substance choline is contained in phospholipids, which are the main components of biological membranes. What sulfur-containing amino acid serves as the donor of methyl groups for the synthesis of choline?
A. Methionine
B. Serine
C. Glycine
D. Alanine
E. Threonine

48. THE Human X chromosome contains a dominant gene that is responsible for normal blood clotting. An autosomal dominant gene plays a similar role. Lack of any of these genes leads to coagulation disorder. The form of interaction between these genes is called:
A. Complementarity
B. Epistasis
C. Polymerism
D. Codominance
E. Pleiotropy

49. A 2-year-old child has congenital spastic contraction of muscles on one side of the neck, which is torticollis. What muscle is affected?

A. Sternocleidomastoid
B. Subcutaneous
C. Sternohyoid
D. Sternothyroid
E. Omohyoid

50. A 58-year-old male patient consulted a urologist about acute pain during urination and decreased amount of the excreted urine. Urolithiasis was suspected. The concrements are most likely to be found in the following part of the urethra:
A. Pars membranacea
B. Pars prostatica
C. Pars spongiosa
D. Pars pelvina
E. Pars intramuralis

51. A 47-year-old patient with symptoms of severe intoxication and respiratory failure died. A section of lung tissue had a mottled pattern with multiple small focal hemorrhages and foci of emphysema. Histological examination revealed hemorrhagic bronchopneumonia accompanied by abscess; the cytoplasm of bronchial epithelial cells had eosinophil and basophil inclusions. According to the section analysis, make your diagnosis:
A. Influenza
B. Adenovirus infection
C. Parainfluenza
D. Respiratory syncytial
E. Staphylococcal bronchopneumonia

52. A 12-year-old child is of short stature, has a disproportionate body structure and mental retardation. The hyposecretion of the following hormone might cause these characteristics:
A. Thyroxine
B. Insulin
C. Cortisol
D. Somatotropin
E. Glucagon

53. A patient had been provisionally diagnosed with syphilis. A laboratory assistant took the blood serum for an immunologic test based on the detection of antibodies preventing the movement of treponemes and causing their death. What reaction was used for the diagnosis?
A. Immobilization
B. Complement binding
C. Agglutination
D. Precipitation
E. Neutralization

54. Transfusion of Rh-incompatible blood resulted in hemolytic jaundice development in the patient. What laboratory blood value confirms this type of jaundice?
A. Accumulation of unconjugated bilirubin
B. Reduction of unconjugated bilirubin
C. Accumulation of urobilinogen
D. Reduction of stercobilin
E. Reduction of conjugated bilirubin

55. The mother and father are healthy. The mother underwent amniocentesis for fetal karyotyping. The fetal karyotype turned out to be 45, XO. What syndrome can be expected in a newborn baby?
A. Turner's
B. Edwards'
C. Patau's
D. Cri du chat
E. "Superwoman"

56. A 66-year-old male patient has liver carcinoma with the syndrome of portal hypertension. What kind of portal hypertension does the patient have?
A. Intrahepatic
B. Suprahepatic
C. Subhepatic
D. Combined
E. –

57. A 46-year-old patient consulted an oculist about drooping of the upper eyelid. On examination, he was diagnosed with a brain tumor. The pathological process must have

tumor. The pathological process must have affected the nuclei of the following pair of cranial nerves:
A. III
B. II
C. IV
D. VI
E. VII

58. A 49-year-old patient has a tumor of the ventral surface of the pons. Impaired blood flow will be observed in the following artery:
A. A. basilaris
B. A. carotisinterna
C. A. cerebri media
D. A. cerebri anterior
E. A. communicans posterior

59. A patient underwent radiography that revealed numerous smooth-walled roundish defects in both jaws. Histological study revealed osteolysis and osteoporosis accompanied by the phenomena of poor bone formation. The patient's urine contained Bence-Jones protein. What is the most likely diagnosis?
A. Multiple myeloma
B. Chronic myelogenous leukemia
C. Chronic erythroleukemia
D. Acute myeloid leukemia
E. Acute undifferentiated leukemia

60. A female with Rh-negative blood of A (II) type has a child with AB (IV) type who has been diagnosed with hemolytic disease resulting from Rh-conflict. What blood type may the baby's father have?
A. III (B), Rh-positive
B. I (0), Rh-positive
C. II (A), Rh-positive
D. IV (Ab), Rh-negative
E. III (B), Rh-negative

61. Autopsy of a dead 6-year-old child revealed marked edema of the soft tissues of the neck and enlarged tonsils. Pharyngeal mucosa was covered with numerous dense whitish-yellow pellicles exposing deep ulcers after their removal. Histological examination of the pharyngeal mucosa revealed necrosis of the upper epithelial layers, impregnation of the mucous membrane with the fibrinous exudate, and moderate leukocyte infiltration. What infectious disease caused the death of the child?
A. Diphtheria
B. Parainfluenza
C. Scarlet fever
D. Whooping cough
E. Measles

62. Arterial pH is 7,4; primary urine -7,4; final urine - 5,8. The decrease in the pH of final urine is the result of the secretion of the following ions in the nephron tubules:
A. Hydrogen ions
B. Potassium ions
C. Hydrogen carbonate ions
D. Urea
E. Creatinine

63. A 23-year-old patient consulted an oculist about vision impairment. The visual activity was corrected by means of lenticular lenses. Specify the type of dysfunction of the visual analyzer in this patient:
A. Hyperopia
B. Myopia
C. Daltonism
D. Night-blindness
E. Astigmatism

64. Activation of free radical processes is a universal mechanism that triggers cell death. What inhibitors of this process should be administered as a part of therapeutic interventions intended for the treatment of generalized periodontitis?
A. Tocopherol, ascorbate
B. Riboflavin, pyridoxine
C. Calciferol, naphthoquinone
D. Thiamin, folate
E. Cobalamin, pantothenic acid

65. The microscopic examination of a CNS body revealed the gray matter with three layers of neurons, namely molecular, ganglionic, and granular layer. What are the neurons constituting the second layer?
A. Piriform
B. Basket
C. Small stellate
D. Large stellate
E. Granule cells

66. Diphtheria exotoxin had been treated with 0,3-0,4% formalin and kept in a thermostat for 30days at a temperature of 40oC. What preparation was obtained as a result of these manipulations?
A. Anatoxin
B. Antitoxin
C. Diagnosticum
D. Therapeutic serum
E. Diagnostic serum

67. After arriving in the polar region, researchers from Australia have complained of nervous disorders, loss of appetite, aggravation of chronic diseases for six months. What process has been disrupted in extreme conditions?
A. Adaptation
B. Tolerance
C. Tachyphylaxis
D. Stress
E. Reparation

68. For the treatment of periostitis, a 35-year-old patient should be administered an antibiotic with a high ability to penetrate the bone tissue. Specify this drug:
A. Doxycycline hydrochloride
B. Streptomycin
C. Erythromycin
D. Chloramphenicol
E. Kanamycin

69. Patients with erythropoietic porphyria (Gunther's disease) have teeth that fluoresce red on exposure to ultraviolet light; photosensitive skin; red urine. This disease is associated with the lack of the following enzyme:
A. Uroporphyrinogen-III cosynthase
B. Uroporphyrinogen-I synthase
C. Delta-aminolevulinate synthase
D. Uroporphyrinogen decarboxylase
E. Ferrochelatase

70. A 42-year-old patient with tetanus developed an acute respiratory failure. What type of respiratory failure occurs in this case?
A. Disregulatory impairment of alveolar ventilation
B. Restrictive impairment of alveolar ventilation
C. Obstructive impairment of alveolar ventilation
D. Perfusion impairment
E. Diffusion impairment

71. The effect of some harmful factors caused focal damage to the gastric epithelium. What cells are responsible for its regeneration?
A. Cervical mucocytes of glands
B. Parietal exocrinocytes of glands
C. Principal exocrinocytes of glands
D. Endocrinocytes
E. Mucocytes of the gland body

72. A 38-year-old female patient complains of bleeding gums, halitosis, exposure of tooth necks. Objectively: the patient has gingivitis, plaque, and tartar. Inflammation involves the alveolar part of gingiva with dental pockets. The bone tissue exhibits signs of bone resorption. What pathology does the patient have?
A. Parodontitis
B. Periostitis
C. Periodontitis
D. Gingivitis
E. –

73. Experimental stimulation of the periph-

eral segment of the vagus nerve of a cat will result in the following changes:
A. Decreased heart rate
B. Increased heart rate
C. Dilated pupils
D. Increased respiratory rate
E. Bronchiectasis

74. A 36- year-old patient has gastric ulcer (with increased acidity). Which of the listed below drugs will reduce the secretion of hydrochloric acid with a minimum of side effects?
A. Famotidine
B. Atropine
C. Pirenzepine
D. Almagel
E. –

75. In the uterine cavity, an embryo was found that was not attached to the endometrium. What stage of embryonal development is it?
A. Blastocyst
B. Zygote
C. Mulberry body
D. Neurula
E. Gastrula

76. A 45-year-old patient with an 8-year history of tuberculosis died in a hospital of chronic renal failure. At autopsy, the kidneys were enlarged, the cross-section surface looked greasy, the histological study revealed profuse deposits of structureless homogeneous eosinophilic masses exhibiting marked metachromasia when stained with Congo red. What pathological process developed in the kidneys?
A. Secondary amyloidosis
B. Hematogenous renal tuberculosis
C. Acute glomerulonephritis
D. Toxic nephritis against the background of antibiotic therapy
E. Nephrosclerosis

77. Pyruvic acid as an intermediate metabolite of carbohydrate, lipid, and amino acid metabolism can undergo oxidative decarboxylation. The cause of this process is the lack of the following nutrient in the diet:
A. Thiamin
B. Pyridoxine
C. Ascorbic acid
D. Citrine
E. Pangamic acid

78. A severe injury in a 36-year-old patient resulted in a significant blood loss, which was accompanied by a blood pressure drop. What hormones provide rapid recovery of blood pressure after the blood loss?
A. Adrenalin, vasopressin
B. Cortisol
C. Sex hormones
D. Oxytocin
E. Aldosterone

79. A 64-year-old male patient died with symptoms of acute cardiovascular failure. Autopsy results: the section of the anterior wall of the left ventricle showed a yellowish flaccid 1,5-2 cm focus surrounded by a reddish rim. The convoluted coronary arteries had lumen irregularly narrowed by 75%. The vessel intima was thickened, dense, covered with whitish plaques, crunched when cut. What disease can you think of?
A. Acute myocardial infarction
B. Continuously recurrent myocardial infarction
C. Postinfarction cardiosclerosis
D. Micro focal cardiosclerosis
E. Recurrent myocardial infarction

80. In a 52-year-old patient with chronic glomerulonephritis, the glomerular filtration rate (GFR)was reduced by 20% compared to normal. What causes a decrease in GFR in patients with chronic renal failure?
A. Reduced number of active nephrons
B. Tubulopathy
C. Obstruction of the urinary tract
D. Renal ischemia

E. Renal artery thrombosis

81. In the area being the epicenter of the registered rabies cases among wild animals, a 43-year-old man presented to a clinic and claimed to have been bitten by a stray dog. He was given a course of anti-rabies vaccine. This preparation relates to the following type of vaccines:
A. Attenuated
B. Inactivated
C. Molecular
D. Toxoids
E. Synthetic

82. A histological specimen represents a structure of the oral cavity, which is formed by bone tissue. It is covered by a mucous membrane consisting of keratinizing stratified squamous epithelium. The structure has a fatty, glandular, and marginal zone. In all parts of the lamina propria, the collagen fibers form thick bundles that penetrate deep into the periosteum. What kind of structure is it?
A. Hard palate
B. Gingiva
C. Lip
D. Cheek
E. Tongue

83. A 49-year-old male patient with myocardial infarction has been admitted to the cardiology department. What changes in the peripheral blood cells are induced by the necrotic changes in the myocardium?
A. Neutrophilic leukocytosis
B. Monocytosis
C. Eosinophilia
D. Thrombocytopenia
E. Lymphopenia

84. In patients with glycogenolysis, that is von Gierke's disease, the conversion of glucose-6-phosphate into glucose is inhibited, which is accompanied by the improper breakdown of glycogen in the liver. The cause of this condition is the following enzyme deficiency:
A. Glucose-6-phosphatase
B. Glycogen phosphorylase
C. Glucose-6-phosphate dehydrogenase
D. Phosphofructokinase
E. Phosphoglucomutase

85. A 60-year-old patient with a history of bronchial asthma has had several attacks during the day. What is the optimal drug to be used for their prevention?
A. Salbutamol
B. Isadrinum
C. Adrenaline hydrochloride
D. Dobutamine
E. Methacinum

86. Examination of a 29-year-old patient revealed a dense, immobile, ill-defined tumor-like formation in the lower jaw. The overlying mucosa was pale. Biopsy of the neoplasm revealed osteoid structures lined with atypical osteoblasts, numerous pathologic mitotic figures, a great number of thin-walled vessels. What is the most likely diagnosis?
A. Osteosarcoma
B. Osteoblastoclastoma
C. Exacerbation of chronic osteomyelitis
D. Ameloblastoma
E. Primary jaw carcinoma

87. As a result of injury of tongue a 32-year-old male had a heavy bleeding. The bleeding can bestopped by ligating an artery in the following topographic anatomic region (triangle):
A. Pirogov's triangle
B. Omoclavicular triangle
C. Carotid triangle
D. Omotrapezoid triangle
E. Omotracheal triangle

88. A patient with alcohol-induced liver injury has an impairment of biotransformation of xenobiotics and endogenous tox-

ic compounds. These changes are likely to be caused by hypoactivity of the following chromoprotein:
A. Cytochrome P-450
B. Hemoglobin
C. Cytochrome oxidase
D. Cytochrome b
E. Cytochrome c1

89. Impairment of blood circulation typically accompanies the proliferation of connective tissue in the parenchyma of the liver (fibrosis) caused by chronic diseases in the classic lobules. What is the direction of blood flow in these lobules?
A. From the periphery to the center
B. From the center to the periphery
C. Around the lobule
D. From the top to the base
E. From the base to the top

90. A 36-year-old injured has an occipital bone injury causing damage to the sigmoid sinus. What part of the bone is damaged?
A. Pars lateralis
B. Clivus
C. Pars basilaris
D. Squama
E. –

91. A patient under examination is in a stage of rapid eye movement sleep. The following waves registered by EEG confirms this:
A. Beta waves
B. Alpha waves
C. Delta waves
D. Theta waves
E. Alpha spindles

92. A histological specimen represents the parenchyma composed of lymphoid tissue, which forms the diffusely arranged lymph nodules with a central artery. What anatomic formation has the given morphological structure?
A. Spleen
B. Redbone marrow
C. Thymus
D. Tonsil
E. Lymph node

93. A 46-year-old patient consulted a doctor about the pustular rash on the skin of the limbs. Whatantiseptic should be administered to the patient?
A. Alcohol solution of iodine
B. Insulin
C. Prednisolone
D. Sibazon
E. Heparin

94. The examination of a patient revealed glycosuria and hyperglycemia. He complains of dry mouth, itchy skin, frequent urination, thirst. He has been diagnosed with diabetes mellitus. What is the cause of polyuria in this patient?
A. Increased urine osmotic pressure
B. Decreased plasma oncotic pressure
C. Increased filtration pressure
D. Decreased cardiac output
E. Increased plasma oncotic pressure

95. Carious cavities of a 29-year-old patient contain the parasitic protozoa. It is established that they relate to the Sarcodina class. Specify these single-celled organisms:
A. Entamoebagingivalis
B. Entamoeba coli
C. Entamoebahistolutica
D. Amoeba proteus
E. Lambliaintestinalis

96. In hot weather, the microclimate in hot rooms is often normalized by fans. At the same time heat radiation from the human body increases through:
A. Convection
B. Heat conduction
C. Conduction
D. Radiation
E. Evaporation

97. Examination of a 23-year-old patient reveals that when his tongue is protruded, its tip deviates to the side. This is caused by the dysfunction of the following tongue muscle:
A. Genioglossus
B. Hyoid
C. Superior longitudinal
D. Inferior longitudinal
E. Styloglossus

98. The examination of a patient revealed a hard palate tumor in the form of a small dense gray node without clear boundaries. Histological study of the tumor after its removal revealed the following peculiarities: the tumor was constituted by small cubic cells with hyperchromatic nucleus forming alveoli, trabeculae, solid and cribriform structures. Tumor growth could be characterized as invasive. Specify the tumor:
A. Adenoid cystic carcinoma
B. Malignant pleomorphic adenoma
C. Mucoepidermoid carcinoma
D. Adenolymphoma
E. Monomorphic adenoma

99. A 25-year-old patient got an injury as a result of which a portion of the nail plate was removed. What structures will be responsible for its restoration?
A. Nail matrix
B. Nail fold
C. Eponychium
D. Subungual space
E. Nail sinus

100. In a specimen from the ovary stained with hematoxylin-eosin, a follicle can be seen. The follicular epithelial cells are arranged in 1-2 layers and have cubic shape, around the oocyte, the bright red membrane can be seen. Specify the follicle:
A. Primary
B. Primordial
C. Secondary
D. Mature
E. Atresial

101. A 58-year-old patient with essential hypertension complains about general health deterioration. She has been administered methyldopa. Specify the mechanism of this drug action:
A. Inhibition of noradrenaline synthesis
B. Increase in acetylcholine synthesis
C. Blockade of ^-adrenergic receptors
D. Blockade of o-adrenergic receptors
E. Inhibition of angiotensin-converting factor

102. A 46-year-old patient with diabetes had been admitted to a hospital in grave precomatose condition. The study of the acid-base balance revealed metabolic acidosis. What is the primary mechanism that underlies the revealed changes in the acid-base balance?
A. Incomplete oxidation of metabolism products
B. Disturbance of O2 utilization by cells
C. Disorder of blood buffer systems
D. Urinary excretion of alkaline components
E. Reduction of SO2 excretion

103. A 35-year-old female patient has HIV at the AIDS stage. On the skin of the lower extremities and palatine mucosa, there appeared rusty red spots, bright red nodules of various sizes. One of the nodules was taken for histological study. It revealed a lot of randomly distributed thin-walled vessels lined with endothelium, the bundles of spindle cells containing hemosiderin. What kind of tumor developed in the patient?
A. Kaposi's sarcoma
B. Hemangioma
C. Burkitt's lymphoma
D. Lymphangioma
E. Fibrosarcoma

104. A female patient with toxemia of pregnancy has hypersalivation resulting in a

daily loss of 3-4liters of saliva. What disorder of water-salt metabolism occurs in such cases?
A. Hyperosmolar hypohydration
B. Hypoosmolarhypohydration
C. Isoosmolarhypohydration
D. Hypokalemia
E. Hyponatremia

105. A histological specimen represents a blood vessel. Its inner tunica is composed of the endothelium, subendothelium, and internal elastic lamina. The middle tunica is rich in smooth muscle cells. What vessel is characterized by these morphological features?
A. Muscular artery
B. Elastic artery
C. Capillary
D. Amuscular vein
E. Muscular vein

106. Examination of an 18-year-old girl revealed the following features: ovarian hypoplasia, broad shoulders, narrow hips, shortening of the lower extremities, webbed neck. Mental development is normal. The patient has been diagnosed with Turner's syndrome. What chromosomal abnormality does this patient have?
A. Monosomy X
B. Trisomy X
C. Trisomy 13
D. Trisomy 18
E. Nullisomy X

107. A 36-year-old female patient who has been limiting the number of foodstuffs in her diet for 3months presents with a decrease in body weight, deterioration of physical and mental health, face edemata. The deficiency of the following nutrients may cause these changes:
A. Proteins
B. Vitamins
C. Fats
D. Carbohydrates
E. Micronutrients

108. A 47-year-old male patient consulted a dentist about difficult mouth opening (lockjaw). The patient has a history of a stab wound of the lower extremity. What infection can be manifested by these symptoms?
A. Tetanus
B. Brucellosis
C. Whooping cough
D. Anaerobic wound infection
E. Tularemia

109. A 36-year-old patient consulted an ophthalmologist about eye ache. The examination revealed the erosion of the cornea, which is the lack of superficial and spinous layers of the epithelium. What cells will provide regeneration of the damaged epithelium?
A. Cells of the stratum basale
B. Cells of the stratum corneum
C. Cells of the stratum granulosum
D. Cells of the stratum lucidum
E. Cell of the stratum superficiale

110. A 36-year-old patient presents with periodontitis of the mandibular molar. It was found that inflammation had spread to the lymph nodes. What lymph nodes were the first to be involved in the inflammatory process?
A. Submandibular
B. Lateral cervical
C. Aterior cervical
D. Mental
E. Facial

111. Histologically, the internal wall of a maxillary cyst is lined with stratified squamous epithelium with underlying granulation tissue with infiltrating lymphocytes. The outer layer is represented by loose fibrous connective tissue surrounded by cicatricial fibrous tissue. What diagnosis can be made?

A. Cystic granuloma
B. Simple granuloma
C. Epithelial granuloma
D. Keratocyst
E. Ameloblastoma

112. During the examination of a 3-month-old infant, a pediatrician revealed that the baby's oral mucosa and tongue were covered with a thick white deposit. In the material taken from the affected site, a bacteriologist revealed the presence of yeast fungi giving the reasons for suspecting a fungal infection which occurs most often in children of this age, namely:
A. Candidiasis
B. Favus
C. Epidermophytosis
D. Actinomycosis
E. Trichophytia

113. A 36-year-old patient underwent tooth extraction at a dental clinic. After two weeks the stratified squamous epithelium regenerated at this site. What organelles were involved in the restoration of the mucous membrane?
A. Ribosomes
B. Centrosomes
C. Postlysosomes
D. Smooth EPR
E. Mitochondria

114. If a trait is determined mostly by genetic factors, the percentage of concordance between the twins is much higher in monozygotic twins than in dizygotic ones. What is the percentage of blood group concordance in monozygotic twins?
A. 100%
B. 75%
C. 50%
D. 25%
E. 0%

115. A boy has been diagnosed with a hydrocele (fluid collection within the scrotum). Whichscrotum tunica contains this liquid?
A. Tunica vaginalis
B. Tunica dartos
C. Tunica albuginea
D. External spermatic fascia
E. Internal spermatic fascia

116. When examining the oral cavity of a 22-year-old patient, the dentist noticed a destroyed medial tubercle on the cutting edge of the right maxillary first molar. This tubercle is called:
A. Paracone
B. Metacone
C. Mesocone
D. Hypocone
E. Protocone

117. A 35-year-old patient had a cerebral injury that caused a hemorrhage in the region of the medial surface of the frontal gyrus and cingulate gyrus. What artery supplies blood to the area of hemorrhage localization?
A. Anterior cerebral
B. Median cerebral
C. Basilar
D. Posterior cerebral
E. Anterior communicating

118. Examination of a 27-year-old donor who had not donated blood for a long time revealed HBsantibodies detected by the ELISA method. In this case, the positive ELISA results indicate that the donor:
A. Had hepatitis B
B. Has acute hepatitis B
C. Has acute hepatitis C
D. Has chronic hepatitis B
E. Has chronic hepatitis C

119. A 9-year-old child has multiple lesions of the oral mucosa in the form of small painful hyperemic sores with a white deposit in the center; enlarged and painful submandibular lymph nodes. Microscopic

examination of the affected region revealed a superficial defect covered by fibrin, edematic, and hyperemic submucosa with inflammatory infiltration. What is the most likely diagnosis?
A. Aphthous stomatitis
B. Hypertrophic stomatitis
C. Herpetic stomatitis
D. Catarrhal gingivitis
E. –

120. A 50-year-old patient with a hypertensive crisis had been administered magnesium sulfate, which led to an abrupt decrease in blood pressure. The side effects of magnesium sulfate can be avoided if the following drug is administered:
A. Calcium chloride
B. Potassium chloride
C. Trilon B
D. Sodium bromide
E. Sodium sulfate

121. A 39-year-old patient consulted a dentist about having a dry area of the oral mucosa beneath the tongue on the right. The dentist revealed compression of chorda tympani as it exits to the right infratemporal fossa through the following fissura:
A. Petrotympanica
B. Tympanomastoidea
C. Petrosguamosa
D. Sphenopetrosa
E. Petroocipitalis

122. A 43-year-old female complains of weight loss, hyperhidrosis, low-grade fever, increased irritability. She has been found to have hyperfunction of the sympathetic-adrenal system and basal metabolism. These disorders can be caused by hypersecretion of the following hormone:
A. Thyroxine
B. Somatotropin
C. Corticotropin
D. Insulin
E. Aldosterone

123. ECG of a 46-year-old patient shows an increase in the QRS duration. This might be caused by:
A. Increased ventricular activation time
B. Conduction disturbances in the AV node
C. Increased atrial excitability
D. Increased atrial and ventricular excitability
E. Increased atrial activation time

124. During AB0 blood grouping by using coliclons (diagnostic monoclonal antibodies), haemagglutination did not occur with any of the coliclons. What is the blood group of the patient under examination?
A. 0 (I)
B. A (II)
C. B (III)
D. AB (IV)
E. –

125. After the restoration of maxillary incisors with artificial crowns, a 44-year-old female was found to have a brownish overgrowth in the form of a node of 15 mm in diameter. Histological study revealed that under the stratified squamous epithelium of gingiva, there was a connective tissue mass with numerous sinusoidal vessels, oval-shaped mononuclear cells forming osteoid substance, and polynuclear giant cells that destroyed the alveolar ridge of the upper jaw. What is the most likely diagnosis?
A. Giant cell epulis
B. Fibromatous epulis
C. Angiomatous epulis
D. Gingival fibromatosis
E. Eosinophilic granuloma

126. Following thyroid surgery, a 47-year-old female patient had fibrillary twitching of muscles in the arms, legs, and face. The introduction of the following hormone can treat these disorders:
A. Parathyroid hormone
B. Triiodothyronine
C. Thyrotropin

D. Thyroxine
E. Thyroid-stimulating hormone

127. A 36-year-old male patient has malabsorption of sodium ions from the intestinal lumen into the blood. At the same time, the absorption of the following substances REMAINS UNCHANGED:
A. Fats
B. Carbohydrates
C. Proteins
D. Water
E. Chlorides

128. One of the means of regulating enzyme activity in a human body is the covalent modification. The following type of covalent modification regulates glycogen phosphorylase and glycogen synthetase activity:
A. Phosphorylation-dephosphorylation
B. ADP-ribosylation
C. Methylation
D. Hydrolysis
E. Sulfonation

129. A 25-year-old patient with a hereditary enzymopathy (Gilbert's disease) has a disorder of bilirubin conjugation in the liver. What enzyme is not synthesized in this patient?
A. UDP-glucuronyl transferase
B. UDP-glucose pyrophosphorylase
C. UDP-glycogen transferase
D. Ornithine carbamoyltransferase
E. Amidophosphoribosyltransferase

130. A 53-year-old patient with a long history of nephrolithiasis underwent nephrectomy. The kidney looks like a thin-walled sac filled with urine. Renal parenchyma is atrophied. Specify this complication of nephrolithiasis:
A. Hydronephrosis
B. Pyelonephritis
C. Pyonephrosis
D. Multicystic kidney disease
E. Nephrosclerosis

131. A 28-year-old patient complains of frequent gingival hemorrhages. The blood test revealed the clotting factor II (prothrombin) deficiency. What phase of blood coagulation is impaired in this patient?
A. Thrombin generation
B. Vascular-platelet hemostasis
C. Fibrinolysis
D. Clot retraction
E. –

132. During the reproduction of some RNA -containing viruses that cause tumors in animals, genetic information can be transmitted in the opposite direction from the RNA to the DNA via aspecific enzyme. The enzyme of reverse transcription is called:
A. Reverse transcriptase
B. DNA polymerase
C. Ligase
D. Primase
E. Topoisomerase

133. Examination of a 28-year-old patient with hepatocerebral degeneration revealed an impairment of ceruloplasmin synthesis. This defect is associated with the following organelles:
A. Granular endoplasmic reticulum
B. Smooth endoplasmic reticulum
C. Mitochondria
D. Lysosomes
E. Golgi complex

134. Examination of a patient revealed dermatitis, diarrhea, dementia. What vitamin deficiency is the cause of this condition?
A. Nicotinamide
B. Ascorbic acid
C. Folic acid
D. Biotin
E. Rutin

135. After a patient had taken a blocking

agent, his heart rate (HR) increased. Pressing on the eyeballs didn't result in the expected reflectory decrease in heart rate. What exactly was blocked by the drug in the pacemaker cells?
A. M-cholinergic receptors
B. a-adrenergic receptors
C. 3-adrenergic receptors
D. Ca2+-L-type channels
E. Fast Na+ channels

136. A 23-year-old patient with diabetes has hyperglycemia at the rate of 19 mmol/l, which is clinically manifested by glucosuria, polyuria, polydipsia. Which of the listed below mechanisms is responsible for the development of glycosuria?
A. Exceedence of renal glucose threshold
B. Non-enzymatic glycosylation of proteins
C. Polyuria
D. Polydipsia
E. Tissue dehydration

137. A 36-year-old patient with diabetes mellitus had seizures with loss of consciousness after an insulin injection. What was the result of the blood glucose test?
A. 2,5 mmol/l
B. 3,3 mmol/l
C. 8,0 mmol/l
D. 10 mmol/l
E. 5,5 mmol/l

138. A 39-year-old patient with arthritis of the temporomandibular joint has been administered diclofenac sodium. It must be kept in mind that the side effect of prolonged use of this drug is:
A. Ulcerogenicity
B. Teratogenicity
C. Ototoxicity
D. Carcinogenicity
E. Drug dependence

139. After an infectious disease, a 21-year-old patient exhibits the inability to rotate his head in the direction opposite to the affected region. What nerve has been damaged?
A. Accessory
B. Vagus
C. Infrascapular
D. Transverse cervical nerve
E. Thoracodorsal

140. A 28-year-old liquidator of the Chernobyl disaster consulted a doctor about marked weakness, skin hemorrhages, diarrhea. Blood test results: ESR- 25 mm/h, RBC- 2,4 • 1012/L, WBC - 2,2 •109/L, platelets -70 • 109/L. What stage of acute radiation sickness are these presentations typical for?
A. Manifest illness stage
B. Prodromal stage
C. Latent stage
D. Recovery stage
E. Outcome of the disease

141. A 35-year-old patient complains of pain in the upper jaw, bleeding, a slight loosening of teeth. He has been diagnosed with periodontitis. What is a typical pathological process in this case?
A. Inflammation
B. Bleeding
C. Caries
D. Pain
E. Redness

142. Microscopic examination of a skin tumor revealed that it invaded the underlying tissue, destroyed it and formed nests and cords of atypical epithelium, which included some pearl-like formations. Specify the tumor:
A. Keratinizing squamous cell carcinoma
B. Squamous cell non-keratinizing carcinoma
C. Solid carcinoma
D. Adenocarcinoma
E. Medullary carcinoma

143. A 10-year-old child cut his leg with a

piece of glass and was sent to a clinic for an anti-tetanus serum injection. In order to prevent the development of anaphylactic shock, the Besredkadesensitization method was applied. What mechanism underlies this method?
A. Binding to IgE fixed to mast cells
B. Inhibited synthesis of mast cells mediators
C. Stimulation of the immunological antigen tolerance
D. Stimulation of antigen-specific IgG2 synthesis
E. Binding of IgE receptors on mast cells

144. A 33-year-old patient complains of impairment of skin sensitivity in the medial part of the dorsal and palmar surface of the hand. Which nerve is damaged?
A. N. ulnaris
B. N. radialis
C. N. medianus
D. N. musculocutaneus
E. N. cutaneusantebrachiimedialis

145. A physician collects the patient's history of the post-embryonic period of ontogenesis from birth to puberty. In this case, we are talking about:
A. Juvenile period
B. The first period of adulthood
C. Senium
D. The second period of adulthood
E. Advanced age

146. A 28-year-old patient had been diagnosed with a multifragmental fracture of the right hip. On the third day after the injury, he began to complain of pain in the right side of the chest, difficult respiration. A day later, the patient died of progressive heart and respiratory failure. Histological study of pulmonary and cerebral blood vessels revealed orange sudanophilic droplets that completely obstructed the vessels of the microvasculature. What complication caused the death of the patient?
A. Fat embolism
B. Gas embolism
C. Drug-induced embolism
D. Microbial embolism
E. Thromboembolism

147. An injury to the occipital region resulted in apnoea. What could be the immediate cause of apnoea?
A. Medulla oblongata injury
B. Cerebellum injury
C. Rapture between the mesencephalon and medulla oblongata
D. Spinal cord rapture below the 5th vertebra
E. Traumatic shock

148. A 36-year-old male patient frequently has herpes sores on the lips and oral mucosa. Infectionrecurrences are associated with the persistence of the virus in the body. The herpes simplex virus is most likely to reside in:
A. Nerve ganglia
B. Salivary glands
C. Lymph nodes
D. Airway epithelium
E. Gonads

149. Examination of the oral cavity of a 19-year-old patient revealed a small gap between the maxillary and mandibular incisors. There was no contact between the front teeth. Specify the type of occlusion in this patient:
A. Open occlusion
B. Orthognathia
C. Edge-to-edge occlusion
D. Closed bite
E. Prognathism

150. In some areas of South Africa, many people have sickle cell disease characterized by red blood cells that assume an abnormal sickle shape due to the substitution of glutamic acid for valine in the hemoglobin molecule. What is the cause of this dis-

ease?
A. Gene mutation
B. Disturbances of the mechanisms of genetic information transmission
C. Crossing-over
D. Genomic mutation
E. Transduction

151. As a result of the treatment of viral RNA with nitrous acid, the UCA triplet mutated to the UGA triplet. What kind of mutation occurred?
A. Transition
B. Nucleotide deletion
C. Missense
D. Nucleotide insertion
E. Inversion

152. A 48-year-old patient has been found to have an increase in the concentration of thyroid hormones in blood. Microscopy of a biopsy sample from the thyroid gland is likely to reveal the following morphological changes affecting the following cells:
A. Increase in the thyrocyte height
B. Decrease in the thyrotrope height
C. Decrease in the parathyrocyte size
D. Decrease in the thyrocyte height
E. Changes in hormone concentrations will have no effect on the morphology of the thyroid gland cells

153. A 31-year-old patient has deep caries of the fifth maxillary tooth on the right. Acute purulent inflammation in the region of the tooth apex has developed. There is marked edema with isolated neutrophils in the perifocal tissues and soft tissues of the cheek and palate. Diagnose the pathologic process in the soft tissues of cheek and palate:
A. Acute serous inflammation
B. Acute suppurative periodontitis
C. Acute suppurative periostitis
D. Phlegmon
E. –

154. A 12-year-old girl has a bleeding ulcer 5 mm in diameter, which is localized on the mouth floor. The ulcer is surrounded by bright-red tissue that turns white when pressed. The microscopic examination of a biopsy sample reveals a tumor constituted by a number of large cavities filled with blood. The cavities are lined with endothelial cells. Between the cavities, there is stroma represented by the loose connective tissue. What is the most likely diagnosis?
A. Ulcerated cavernous hemangioma
B. Secondary rhabdomyosarcoma
C. Squamous cell non-keratinizing carcinoma
D. Osteoblastoclastoma
E. Ulcerated melanoma

155. A patient has an inflammation in the pterygopalatine fossa. The infection has spread to the nasal cavity. What anatomic structure has the infection penetrated through?
A. Foramen sphenopalatinum
B. Foramen rotundum
C. Canalispalatinus major
D. Canalispalatinus minor
E. Canalisptherygoideus

156. A 49-year-old male has mitral stenosis. What is the leading mechanism of heart failure in thiscase?
A. Pressure overload
B. Volume overload
C. Myocardial tension
D. Myocardial injury
E. Fluid overload

157. A 69-year-old male patient got a small plaque with subsequent ulceration on the skin of the lower eyelid. The formation was removed. The microscopic examination of dermis revealed complexes of atypical epithelial cells arranged perpendicularly to the basal membrane on the periphery. The cells were dark, of polygonal prismatic shape with hyperchromic nuclei with a high mi-

totic rate. What is the histological form of carcinoma in this patient?
A. Basal cell carcinoma
B. Keratinizing squamous cell carcinoma
C. Nonkeratinizing squamous cell carcinoma
D. Adenocarcinoma
E. Undifferentiated

158. A 36-year-old patient had had a traumatic brain injury, which caused a swallowing impairment. Which part of the brain was affected?
A. Medulla oblongata
B. Mesencephalon
C. Diencephalon
D. Reticular formation
E. Thalamus

159. Ultrasonography of a pregnant revealed no abnormalities in the cardiovascular system of the fetus, the ductus arteriosus had a normal function. What vessels does it connect?
A. Pulmonary trunk and aorta
B. Pulmonary trunk and superior vena cava
C. Pulmonary trunk and inferior vena cava
D. Umbilical vein and aorta
E. Umbilical vein and umbilical artery

160. A 32-year-old patient has B2 hypovitaminosis. The specific symptoms such as epithelial, mucosal, skin, and corneal lesions are most likely to be caused by the deficiency of:
A. Flavin coenzymes
B. Cytochrome a1
C. Cytochrome oxidase
D. Cytochrome b
E. Cytochrome c

161. A 32-year-old patient undergoing dental examination was found to have some rash-like lesions resembling secondary syphilis in the oral cavity. The patient was referred for the serological study with the purpose of diagnosis confirmation. In order to detect antibodies in the serum, living Treponema was used as a diagnosticum. What serological test was performed?
A. Immobilization
B. Neutralization
C. Complement binding
D. Precipitation
E. Passive hemagglutination

162. For several days a 55-year-old female patient has had pain attacks in the right upper quadrant after eating fatty foods. Visually, there is yellowness of sclera and skin. The patient has an acholous stool, beer-colored urine. What substance present in the patient's urine causes its dark color?
A. Conjugated bilirubin
B. Ketone bodies
C. Unconjugated bilirubin
D. Stercobilin
E. Bilirubin glucuronides

163. A 49-year-old patient was found to have a disproportionate enlargement of hands, feet, nose, ears, superciliary arches, and cheekbones. The blood test revealed hyperglycemia, impaired glucose tolerance. What is the most likely cause of this pathology development?
A. Hypersecretion of growth hormone
B. Posterior pituitary hormone hypersecretion
C. Insulin hyposecretion
D. Vasopressin hyposecretion
E. Glucocorticoid hypersecretion

164. A 1-year-old child with the symptoms of affection of limb and trunk muscles had been admitted to a hospital. Examination revealed muscle carnitine deficiency. The biochemical basis of this pathology is a disruption of the following process:
A. Transport of fatty acids to mitochondria
B. Regulation of Ca2+ level in mitochondria
C. Substrate phosphorylation
D. Utilization of lactic acid

D. Utilization of lactic acid
E. Oxidative phosphorylation

165. The study of the histological specimen of a baby's primary tooth revealed hypoplasia (underdevelopment) of enamel. This abnormality is caused by the disruptions in the activity of the following cells:
A. Inner enamel epithelium
B. Pulp cells of the enamel organ
C. Outer enamel epithelium
D. Cells of the stratum intermedium of the enamel organ
E. Odontoblasts

166. A 42-year-old female patient consulted a doctor about pain in the knee joints. Objectively there is swelling, redness, hyperthermia in the region of these joints. Laboratory testing revealed positive acute phase reactants. What drugs should be used to treat this patient?
A. Anti-inflammatory drugs
B. Narcotic analgesics
C. Antidepressants
D. Antibiotics
E. Sulfonamides

167. A histological specimen of the submandibular salivary gland represents basket cells from which some processes radiate and embrace the secretory unit. Contraction of the processes of these cells helps in expelling secretions from the lumen of secretory units and moving them to the system of excretory ducts. Name these cells:
A. Myoepithelial cells
B. Serous cells
C. Mucocytes
D. Adipocytes
E. Epithelial cells

168. A 57-year-old patient with coronary artery disease has been administered an anti-anginal agent that activates guanylate cyclase and accumulates myocardial cGMP. What drug is it?
A. Isosorbidemononitrate
B. Dipyridamole
C. Panangin
D. Validol
E. Verapamil

169. After the sanitary and bacteriological study of tap water, the following results were obtained: the total number of bacteria in 1,0 ml was 80, coli index was 3. How would you interpret the study results?
A. Water is safe to be consumed
B. Water is of doubtful quality
C. Water is of highly doubtful quality
D. Water is contaminated
E. Water is highly contaminated

170. In the solution being used for perfusing the isolated heart of rat, the K + concentration has been increased to 8 mmol/L. What changes in the heart are to be expected?
A. Diastolic arrest
B. Systolic arrest
C. Heart force increase
D. Heart rate increase
E. There will be no changes

171. An animal has been given a weak solution of hydrochloric acid introduced into the duodenum through a tube. Which hormone concentration will increase in the animal?
A. Secretin
B. Cholecystokinin (pancreozymin)
C. Gastrin
D. Glucagon
E. Neurotensin

172. While studying blood and mucus samples from the nasopharynx, a bacteriologist took certain measures to conserve the pathogens in the material. The bacterioscopic study revealed the presence of gram-negative cocci looking like coffee beans and arranged in pairs or tetrads. Name the pathogen that was isolated by the bacteriol-

ogist:
A. Neisseria meningitidis
B. Staphilococcus aureus
C. Neisseria gonorrhoeae
D. Moraxella lacunata
E. Acinetobactercalcoaceticus

173. Microscopy of a dental plaque revealed a large number of cocci arranged in pairs and strings, as well as Gram-positive bacilli, which were likely to be the cause of cariogenesis. What microorganism associations are involved in the development of dental caries?
A. S.mutans streptococci and lactobacilli
B. S.salyvarius streptococci and lactobacilli
C. S.mutans streptococci and corynebacteria
D. S.aureus and lactobacilli
E. S.salyvarius streptococci and enterococci

174. The loose fibrous connective tissue of salivary glands contains oval average-sized cells that synthesize antibodies. The cells have a round eccentric nucleus and "spoke-wheel" chromatin pattern made by small clumps of chromatin. What are these cells called?
A. Plasma cells
B. Adipocytes
C. Neutrophils
D. Fibroblasts
E. Macrophages

175. A 38-year-old female patient has been diagnosed with inflammation of the third branch of the trigeminal nerve. This branch exits the skull through the following foramen:
A. Oval
B. Round
C. Spinous
D. Jugular
E. Sphenotic

176. A 39-year-old patient underwent hematologic tests. The following results were obtained: RBC-2,8 • 1012/L, Hb-80 g/L, color index - 0,85, reticulocytes - 0,1%, platelets - 160 • 109/L, WBC -60 • 109/L. Basophils - 2, eosinophils - 8, promyelocytes - 5, myelocytes - 5, immatureneutrophils - 16, stab neutrophils - 20, segmented neutrophils - 34, lymphocytes - 5, monocytes-5. What form of blood pathology are these results indicative of?
A. Chronic myeloid leukemia
B. Acute myeloid leukemia
C. Hypoplastic anemia
D. Undifferentiated leukemia
E. Hemolytic anemia

177. A physician performs the anterior transverse cervical skin incision for urgent tracheotomy. He should keep in mind the probability of damaging the following vessel:
A. Arcus venosusjuguli
B. Vjugularis externa
C. Vjugularisinterna
D. Vfacialis
E. Vthyroidea media

178. 6 hours after the initial inoculation of water sample into 1% peptone water, the growth of a culture in the form of a thin pellicle on the medium surface was registered. Such cultural properties are typical for the causative agent of the following disease:
A. Cholera
B. Plague
C. Tuberculosis
D. Dysentery
E. Pseudotuberculosis

179. A 23-year-old patient with acute pulpitis has elevated body temperature and an increase in the WBC count up to 14 • 109/L. The leucogram is as follows: basophils - 0, eosinophils - 2,monocytes - 0, immature neutrophils - 4, stab neutrophils - 8, segmented neutrophils - 56,lymphocytes - 26, monocytes - 4. How can we interpret these

changes in the white blood cells?
A. Neutrophilia with a regenerative left shift
B. Neutrophilia with a degenerative left shift
C. Neutrophilia with a hyper regenerative left shift
D. Lymphocytosis
E. Neutrophilic leukocytosis with a right shift

180. Genealogical study of a family with hereditary enamel hypoplasia has revealed that the disease occurs in every generation. In women, the anomaly occurs more frequently than in men. Male patients only pass this trait to their daughters. What type of inheritance takes place in this case?
A. X-linked dominant
B. Autosomal dominant
C. Autosomal recessive
D. Y-linked
E. X-linked recessive

181. A 42-year-old patient has an inflammation of the inner ear. After the examination, the doctor revealed the affection of the first neuron bodies of the auditory analyzer. Where are they localized?
A. G. spirale
B. G. vestibulare
C. G. geniculi
D. G. trigeminale
E. G. ciliare

182. An animal had been intensively fed with carbohydrates. Histological examination of its liver revealed a significant number of glycogen granules. Glycogen relates to the following group of cell structures:
A. Trophic granules
B. Secretory granules
C. Excretory granules
D. Pigment granules
E. Special-purpose organelles

183. Calcification of dental tissues is significantly influenced by osteocalcin protein which has an ability to bind calcium ions due to the presence of the following modified amino acid residues in the polypeptide chain:
A. Gamma-carbon glutamine
B. Alanine
C. Gamma-aminobutyric
D. Carboxyaspargine
E. Delta-aminopropionic

184. To prevent the seasonal influenza epidemics in the city hospitals, sanitary epidemic station gave orders to immunize health care workers. Which of the following preparations should be used for immunization?
A. Subunit vaccine
B. Interferon
C. Gamma-globulin
D. Rimantadine
E. Amantadine

185. A paroxysm of tachycardia occurred in a patient undergoing a dental procedure. Which of the following drugs should be used to relieve it?
A. Verapamil
B. Isadrinum
C. Atropine
D. Dipheninum
E. Nitroglycerine

186. A 30-year-old patient with pneumonia has been administered a 3-day course of an antibiotic from the group of azalides that has a bactericidal effect, prolonged action, the ability to bind to phagocytic cells and accumulate in the infection foci. What drug has been administered?
A. Azithromycin
B. Erythromycin
C. Benzylpenicillin sodium salt
D. Isoniazid
E. Ciprofloxacin

187. A histological specimen represents an

organ whose wall consists of the mucosa, submucosa, fibrocartilage, and adventitious cartilage. The organ is lined by pseudostratified ciliary epithelium, the muscular layer of the mucosa is absent, the submucosa contains seromucous glands. Hyaline cartilage C-rings are present. What organ has described morphological characteristics?
A. Trachea
B. Bronchiole
C. Secondary bronchus
D. Terminal bronchiole
E. Larynx

188. Autopsy of a dead man with no fixed abode revealed the aneurysm of the ascending aorta. Microscopy of the middle tunica of aorta revealed lymphocytic inflammatory infiltrates, plasma cells, fibroblast cells with some Pirogov-Langhans cells, endovasculitis. What disease should be suspected?
A. Syphilis
B. Atherosclerosis
C. Rheumatism
D. Essential hypertension
E. Tuberculosis

189. A 24-year-old injured has a fracture in the middle third of the II rib. The dysfunction of the following muscle accompanies the fracture:
A. M. scalenus posterior
B. M. sternocleidomastoideus
C. M. sternohyoideus
D. M. scalenusmedius
E. M. subclavius

190. A 29-year-old patient with bacterial pneumonia has been administered penicillin. What is the mechanism of its antimicrobial action?
A. Inhibition of cell walls synthesis in the microorganisms
B. Inhibition of intracellular protein synthesis
C. Inhibition of cholinesterase activity
D. Inhibition of SH-groups of microorganism enzymes
E. Antagonism of PABA

191. After using toothpaste, a 27-year-old patient has developed Quincke's edema. Administer a drug from the group of histamine H1-receptor antagonists for the treatment of this condition:
A. Dimedrol
B. Paracetamol
C. Digoxin
D. Chlorpromazine
E. Analgin

192. The operative dentistry department admitted a newborn girl who choked during sucking. Examination revealed cleft palate arising from non-union of the middle frontal process and maxillary process of the I-st branchial arch. The cleft was located in the palate between:
A. Osincisivum et processuspalatinus maxillae
B. Processuspalatinus maxillae dextrae et sinistrae
C. Lamina horizontalisospalatinumdextrum et sinistrum
D. Processuspalatinus maxillae et lamina horizontalisospalatinum
E. In the region of canalisincisivus

193. In the case of some helminthiases, an affected person can detect helminth himself because mature segments of the causative agent are able to crawl out of the anus. This is typical for the following disease:
A. Beef tapeworm infection
B. Pork tapeworm infection
C. Hymenolepiasis
D. Bothriocephaliasis
E. Echinococcosis

194. Hormonal form of a certain vitamin induces genome level synthesis of Ca-binding proteins and enterocytes, thus regulating the intestinal absorption of Ca2+ ions required for dental tissue development.

What vitamin is it?
A. D3
B. A
C. Bi
D. E
E. K

195. In the histological specimen of a tooth germ, the outer surface of the enamel organ is uneven, the cells of the inner layer show the reversal of polarity (inversion). These changes precede the beginning of the following process:
A. Amelogenesis
B. Dentinogenesis
C. Pulp genesis
D. Cementogenesis
E. Periodont development

196. During auscultation, a 26-year-old patient was asked to breathe deep. After ten breaths, the patient lost consciousness, which is associated with the development of the following condition:
A. Respiratory alkalosis
B. Carbon dioxide acidosis
C. Erythropenia
D. Polycythemia
E. Reduced oxygen capacity of the blood

197. A 43-year-old patient is to be administered an antibiotic from the penicillin group, which would be resistant to penicillinase. What drug can be recommended?
A. Oxacillin
B. Amoxicillin
C. Carbenicillin
D. Azlocillin
E. Ampicillin

198. In the experiment, the permeability of the cell membrane for potassium ions has been increased. What changes can be expected in the membrane state?
A. Hyperpolarization
B. Depolarization
C. Action potential
D. Local response
E. There will be no changes

199. A 48-year-old female patient with a history of cholelithiasis has recurring steatorrhea. What vitamin deficiency may develop as a complication of the current disease?
A. K
B. Be
C. C
D. PP
E. B12

200. The surgically excised connective tissue of the deformed mitral valve gives a basophilic reaction when stained with hematoxylin and eosin. When stained with toluidine blue, it turns purple (metachromasia). What changes in the connective tissue can be detected by these reactions?
A. Mucoid edema
B. Fibrinoid necrosis of connective tissue
C. Connective tissue edema
D. Petrification
E. Hyalinosis

1. Inadequate treatment of middle ear inflammation (mesotympanitis) has resulted in suppurative inflammation of the cells of the temporal bone mastoid process (mastoiditis). The abscess has erupted into the bed of sternocleidomastoid muscle. This pathological process is localized in the following cervical fascia:
A. Lamina superficialis fasciae colli propriae
B. Fascia colli superficialis
C. Lamina profunda fasciae colli propriae
D. Fascia endocervicalis
E. Fascia prevertebralis

2. When examining the oral cavity of a 22-year-old patient, the dentist noticed a destroyed medial tubercle on the cutting edge of the right maxillary first molar. This tubercle is called:
A. Paracone
B. Metacone
C. Mesocone
D. Hypocone
E. Protocone

3. Alveolar bleeding has been detected following the extraction of the maxillary second premolar. What artery causes this kind of bleeding, when damaged?
A. Middle superior alveolar artery
B. Posterior superior alveolar artery
C. Inferior alveolar artery
D. Palatine artery
E. Anterior superior alveolar artery

4. A female patient has referred to a dentist with complaints of bruise and swelling around her eye. Anamnesis is as follows: several days prior, her 1st premolar tooth had been extracted, with infraorbital anesthesia administered; several days later, hematoma appeared in the area of foramen intraorbitale. Branch of the following artery was damaged:
A. Maxillary artery
B. Facial artery
C. Superficial temporal artery
D. Superior labial artery
E. Masseteric artery

5. A patient has lost his ability to recognize objects by their characteristic sounds (clock, bell, music). What part of his brain is damaged?
A. Lobus temporalis
B. Lobus occipitalis
C. Lobus frontalis
D. Lobus parietalis
E. Insula

6. A patient complains of pain in the thorax during breathing, dyspnea, restriction of coughing movements, hiccup. What respiratory muscles are affected?
A. Diaphragm
B. External intercostal muscles
C. Serratus anterior muscle
D. Internal intercostal muscles
E. Abdominal muscles

7. Having lost a significant amount of body weight, a 70-year-old patient complains of dull pain in the lumbar area. As a result of the examination, he was diagnosed with a floating kidney. What part of the kidney supporting apparatus is most likely to be damaged?
A. Capsula adiposa
B. Capsula fibrosa
C. M. Iliopsoas
D. Lig. Hepatorenalis
E. M. quadratus lumborum

8. Examination of a 23-year-old patient reveals that when his tongue is protruded, its tip deviates to the side. This is caused by the dysfunction of the following tongue muscle:
A. Genioglossus
B. Hyoid
C. Superior longitudinal
D. Inferior longitudinal
E. Styloglossus

9. A patient has air embolism as a result of a skin injury in the middle portion of the sternocleidomastoid muscle. Which cervical vein was injured?
A. External jugular vein
B. Anterior jugular vein
C. Internal jugular vein
D. Posterior auricular vein
E. Transverse cervical vein

10. Otopyosis has caused a tympanic cavity roof to be broken by pus. From tympanic cavity pus spreads to the following cranial fossa:
A. Middle cranial fossa
B. Posterior cranial fossa
C. Anterior cranial fossa
D. Orbit
E. Sphenopalatine fossa

11. A 33-year-old patient complains of impairment of skin sensitivity in the medial part of the dorsal and palmar surface of the hand. Which nerve is damaged?
A. N. ulnaris
B. N. radialis
C. N. medianus
D. N. musculocutaneus
E. N. cutaneus antebrachii medialis

12. A 2-year-old child has congenital spastic contraction of muscles on one side of the neck, which is torticollis. What muscle is affected?
A. Sternocleidomastoid
B. Subcutaneous
C. Sternohyoid
D. Sternothyroid
E. Omohyoid

13. Nucleoli of nuclei have been damaged due to tissue culture nuclear irradiation. Regeneration of the following organelles becomes hampered in the cytoplasm:
A. Ribosomes
B. Lysosomes
C. Endoplasmic reticulum
D. Microtubules
E. Golgi apparatus

14. A histological preparation shows organ, where lymphocytes form three types of lymphoid structures: lymph nodules, medullary cords, and lymphatic sinuses. What organ is it?
A. Lymph node
B. Spleen
C. Thymus
D. Tonsil
E. Redbone marrow

15. An electron microphotograph of the duodenal epithelium clearly shows a cell with electron-dense granules in the basal pole. What cell is it?
A. Endocrine
B. Prismatic with a limbus
C. Poorly differentiated
D. Goblet
E. Parietal

16. As a result of a development anomaly, a newborn has a malformation of major salivary glands. This anomaly is caused by the damage of the following embryonal structure:
A. Ectoderm
B. Splanchnotom
C. Somites
D. Entoderm
E. Mesenchyme

17. The effect of some harmful factors caused focal damage to the gastric epithelium. What cells are responsible for its regeneration?
A. Cervical mucocytes of glands
B. Parietal exocrinocytes of glands
C. Principal exocrinocytes of glands
D. Endocrinocytes
E. Mucocytes of the gland body

18. The microscopic examination of a CNS body revealed the gray matter with three

layers of neurons, namely molecular, ganglionic, and granular layers. What are the neurons constituting the second layer?
A. Piriform
B. Basket
C. Small stellate
D. Large stellate
E. Granule cells

19. Histological preparation of lower jaw shows dentin being formed. Collagen fibers synthesized by odontoblasts are thin and situated perpendicular to dentinal tubules. What fibers are being produced in dentin?
A. Tangential fibers
B. Radial fibers
C. Parallel fibers
D. Sharpey's fibers
E. Perforating fibers

20. Normal implantation of the human embryo is possible only if uterus endometrium undergoes certain changes, with the following type of endometrium cells increasing in number:
A. Decidual cells
B. Macrophages
C. Endotheliocytes
D. Fibroblasts
E. Neurons

21. There is a large amount of effusion in the pericardial cavity of a patient with exudative pericarditis. What cells cause such a phenomenon when their functional activity is disrupted?
A. Mesotheliocytes
B. Fibroblasts
C. Working cardiac myocytes
D. Cardiac conduction cells
E. Endotheliocytes

22. Stimulation of the peripheral segment of *chorda tympani* in an experimental animal resulted in the discharge of the following secretion from the parotid salivary fistula:
A. A lot of liquid salivae
B. A small amount of liquid saliva
C. There is no saliva
D. A small amount of viscous saliva
E. A lot of viscous salivae

23. A 40-year-old patient was revealed to have a blood clotting time of 2 minutes under a stressful condition. It is primarily caused by the following hormone affecting hemocoagulation:
A. Catecholamine
B. Cortisol
C. Aldosterone
D. Somatotropin
E. Vasopressin

24. Sharp decrease in lungs surfactant activity has been detected in a patient. It will result in the following:
A. Alveoli will become prone to deflation
B. Airways resistance decreases
C. Respiratory muscles work decreases
D. Pulmonary ventilation increases
E. Hyperoxemia

25. A 38-year-old female patient has been brought into the admission room with uterine bleeding. What will be revealed by blood test?
A. Decrease of packed cell volume
B. Eosinophilia
C. Decreased erythrocyte sedimentation rate
D. Leukocytosis
E. Increased color index of blood

26. The patient's lower pair of mesencephalon quadrigeminal bodies has been damaged due to hemorrhage. What reflex is lost?
A. Aural signals orienting response
B. Light signals orienting response
C. Tactile stimulation orienting response
D. Statokinetic reflex - ocular nystagmus
E. Head-righting reflex

27. There is a high content of protein and erythrocytes in the urine. This can be caused by increased:
A. Permeability of renal filter permeability
B. Effective filtration pressure
C. Hydrostatic blood pressure in glomerular capillaries
D. Hydrostatic pressure of primary urine in capsule
E. Oncotic pressure of blood plasma

28. Certain brain structures of test animals have been subjected to electrostimulation as an experiment, resulting in the development of polyphagia (abnormal desire to consume excessive amounts of food) in test animals. Electrodes have been inserted in the following brain structures:
A. Lateral nuclei of hypothalamus
B. Ventromedial nuclei of hypothalamus
C. Supraoptic nuclei of hypothalamus
D. Adenohypophysis
E. Red nuclei

29. Experimental studies revealed steroid hormones to have an effect on proteosynthesis. They influence the synthesis of the following substances:
A. Specific messenger RNA
B. Adenosine triphosphate
C. Specific transfer RNA
D. Guanosine triphosphate
E. Specific ribosomal RNA

30. A female patient has scalded her hand with boiling water. The affected skin area became red, swollen, and painful. The accumulation of the following substance causes this effect:
A. Histamine
B. Lysine
C. Thiamine
D. Glutamine
E. Asparagine

31. Mother had noticed her 5-year-old child's urine to become dark in colour. Bile pigments in urine were not detected. The diagnosis of alkaptonuria was made. What pigment is deficient?
A. Homogentisic acid oxidase
B. Phenylalanine hydroxylase
C. Tyrosinase
D. Oxyphenylpyruvate oxidase
E. Phenylpyruvate decarboxylase

32. Biogenic amines, such as histamine, serotonin, dopamine, and others, are highly active substances affecting various physiological functions. What transformation process of amino acids results in biogenic amines being produced in somatic tissues?
A. Decarboxylation
B. Deamination
C. Transamination
D. Oxidation
E. Reductive amination

33. Various diseases cause sharp increase of active oxygen, leading to cell membranes destruction. Antioxidants are used to prevent it from happening. The most potent natural antioxidant is:
A. Alpha-tocopherol
B. Glucose
C. Vitamin *D*
D. Fatty acids
E. Glycerol

34. In the process of metabolism human body produces active oxygen forms, including superoxide anion radical *O*2. The following enzyme inactivates this anion:
A. Superoxide dismutase
B. Catalase
C. Peroxidase
D. Glutathione peroxidase
E. Glutathione reductase

35. A 34-year-old patient has low endurance of physical loads. At the same time, skeletal muscles have an increased concentration of glycogen. This is caused by the reduced activity of the following enzyme:

reduced activity of the following enzyme:
A. Glycogen phosphorylase
B. Glucose-6-phosphate dehydrogenase
C. Phosphofructokinase
D. Glycogen synthase
E. Glucose-6-phosphatase

36. A patient has been prescribed pyridoxal phosphate. What processes are corrected with this drug?
A. Transamination and decarboxylation of amino acids
B. Oxidative decarboxylation of keto acids
C. Deaminization of amino acids
D. Synthesis of purine and pyrimidine bases
E. Protein synthesis

37. A 60-year-old man consulted a doctor about an onset of chest pain. In blood serum analysis showed a significant increase in the activity of the following enzymes: creatine kinase and its MB- isoform, aspartate aminotransferase. These changes indicate the development of the pathological process in the following tissues:
A. Cardiac muscle
B. Lungs
C. Skeletal muscles
D. Liver
E. Smooth muscles

38. A nuclear power plant disaster fighter had absorbed radiation dose of 5 Gy; in a week, he was diagnosed with blood agranulocytosis. What pathogenetic mechanism is principal in its origination?
A. Leukopoiesis suppression
B. Increased granulocytes transfer into tissues
C. Increased leucocytes disintegration
D. Disruption of mature leucocytes emerging from bone marrow
E. Autoimmune process development

39. A patient with liver cirrhosis has been given intravenously 500,0 ml of 5 % glucose solution along with other drugs. There is a high risk of the following water-electrolytic balance disruption:
A. Hyposmolar hypohydration
B. Hyperosmolar hypohydration
C. Iso-osmolar hypohydration
D. Hyposmolar dehydration
E. Hyperosmolar dehydration

40. A 32-year-old patient has a purulent wound in the lower third of the forearm. The smear of purulent wound content has been made. What cells will be generally detected, if it is stained using Romanovsky-Giemsa stain?
A. Neutrophil
B. Eosinophil
C. Lymphocyte
D. Erythrocyte
E. Basocyte

41. A patient has oliguria caused by acute renal failure. What daily amount of urine corresponds with this symptom?
A. 100-500 ml
B. 1500-2000 ml
C. 1000-1500 ml
D. 500-1000 ml
E. 50-100 ml

42. A 7-year-old child suffers from acute disease. A pediatrician observed the following during examination: pharynx mucosa is hyperemic, edematous, swollen, covered with a large amount of mucus. Buccal mucosa has whitish discolored spots. On the next day, the child came out in a rash with large spots covering the skin of his face, neck, and torso. What kind of inflammation causes changes in pharynx mucosa?
A. Catarrhal
B. Serous
C. Serofibrinous
D. Fibrinous
E. Hemorrhagic

43. Histological examination of the grayish

pink elastic nodule of 0,3 cm in diameter found by a surgeon at the root of the extracted tooth shows granulation tissue with cords of stratified squamous epithelium. What is the most likely diagnosis?
A. Granulomatous periodontitis
B. Eosinophilic granuloma
C. Granulating pulpitis
D. Acute apical periodontitis
E. Granulating periodontitis

44. Histological examination of a lymph node removed from the posterior triangle of the neck of an 18-year-old patient revealed some cell agglomerations that included single multinuclear Reed-Sternberg cells, major Hodgkin's cells, minor Hodgkin's cells, and many lymphocytes, single plasmatic cells, eosinophils. What is the most likely diagnosis?
A. Lymphogranulomatosis
B. Nodular lymphoma
C. Burkitt's tumor
D. Lymphocytic lymphoma
E. Chronic lymphoid leukosis

45. Autopsy of a man who died from intraintestinal hemorrhage revealed necrosis of grouped and solitary follicles, dead tissues imbibed with bile and blood in the ileum, sequestration, and rejection of necrotic masses with defect formation in the lower segment of the intestine. Which of the following diagnoses is most likely?
A. Typhoid fever, ulcerative stage
B. Typhoid fever, "clean ulcer" stage
C. Typhoid fever, necrosis stage
D. Abdominal typhoid salmonellosis
E. Crohn's disease

46. An autopsy of the body of an aged man, who was suffering from acute intestinal disorder during his last two weeks, has revealed the following change in the rectum and sigmoid colon: brown and green film covering the mucosa is detected. The itestinal wall is thickened; the cavity sharply narrows down. Microscopy reveals mucosa necrosis of varying depth, necrotic tissue is pierced through with fibrin threads, leucocytic infiltration is observed. What diagnosis is most probable?
A. Fibrinous colitis
B. Catarrhal colon
C. Ulcerative colitis
D. Follicular colitis
E. –

47. A 28-year-old patient had been diagnosed with a multifragmental fracture of the right hip. On the third day after the injury, he began to complain of pain in the right side of the chest, difficult respiration. A day later, the patient died of progressive heart and respiratory failure. Histological study of pulmonary and cerebral blood vessels revealed orange sudanophilic droplets that completely obstructed the vessels of the microvasculature. What complication caused the death of the patient?
A. Fat embolism
B. Gas embolism
C. Drug-induced embolism
D. Microbial embolism
E. Thromboembolism

48. A female patient with heavy poisoning caused by sepsis has died. "Tiger heart" was revealed during the autopsy. The microscopic investigation allowed detecting lipids in the cardiac myocytes cytoplasm. What morphogenetic development mechanism is the main cause of this kind of dystrophy?
A. Decomposition
B. Infiltration
C. Transformation
D. Pathological synthesis
E. –

49. A patient, who works as a milkmaid, has made an appointment with a dentist with complaints of an aphtha-shaped rash on the mucosa of the oral cavity. The doc-

tor detected a rash on her hands in the area of nail plates. What agent causes this disease?
A. Foot-and-mouth disease virus
B. Cytomegalovirus
C. Vesicular stomatitis virus
D. Herpesvirus
E. Coxsackie B virus

50. Bacterioscopy of nasopharyngeal mucus taken from a 2,5-year-old child with nasopharyngitis revealed gram-positive diplococci looking like coffee grains. What organs of the child are most likely to be affected if these microorganisms penetrate the blood?
A. Brain tunics
B. Cardiac valves
C. Renal glomeruli
D. Urogenital tracts
E. Lymph nodes

51. A pregnant woman complains of vaginal mucosa irritation, itching, and genital tracts secretion. Bacterioscopy of vaginal smears revealed large gram-positive oval, oblong cells that form pseudomicelium. What is the most probable channel of infection?
A. Endogenous infection
B. Sexual transmission
C. Contact infection
D. Vector-borne transmission
E. Wound infection

52. There are several cases of children from boarding school suffering from sore throat. Microscopy of tonsil smears stained according to the Neisser method has revealed thin yellow bacilli with dark brown grains on their ends placed in the shape of Roman numeral five. What infection can be suspected in this case?
A. Diphtheria
B. Infectious mononucleosis
C. Listeriosis
D. Tonsillitis
E. Scarlet fever

53. A patient has been hospitalized with a provisional diagnosis of hepatitis B. To make a diagnosis, the serological reaction is used, which is based on antigen reacting with antibody chemically bound with peroxidase or alkaline phosphatase. What is the name of this serological reaction?
A. Enzyme immunoassay
B. Radioimmunoassay
C. Immunofluorescence test
D. Complement binding assay
E. Immobilization test

54. To perform conduction anesthesia, a patient had been administered a drug used in dental surgery. It was followed by the symptoms of poisoning: central nervous system excitation with the following paralysis and acute cardiovascular insufficiency (collapse). Additionally, there were allergic reactions (itching, swelling, erythema). Name this drug.
A. Lidocaine
B. Suxamethonium chloride
C. Thiopental sodium
D. Tubocurarin chloride
E. Pipecuronium bromide

55. A patient in a collaptoid state has been given an injection of mesatonum for the correction of blood pressure. What is the mechanism of this drug action?
A. It stimulates α-adrenergic receptors
B. It stimulates β-adrenergic receptors
C. It blocks α-adrenergic receptors
D. It blocks β-adrenergic receptors
E. It stimulates α- and β-adrenergic receptors

56. A 42-year-old female patient consulted a doctor about pain in the knee joints. Objectively there is swelling, redness, hyperthermia in the region of these joints. Laboratory testing revealed positive acute phase reactants. What drugs should be used to

treat this patient?
A. Anti-inflammatory drugs
B. Narcotic analgesics
C. Antidepressants
D. Antibiotics
E. Sulfonamides

57. A patient being treated for tuberculosis is suffering from hearing deterioration. What drug causes this complication?
A. Streptomycin
B. Isonicotinic acid hydrazide (Isoniazid)
C. Kanamycin sulfate
D. Ethionamide
E. Rifampicin

58. A 55-year-old male patient with acute heart failure has been administered a quick-relief cardiac glycoside. Which of the following drugs has been given to the patient?
A. Strophanthin
B. Adonisidum
C. Digitoxin
D. Celanid
E. Milrinone

59. A patient complains about retrosternal pain, dyspnea, and palpitation. After examination, he was diagnosed with coronary heart disease and prescribed verapamil. What is the mechanism of its action?
A. It blocks calcium channels
B. It blocks α-adrenoreceptors
C. It blocks β-adrenoreceptors
D. It blocks potassium channels
E. It blocks sodium channels

60. A doctor has prescribed clonidine for rapid relief of hypertensic crisis. What group does this drug belong to according to its mechanism of action?
A. Central α2-adrenoceptor agonist
B. α-adrenergic blocking agent
C. Nonselective α-adrenoceptor agonist
D. Selective α1-adrenoceptor agonist
E. Selective β1-adrenergic blocking agent

61. Examination of the oral cavity of a 19-year-old patient revealed a small gap between the maxillary and mandibular incisors. There was no contact between the front teeth. Specify the type of occlusion in this patient:
A. Open occlusion
B. Orthognathia
C. Edge-to-edge occlusion
D. Closed bite
E. Prognathism

62. A 39-year-old patient has been suffering from gastric ulcer for the last four years. His condition exacerbates in spring and autumn: he suffers from pain in epigastrium, heartburn, nausea, constipation. What nosological term can be applied to the period between two exacerbations?
A. Pathological state
B. Pathological process
C. Pathological reaction
D. Typical pathological process
E. Good health

63. A patient has sustained a traumatic injury of the greater pectoral muscle. This resulted in a decrease of:
A. Inspiratory reserve volume
B. Expiratory reserve volume
C. Tidal volume
D. Residual volume
E. Functional residual lung capacity

64. Denture installation has caused excessive salivation in the patient. The following reflexes cause it:
A. Unconditioned
B. Conditioned
C. Conditioned and unconditioned
D. Local
E. –

65. A 53-year-old patient with a long history of nephrolithiasis underwent nephrectomy. The kidney looks like a thin-walled sac filled with urine. Renal parenchyma is atro-

phied. Specify this complication of nephrolithiasis:
A. Hydronephrosis
B. Pyelonephritis
C. Pyonephrosis
D. Multicystic kidney disease
E. Nephrosclerosis

66. Microscopy of smear preparation stained with methylene blue revealed bacilli with clublike expansions on their ends similar to C.diphteriae. What additional method of staining should be used to verify this assumption?
A. Neisser
B. Kozlovsky
C. Ziehl-Neelsen
D. Zdrodovsky
E. Aujeszky

67. A patient from Prykarpattia (at the foot of the Carpathian mountains) with endemic goiter consulted a doctor about the suppuration of gingival angles and loosening of teeth. What is a major factor in periodontitis development in this case?
A. Endocrine disorders
B. Stress effects
C. Hypersalivation
D. Violation of swallowing
E. Malnutrition

68. A 38-year-old man died all of a sudden. Autopsy revealed myocardial infarction in the posterior wall of the left ventricle. What are the most likely alterations in myocardiocyte structure that can be revealed microscopically in the infarction focus?
A. Karyolysis
B. Adipose degeneration
C. Carbohydrate degeneration
D. Calcification
E. Protein degeneration

69. A patient at the early stage of diabetes mellitus was found to have polyuria. What is its cause?
A. Hyperglycemia
B. Ketonemia
C. Hypocholesterolemia
D. Hypercholesterolemia
E. Hyperkaliemia

70. Microscopy of perianal folds scrape has revealed colorless eggs in the shape of asymmetrical ovals sized 50x23 micrometers. Name the kind of helminth.
A. Pinworm (Enterobius)
B. Ascarid (Ascaris lumbricoides)
C. Hookworm (Ancylostoma duodenale)
D. Whipworm (Trichuris)
E. Dwarf tapeworm (Hymenolepis nana)

71. A female patient presents with the ovarian hyperemia, increased permeability of the blood-follicle barrier with the development of edema, infiltration of the follicle wall with segmental leukocytes. The follicle is large in volume. Its wall is thickened. What period of the sex cycle is the described situation typical for?
A. Preovulatory stage
B. Ovulation
C. Menstrual period
D. Postmenstrual period
E. Period of relative rest

72. The total number of leukocytes in patient's blood is 90 109/l. Leukogram: eosinophils - 0 %, basophils - 0 %, juvenile - 0 %, stab neutrophils - 2 %, segmentonuclear cells - 20 %, lymphoblasts - 1 %, prolymphocytes - 2 %, lymphocytes - 70 %, monocytes - 5 %, Botkin-Gumprecht cells. Clinical examination revealed enlarged cervical and submandibular lymph nodes. Such clinical presentations are typical for the following pathology:
A. Chronic lympholeukosis
B. Acute lympholeukosis
C. Lymphogranulomatosis
D. Infectious mononucleosis
E. Chronic myeloleukosis

73. A 67-year-old patient has atherosclerosis of cardiac and cerebral vessels. Examination revealed hyperlipidemia. What class of blood plasma lipoproteids is most important in atherosclerosis pathogenesis?
A. Low-density lipoproteids
B. Chylomicrons
C. α-lipoproteids
D. High-density lipoproteids
E. –

74. A 42-year-old patient with tetanus developed an acute respiratory failure. What type of respiratory failure occurs in this case?
A. Disregulatory impairment of alveolar ventilation
B. Restrictive impairment of alveolar ventilation
C. Obstructive impairment of alveolar ventilation
D. Perfusion impairment
E. Diffusion impairment

75. A patient, who has been suffering from a severe injury of thorax, went into shock, followed by symptoms of acute renal failure. What is the primary mechanism of acute renal failure development in this case?
A. Arterial pressure drop
B. Disruption of urinary outflow
C. Increase of pressure in glomerular capsule
D. Increase of pressure in renal arteries
E. Decrease of oncotic blood pressure

76. A histologic study of a redbone marrow puncture sample had been conducted in the course of examination of a 35-year-old patient, and significant megakaryocyte number depletion was detected. What peripheral blood changes will result from that?
A. Thrombocytopenia
B. Leukocytosis
C. Thrombocytosis
D. Agranulocytosis
E. Leukopenia

77. A 5-year-old child with a diagnosis of diphtheria has been hospitalized in severe condition in a contagious isolation ward. Tracheostomy had to be performed on the child to prevent asphyxiation. This operation was carried out in the following neck triangle (trigonum):
A. Omotracheale
B. Caroticum
C. Omoclaviculare
D. Submandibulare
E. Omotrapezoideum

78. Histological preparation of the cerebellum transverse section shows a large number of multipolar neurons in the grey matter. What morphological feature allows identifying them as multipolar?
A. Number of cellular processes
B. Length of cellular processes
C. Shape of axon terminals
D. Shape of perikaryon
E. Cell size

79. A patient is diagnosed with seborrheic dermatitis caused by vitamin H (biotin) deficiency. Observed is activity disruption of the following enzyme:
A. Acetyl-CoA carboxylase
B. Pyruvate decarboxylase
C. Alcohol dehydrogenase
D. Aminotranspherases
E. Carbamoyl phosphate synthetase

80. THE Human X chromosome contains a dominant gene that is responsible for normal blood clotting. An autosomal dominant gene plays a similar role. Lack of any of these genes leads to coagulation disorder. The form of interaction between these genes is called:
A. Complementarity
B. Epistasis
C. Polymerism
D. Codominance

E. Pleiotropy

81. A 56-year-old female patient is registered in a psychoneurological dispensary due to her suffering from epilepsy, specifically, minor attacks (optimal). What drug is most efficient in this case?
A. Sodium valproate
B. Phenobarbital
C. Trihexyphenidyl
D. Levodopa
E. Phenytoin

82. The glucose content of blood stays at a sufficient level after one week of starvation. Is it caused by activation of the following process:
A. Gluconeogenesis
B. Glycolysis
C. Glycogenolysis
D. Tricarboxylic acid cycle
E. Glycogen phosphorolysis

83. As a result of a trauma, a patient has developed traumatic shock. The patient is fussy, talkative, pale. AP- 140/90 mm Hg, Ps-120 bpm. This condition is consistent with the following shock phase:
A. Erectile
B. Latent
C. Terminal
D. Torpid
E. –

84. A 60-year-old patient with a history of bronchial asthma has had several attacks during the day. What is the optimal drug to be used for their prevention?
A. Salbutamol
B. Isadrinum
C. Adrenaline hydrochloride
D. Dobutamine
E. Methacinum

85. A 12-year-old child is of short stature, has a disproportionate body structure and mental retardation. The hyposecretion of the following hormone might cause these characteristics:
A. Thyroxine
B. Insulin
C. Cortisol
D. Somatotropin
E. Glucagon

86. An injured person with a wound of forearm radial surface has been brought to a surgical department. Venous bleeding of the wound is observed. What blood vessel is damaged?
A. V. cephalica
B. V. basilica
C. V. intermedia cubiti
D. Vv. ulnares
E. Vv. Brachiales

87. A patient has been diagnosed with bacillary dysentery. What drug of those listed below should be prescribed?
A. Amoxicillin
B. Benzylpenicillin sodium salt
C. Isonicotinic acid hydrazide (Isoniazid)
D. Itraconazole
E. Acyclovir

88. A patient with acute retention of urine has been brought to an admission room. During the examination, a doctor found out that the patient has urethral obturation caused by the pathology of the surrounding organ. Name this organ.
A. Prostate
B. Testicle
C. Seminal vesicle
D. Spermatic cord
E. Epididymis

89. A patient underwent lobectomy of the right middle lobe of a lung. What segments of the lung were affected?
A. Lateral and medial
B. Apical, anterior
C. Basal medial and anterior
D. Basal posterior and lateral

E. Apical posterior and anterior

90. A patient was taken to a hospital with dizziness, dry mouth, mydriatic pupils, accommodation disorder, tachycardia, difficult urination, intestinal atony. An overdose of the following drug might have caused these symptoms:
A. Atropine sulfate
B. Furosemide
C. Clonidine
D. Captopril
E. Prazosin

91. A connective tissue preparation stained with hematoxylin-eosin shows isogenous cell groups surrounded with basophilic intercellular substance. No fibrous structures detected. What type of connective tissue is it?
A. Hyaline cartilage tissue
B. Elastic cartilage tissue
C. Dense fibrous tissue
D. Loose fibrous tissue
E. Splenial bone tissue

92. A patient has addressed a doctor with a complaint of gastric ulcer exacerbation. The following membrane cytoreceptors should be blocked in the course of the patient's complex therapy:
A. 2-histamine
B. 1-histamine
C. α-adrenergic receptor
D. β1-adrenergic receptor
E. β2-adrenergic receptor

93. A 36-year-old patient consulted an ophthalmologist about eye ache. The examination revealed the erosion of the cornea, which is the lack of superficial and spinous layers of the epithelium. What cells will provide regeneration of the damaged epithelium?
A. Cells of the stratum basale
B. Cells of the stratum corneum
C. Cells of the stratum granulosum
D. Cells of the stratum lucidum
E. Cell of the stratum superficiale

94. A 25-year-old woman has died when giving birth. The histological study of her kidneys has revealed the following in the epithelium of nephron tubules: condensation of nucleus chromatin, nuclei breaking down into lumps, and lysis, along with plasmorrhexis and cytolysis. What pathologic process was revealed in the epithelium of kidney tubules?
A. Necrosis
B. Hydropic degeneration
C. Amyloidosis
D. Fatty degeneration
E. Hyalinosis

95. A 43-year-old female complains of weight loss, hyperhidrosis, low-grade fever, increased irritability. She has been found to have hyperfunction of the sympathetic- adrenal system and basal metabolism. These disorders can be caused by hypersecretion of the following hormone:
A. Thyroxine
B. Somatotropin
C. Corticotropin
D. Insulin
E. Aldosterone

96. A 30-year-old driver complains of allergic rhinitis that usually exacerbates in spring. He has been administered an antihistamine drug with a slight sedative effect and a 24-hour period of action. Which of the listed drugs has been administered?
A. Loratadine
B. Dimedrol
C. Heparin
D. Vicasol
E. Oxytocin

97. A patient suffers from a severe life-threatening, generalized septic infection. What group of chemotherapeutical drugs should be prescribed in this case?

A. Cephalosporines
B. Tetracyclines
C. Sulfanilamides
D. Chloramphenicol group
E. Macrolides

98. A patient who had been eating only polished rice developed polyneuritis caused by thiamine deficiency. What compound can be indicative of this kind of avitaminosis when excreted with urine?
A. Pyruvic acid
B. Malate
C. Methylmalonic acid
D. Uric acid
E. Phenylpyruvate

99. As a result of the treatment of viral RNA with nitrous acid, the UCA triplet mutated to the UGA triplet. What kind of mutation occurred?
A. Transition
B. Nucleotide deletion
C. Missense
D. Nucleotide insertion
E. Inversion

100. To prevent possible negative effects upon the gastric mucosa a patient with rheumatoid arthritis was administered a nonsteroid anti-inflammatory drug - a COX -2 selective inhibitor. Specify this drug:
A. Celecoxib
B. Analgine
C. Acetylsalicinic acid
D. Butadion
E. Ibuprofen

101. A 46-year-old patient consulted a doctor about the pustular rash on the skin of the limbs. What antiseptic should be administered to the patient?
A. Alcohol solution of iodine
B. Insulin
C. Prednisolone
D. Sibazon
E. Heparin

102. As a result of the dysfunction of protein synthesis in the liver, a patient with hepatic insufficiency has disturbed synthesis of procoagulants, prothrombin, fibrinogen. Which of the listed syndromes can be expected in this patient?
A. Haemorrhagic
B. Portal hemorrhagic syndrome
C. Hepatolienal syndrome
D. Acholia syndrome
E. Cholaemia syndrome

103. A patient suffering from stenocardia takes 100 mg of acetylsalicylic acid daily. What is the effect of acetylsalicylic acid on this patient?
A. Inhibition of thrombocyte aggregation
B. Inhibition of blood coagulation
C. Dilatation of coronary vessels
D. Prothrombin rate reduction
E. Cholesterol rate reduction

104. A 49-year-old male patient with myocardial infarction has been admitted to the cardiology department. What changes in the peripheral blood cells are induced by the necrotic changes in the myocardium?
A. Neutrophilic leukocytosis
B. Monocytosis
C. Eosinophilia
D. Thrombocytopenia
E. Lymphopenia

105. In the area being the epicenter of the registered rabies cases among wild animals, a 43-year-old man presented to a clinic and claimed to have been bitten by a stray dog. He was given a course of anti-rabies vaccine. This preparation relates to the following type of vaccines:
A. Attenuated
B. Inactivated
C. Molecular
D. Toxoids
E. Synthetic

106. In Western Europe, nearly half of all

congenital malformations occur in the children conceived in the period when pesticides were used extensively in the region. Those congenital conditions result from the following influence:
A. Teratogenic
B. Carcinogenic
C. Malignization
D. Mutagenic
E. Mechanical

107. A prolonged bleeding complicated tooth extraction in a patient with chronic persistent hepatitis. What is the cause of hemorrhagic syndrome?
A. Decreased production of thrombin
B. Increased production of thromboplastin
C. Decreased production of fibrin
D. Increased synthesis of fibrinogen
E. Increased fibrinolysis

108. A patient has been hospitalized with skull trauma. His examination established the absence of volitional movements of his head and neck muscles. What part of the brain can cause this effect if damaged?
A. Lower part of precentral gyrus
B. Lower part of postcentral gyrus
C. Upper part of precentral gyrus
D. Upper part of postcentral gyrus
E. Inferior frontal (Broca's) gyrus

109. A 12-year-old male patient has tetanic convulsions. Which gland function may be impaired in this case?
A. Glandulae parathyroidae
B. Hypophysis
C. Glandula thyroidea
D. Thymus
E. Glandula pinealis

110. A 45-year-old female patient has neurosis with irritability, insomnia, amotivational anxiety. What tranquilizer will be able to eliminate all symptoms of the disease?
A. Diazepam
B. Paracetamol
C. Piracetam
D. Caffeine-sodium benzoate
E. Levodopa

111. A patient presented to a hospital with complaints about quick fatigability and significant muscle weakness. Examination revealed an autoimmune disease that causes functional disorder of receptors in the neuromuscular synapses. This will result in the disturbed activity of the following mediator:
A. Acetylcholine
B. Noradrenaline
C. Dopamine
D. Serotonin
E. Glycine

112. Preparation of the endocrine gland demonstrates cortical and medullary substances divided with the connective tissue layer. In the cortical substance, parenchyma cells make up three zones: they form rounded clusters in the superficial zone, parallel strands in the middle one, and in the deep zone cell strands form a net-like structure. What gland is it?
A. Adrenal
B. Thyroid
C. Hypophysis
D. Epiphysis
E. Hypothalamus

113. Orthodontic treatment of a child proved to be ineffective due to the chronic mouth breathing since the nasal breathing is impaired. The hypertrophy of the following tonsils causes this:
A. Pharyngeal
B. Tubal
C. Lingual
D. Palatine
E. Palatine and tubal

114. A patient complains of a feeling of pain in his upper jaw and teeth. Physical

examinations reveal a painful feeling when the supraorbital incisure area is pressed. What nerve is damaged?
A. The 2-nd branch of trigeminal nerve
B. The 1-st branch of trigeminal nerve
C. The 3-rd branch of trigeminal nerve
D. Trochlear nerve
E. Facial nerve

115. A patient with mandibular osteomyelitis shows the signs of plexus dentalis inferior damage and innervation disruption of his mandibular teeth and gums. What nerve provides this innervation with its branches?
A. N. alveolaris inferior
B. N. maxillaris
C. N. lingualis
D. N. buccalis
E. N. facialis

116. A patient has some vesicles on the mucous membrane of the oral cavity, lips, and nose. A dentist suspected vesicular stomatitis. What analysis will allow confirming the diagnosis?
A. Recovery of virus from the vesicular fluid
B. Allergy test
C. Recovery of bacteria from the vesicular fluid
D. Contamination of animals with the vesicular fluid
E. Microscopy of the vesicular fluid

117. Periodontitis induces the development of lipid peroxidation in the periodontal tissues, as well as an increase in malondialdehyde and hydrogen peroxide concentration in the oral cavity. Which of the following enzymes provides antioxidant protection?
A. Catalase
B. Amylase
C. Maltase
D. Lactase
E. Invertase

118. Osteolaterism is characterized by a decrease in collagen strength caused by much less intensive formation of cross-links in the collagen fibrils. This phenomenon is caused by hypoactivity of the following enzyme:
A. Lysyl oxidase
B. Monoamino-oxidase
C. Prolyl hydroxylase
D. Lysyl hydroxylase
E. Collagenase

119. After the transfusion of the concentrated red blood cells, the patient developed posttransfusion shock. What is the leading mechanism of acute renal failure in this case?
A. Glomerular filtration disorder
B. Tubular reabsorption disorder
C. Tubular secretion disorder
D. Urinary excretion disorder
E. Impairment of the renal incretory function

120. A 50-year-old patient has been referred for treatment of neck lymphadenitis. His individual penicillin sensitivity was tested. In 30 seconds, full-body fever raised in the patient, and his arterial blood pressure dropped to 0 mm Hg, followed by cardiac arrest. Resuscitation was unsuccessful. Autopsy revealed acute venous hyperemia of viscera. Histological study revealed mast cells (tissue basocytes) degranulation in the skin (at the area of injections), myocardium, and lungs. What kind of hypersensitivity reaction occurred in the patient?
A. Anaphylactic
B. Delayed-type hypersensitivity
C. Complement-mediated cytotoxic
D. Immune complex-mediated
E. –

121. A young man has the following symptoms: purulent acne on the face; wrinkled, hyperemic skin; eyebrows and eyelashes are falling out. A doctor has made a diagnosis of demodicosis (demodectic mange).

What preventive measures can be recommended?
A. Maintaining personal hygiene
B. Protection from mite bites
C. Repellents
D. Processing premises with insecticides
E. Donor blood check-up

122. An oncological patient had been administered methotrexate. With time target cells of the tumor lost sensitivity to this drug. At the same time, the change in gene expression of the following enzyme is observed:
A. Dehydropholate reductase
B. Thiaminase
C. Deaminase
D. Pholate oxidase
E. Pholate decarboxylase

123. A patient has secretory dysfunction of the submandibular salivary gland. Which nerve is responsible for its vegetative innervation?
A. Chorda tympani
B. N.auriculotemporalis
C. N.mandibularis
D. N.petrosus major
E. N.petrosus minor

124. A patient complains of decreased ability to produce proper pressure with his masticatory muscles. What method of study allows checking the patient's complaint?
A. Gnathodynamometry
B. Dynamometry
C. Electromyography
D. Sphygmography
E. Masticatiography

125. A child is six years old. The permanent teeth have started to take the place of the primary teeth. What teeth are the first to emerge?
A. Lower first molars
B. Lower first premolars
C. Upper first premolars
D. Upper medial incisors
E. Lower canines

126. The examination of the oral mucosa revealed a small nodule with the papillary surface. Histological examination revealed conjugate papillary proliferations of stratified squamous epithelium without cellular atypism and underlying stroma represented by thin-walled vessels and loose connective tissue. What formation has developed in a patient?
A. Papilloma
B. Fibroma
C. Fibrolipoma
D. Epithelium hyperplasia
E. Basal cell carcinoma

127. A 9-year-old child has multiple lesions of the oral mucosa in the form of small painful hyperemic sores with a white deposit in the center; enlarged and painful submandibular lymph nodes. Microscopic examination of the affected region revealed a superficial defect covered by fibrin, edematic, and hyperemic submucosa with inflammatory infiltration. What is the most likely diagnosis?
A. Aphthous stomatitis
B. Hypertrophic stomatitis
C. Herpetic stomatitis
D. Catarrhal gingivitis
E. –

128. An irregular-shaped dense grey and white focus has appeared on the patient's oral cavity mucosa, raising above the mucosa surface. The patient considers it to be denture-caused damage of mucosa. Microscopy has revealed the following: hyperplasia, hyperkeratosis, parakeratosis, acanthosis of the stratified epithelium of mucosa; underlying connective tissue has lymphoplasmacytic infiltration. What pathology is it?
A. Leukoplakia
B. Candidosis

C. Ichthyosis
D. Syphilitic papula
E. Lupus erythematosus

129. After the restoration of maxillary incisors with artificial crowns, a 44-year-old female was found to have a brownish overgrowth in the form of a node of 15 mm in diameter. Histological study revealed that under the stratified squamous epithelium of gingiva, there was a connective tissue mass with numerous sinusoidal vessels, oval-shaped mononuclear cells forming osteoid substance, and polynuclear giant cells that destroyed the alveolar ridge of the upper jaw. What is the most likely diagnosis?
A. Giant cell epulis
B. Fibromatous epulis
C. Angiomatous epulis
D. Gingival fibromatosis
E. Eosinophilic granuloma

130. A rounded whitish-pink tumor node with a diameter of 6 cm has been removed from the uterine cavity. Microscopy revealed it to consist of chaotically arranged smooth muscle fibers with a large amount of stroma threaded through with nerves and blood vessels. What diagnosis is most probable?
A. Ffibromyoma
B. Granular cell (Abrikosov's) tumor
C. Desmoid
D. Hibernoma
E. Rhabdomyoma

131. Wilson's disease is a disorder of copper transport, which leads to the accumulation of this metal in brain and liver cells. It is associated with a disturbance in the synthesis of the following protein:
A. Ceruloplasmin
B. Metallothionein
C. Transcobalamin
D. Haptoglobin
E. Siderophilin

132. The patient's examination in a hospital specialized in diseases of the nervous system has revealed the absence of light-induced miosis. It is caused by damage of the following brain structures:
A. Vegetative nuclei of the 3rd pair of cranial nerves
B. Red nuclei of the mesencephalon
C. Reticular nuclei of the mesencephalon
D. Hypothalamus nuclei
E. Reticular nuclei of the medulla oblongata

133. A patient with pituitary tumor complains of increased daily diuresis (polyuria). Glucose concentration in blood plasma equals 4,8 mmol/l. What hormone can be the cause of this if its secretion is disturbed?
A. Vasopressin
B. Aldosterone
C. Natriuretic hormone
D. Insulin
E. Angiotensin I

134. During AB0 blood grouping by using coliclons (diagnostic monoclonal antibodies), haemagglutination did not occur with any of the coliclons. What is the blood group of the patient under examination?
A. 0 (I)
B. A (II)
C. B (III)
D. AB (IV)
E. –

135. A newborn boy has been diagnosed with hydrocephalus. Doctors consider it to be caused by teratogenic factors. What germ layers are affected by teratogen?
A. Ectoderm
B. All embryo germ layers
C. Endoderm and mesoderm
D. Endoderm
E. Mesoderm

136. During ventricular systole, the muscle

does not respond to additional stimulation because it is in the phase of:
A. Absolute adiaphoria
B. Relative adiaphoria
C. Increased excitability
D. Subnormal excitability
E. –

137. A patient is diagnosed with acute morphine hydrochloride poisoning. Choose the oxidant drug to be prescribed for gastric lavage.
A. Potassium permanganate
B. Chloramine
C. Sulfocamphocainum (Procaine + Sulfocamphoric acid)
D. Cerigel
E. Chlorhexidine digluconate

138. After arriving in the polar region, researchers from Australia have complained of nervous disorders, loss of appetite, aggravation of chronic diseases for six months. What process has been disrupted in extreme conditions?
A. Adaptation
B. Tolerance
C. Tachyphylaxis
D. Stress
E. Reparation

139. Microelectrode technique allowed registering a potential following "all-or-none" law and being able of undecremental spreading. Specify this potential:
A. Action potential
B. Excitatory postsynaptic potential
C. Rest potential
D. Inhibitory postsynaptic potential
E. Receptor potential

140. A woman with A (II), Rh-negative blood had a child with B (III), Rh-positive blood. The child was diagnosed with congenital anemia of newborns. What is the most likely cause of its development?
A. Rhesus incompatibility
B. Hereditary chromosomal pathology
C. AB0-incompatibility
D. Intrauterine intoxication
E. Intrauterine infection

141. Throughout a year, a 37-year-old woman periodically got infectious diseases of bacterial origin, their course was extremely lingering, remissions were short. Examination revealed a low level of major classes of immunoglobulins. The direct cause of this phenomenon may be the following cell dysfunction:
A. Plasmocytes
B. Phagocytes
C. Neutrophils
D. Macrophages
E. Lymphocytes

142. A patient is diagnosed with pancreatic diabetes with associated hyperglycemia. Glycemia rate can be assessed retrospectively (4-8 weeks prior to examination) by measuring the concentration of the following blood plasma protein:
A. Glycated hemoglobin
B. Albumin
C. Fibrinogen
D. C-reactive protein
E. Ceruloplasmin

143. When examining a patient with a suspicion of food toxic infection, a doctor on duty has detected symptoms characteristic of botulism. The patient named the meals he had eaten the day before. What is the most probable cause of infection?
A. Homemade canned meat
B. Custard pastry from a private bakery
C. Sour cream from a local dairy factory
D. Strawberries from a suburban vegetable garden
E. Fried eggs

144. Histological preparation of multirooted tooth reveals polygonal cells with processes in the root bifurcation area. What

cells and what dental tissues are characterized by these morphologic features?
A. Cementocytes, cement
B. Odontoblasts, enamel
C. Enameloblasts, enamel
D. Fibroblasts, pulp
E. Cementocytes, dentine

145. A 26-year-old woman at 40 weeks' gestation was admitted to the maternity ward. Examination revealed that the cervix was open, but uterine contractions were absent. The doctor gave her a hormonal drug to induce labor. Specify this drug:
A. Oxytocin
B. Hydrocortisone
C. Estrone
D. Testosterone
E. ACTH

146. A patient consulted an immunologist about diarrhea, weight loss within several months, low-grade fever, enlarged lymph nodes. The doctor suspected HIV infection. What immunocompetent cells must be studied in the first place?
A. Helper T-lymphocytes
B. Suppressor T-lymphocytes
C. B-lymphocytes
D. Monocytes
E. Plasma cells

147. Pyrogenal administered to a rabbit, in the course of an experiment, increasing its body temperature. What substance of those named below acts as a secondary pyrogen that is a part of a fever-inducing mechanism?
A. Interleukin 1
B. Pseudomonas polysaccharide (Piromen)
C. Histamine
D. Bradykinin
E. Immunoglobulin

148. Phenylketonuria is a disease caused by a recessive gene that is localized in the autosome. The parents are heterozygous for this gene. They already have two sons with phenylketonuria and one healthy daughter. What is the probability that their fourth child will have the disease too?
A. 25 %
B. 0 %
C. 50 %
D. 75 %
E. 100 %

149. X-chromatin test of somatic cells is used for quick diagnostics of hereditary diseases caused by variations of sex chromosomes number. What is the karyotype of a male, whose cells mostly contain one X-chromatin body?
A. 47, XXY
B. 45, X0
C. 46, XY
D. 48, XXXY
E. 49, XXXXY

150. A 32-year-old patient has *B*2 hypovitaminosis. The specific symptoms such as epithelial, mucosal, skin, and corneal lesions are most likely to be caused by the deficiency of:
A. Flavin coenzymes
B. Cytochrome a1
C. Cytochrome oxidase
D. Cytochrome b
E. Cytochrome c

151. A female patient suffering from coronary artery disease has been prescribed amiodarone that has antianginal action. What other action does this drug have?
A. Antiarrhythmic
B. Analgesic
C. Local anesthetic
D. Anti-inflammatory
E. Anti-shock

152. In order to prevent massive hemorrhage in the region of the oral cavity floor, it is required to ligate an artery that is located within Pirogov's triangle. What artery is

it?
A. Lingual artery
B. Superior thyroid artery
C. Facial artery
D. Ascending pharyngeal artery
E. Maxillary artery

153. Histological study of a micro slide of human skin found only dense irregular connective tissue. Which layer of this organ was analyzed?
A. Reticular dermis
B. Papillary dermis
C. Subcutaneous adipose tissue
D. Epidermis
E. Basal layer of epidermis

154. A patient has been preliminarily diagnosed with paragonimiasis. Lung flukes cause this disease. The causative agent entered into the patient's body through:
A. Eating half-cooked lobsters and crabs
B. Eating unwashed vegetables
C. Contact with an infected cat
D. Eating half-cooked or dried fish
E. Drinking raw water from open reservoirs

155. A shepherd who has tended sheep together with dogs consulted a doctor about pain in his right subcostal area, nausea, vomiting. Roentgenoscopy revealed a tumour-like formation. What kind of helminthiasis might be suspected?
A. Echinococcosis
B. Ascaridiasis
C. Enterobiasis
D. Taeniarhynchosis
E. Taeniasis

156. A preparation of intestine reveals complex branching tubuloalveolar glands with their ends in the submucous layer. What organ is it?
A. Duodenum
B. Jejunum
C. Ileum
D. Colon
E. Cecum

157. After examining the patient, the doctor recommended him to eliminate rich meat and vegetable broth, spices, smoked products from the diet, since the patient was found to have:
A. Increased secretion of hydrochloric acid by the stomach glands
B. Reduced secretion of hydrochloric acid by the stomach glands
C. Reduced motility of the gastrointestinal tract
D. Reduced salivation
E. Biliary dyskinesia

158. A 60-year-old patient has taken a drug to relieve angina pectoris attack; in several minutes, the pain felt in the breastbone area abated, but it was followed by the feeling of vertigo, headache, tinnitus, and hyperemia of the face. What drug has he taken?
A. Nitroglycerine
B. Validol
C. Nifedipine
D. Verapamil
E. Amiodarone

159. A young couple has a child with encephalopathy. A doctor determined this disease to be caused by mitochondrial DNA disorder. In what way are mitochondrial pathologies inherited?
A. From mother to all her children
B. From mother to son
C. From father to daughter
D. From father to son
E. From both parents to all their children

160. When examining a female patient, a doctor observed the following: misshapen auricles, elevated palate, teeth growth disorder; mental retardation; no disruption of reproductive function. The provisional diagnosis is the "super woman" syndrome. Point out the karyotype of this disease.
A. (47, XXX)

B. (47, XXY)
C. (47, YYY)
D. (47, XYY)
E. (45, X0)

161. A patient has temporal bone fracture caused by accident. What muscle functioning is disrupted?
A. M. masseter
B. M. temporalis
C. M. pterygoideus medialis
D. M. pterygoideus lateralis
E. M. risorius

162. Peripheral nerve trauma causes muscle atrophy; bones become porous and brittle; sores appear on skin and mucosa. What function of the nervous system is damaged?
A. Trophic
B. Motor
C. Sensory
D. Vegetative
E. Higher nervous activity

163. Diphtheria exotoxin had been treated with 0,3-0,4 % formalin and kept in a thermostat for 30 days at a temperature of 40*oC*. What preparation was obtained as a result of these manipulations?
A. Anatoxin
B. Antitoxin
C. Diagnosticum
D. Therapeutic serum
E. Diagnostic serum

164. A patient with acute cardiac failure has been taking cardiac glycoside drugs for a long time. He has developed the following symptoms: nausea, fatigue, extrasystole. What is the cause of these symptoms?
A. Material cumulation
B. Idiosyncrasy
C. Acquired tolerance
D. Functional cumulation
E. Drug addiction

165. Preventive examination of a 55- year-old patient revealed type II diabetes mellitus. An endocrinologist revealed an increase in body weight and liver enlargement. The man is a non-smoker and doesn't abuse alcohol but likes to have a good meal. Histological examination by means of diagnostic liver puncture revealed that the hepatocytes were enlarged mostly on the lobule periphery, their cytoplasm had transparent vacuoles showing positive reaction with sudan III. What liver pathology was revealed?
A. Fatty hepatosis
B. Acute viral hepatitis
C. Chronic viral hepatitis
D. Alcohol hepatitis
E. Portal liver cirrhosis

166. The squamous part of the temporal bone and the artery situated on its inner surface have been damaged as the result of an inflicted gunshot wound. What artery is it?
A. Middle collateral artery
B. Middle temporal artery
C. Superficial temporal artery
D. Anterior deep temporal artery
E. Posterior deep temporal artery

167. Activation of certain hemostasis system factors is done through calcium ions attachment. What structural component allows this attachment?
A. Gamma-carboxyglutamic acid
B. Gamma-aminobutyric acid
C. Gamma-oxybutyric acid
D. Hydroxyproline
E. Mono amino dicarboxylic acids

168. Tooth temperature increases during its preparation due to dental borer friction, which may cause painful sensations. What is the threshold of teeth thermal sensitivity?
A. 51-600 C
B. 41-500 C
C. 10-200 C
D. 21-300 C
E. 31-400 C

169. A patient suffering from pericarditis with rapid progression has developed acute cardiac tamponade. What regulation mechanism is most likely to compensate for this pathology?
A. Tachycardia
B. Heterometric
C. Homeometric
D. Inotropic effect of catecholamines
E. Vasoconstriction

170. A patient with an incised wound of trapezius muscle has been referred to a traumatology department. What cervical fascia forms the sheath of this muscle?
A. Lamina superficialis
B. Muscular part of lamina pretrachealis
C. Visceral part of lamina pretrachealis
D. Lamina prevertebralis
E. Vagina carotica

171. A 64-year-old male patient died with symptoms of acute cardiovascular failure. Autopsy results: the section of the anterior wall of the left ventricle showed a yellowish flaccid 1,5-2 cm focus surrounded by a reddish rim. The convoluted coronary arteries had lumen irregularly narrowed by 75 %. The vessel intima was thickened, dense, covered with whitish plaques, crunched when cut. What disease can you think of?
A. Acute myocardial infarction
B. Continuously recurrent myocardial infarction
C. Postinfarction cardiosclerosis
D. Microfocal cardiosclerosis
E. Recurrent myocardial infarction

172. A 36-year-old patient underwent tooth extraction at a dental clinic. After two weeks, the stratified squamous epithelium regenerated at this site. What organelles were involved in the restoration of the mucous membrane?
A. Ribosomes
B. Centrosomes
C. Postlysosomes
D. Smooth EPR
E. Mitochondria

173. A dentist has detected symptoms of parodontosis in a patient. What antiprotozoal drug should be prescribed?
A. Metronidazole
B. Levamisole
C. Griseofulvin
D. Mykoseptin
E. Furazolidone

174. A 36-year-old patient had had a traumatic brain injury, which caused a swallowing impairment. Which part of the brain was affected?
A. Medulla oblongata
B. Mesencephalon
C. Diencephalon
D. Reticular formation
E. Thalamus

175. A 43-year-old patient has acute pancreatitis with concomitant disruption of common bile duct patency. What condition can it result in?
A. Mechanical jaundice
B. Hemolytic jaundice
C. Hepatocellular jaundice
D. Hepatic coma
E. Portal hypertension

176. An inflammatory process in tissues is characterized by hyperemia and edema. What leukocytes situated in connective tissue provide for vasodilatation and increased blood vessel capacity under these conditions?
A. Basocytes
B. Neutrophils
C. Eosinophils
D. T-lymphocytes
E. B-lymphocytes

177. Postmortem examination of a patient with a long history of rheumatism revealed thickening and shortening of the mitral

valve leaflets with abundant thrombotic deposits. Histological examination of the valve leaflets confirmed sclerosis and revealed multiple foci of connective tissue disorganization in the form of mucoid and fibrinoid swelling, as well as deendothelization foci. Endothelium defects were covered with thrombotic deposits of 1-2 mm. What type of valvular endocarditis is the case?
A. Recurrent verrucous endocarditis
B. Acute verrucous endocarditis
C. Fibroplastic endocarditis
D. Diffuse valvulitis
E. Polypous-ulcerative endocarditis

178. Autopsy of a dead 6-year-old child revealed marked edema of the soft tissues of the neck and enlarged tonsils. Pharyngeal mucosa was covered with numerous dense whitish-yellow pellicles exposing deep ulcers after their removal. Histological examination of the pharyngeal mucosa revealed necrosis of the upper epithelial layers, impregnation of the mucous membrane with the fibrinous exudate, and moderate leukocyte infiltration. What infectious disease caused the death of the child?
A. Diphtheria
B. Parainfluenza
C. Scarlet fever
D. Whooping cough
E. Measles

179. A patient was suffering from primary tuberculosis five years ago. Radiography has revealed a sharply marginated nodular shadow with a diameter of 4 cm in the 2nd segment of the right lung. The focus was surgically removed. The histological study has revealed the following: the focus of caseous necrosis surrounded by the thick capsule of connective tissue. What kind of secondary tuberculosis has occurred in the patient?
A. Tuberculoma
B. Acute cavernous tuberculosis
C. Fibro-cavernous tuberculosis
D. Caseous pneumonia
E. Cirrhotic tuberculosis

180. When examining the child's oral cavity, a dentist has noticed the growth of the child's first permanent canines. How old is the child?
A. 13
B. 10
C. 9
D. 7
E. 6

181. Calcification of dental tissues is significantly influenced by osteocalcin protein which has an ability to bind calcium ions due to the presence of the following modified amino acid residues in the polypeptide chain:
A. γ-carbon glutamine
B. Alanine
C. γ-aminobutyric
D. Carboxy aspargine
E. δ-aminopropionic

182. A 47-year-old male patient consulted a dentist about difficult mouth opening (lockjaw). The patient has a history of a stab wound of the lower extremity. What infection can be manifested by these symptoms?
A. Tetanus
B. Brucellosis
C. Whooping cough
D. Anaerobic wound infection
E. Tularemia

183. An autopsy of the body of a 56-year-old man, who was suffering from secondary tuberculosis, has revealed large areas of sclerosis in the I-II segments of the right lung. Tissue surrounding affected areas is pale, soft, convex; crunches when cut; does not recede. Specify the changes occurring in the tissues surrounding sclerosis focus.
A. Focal emphysema

B. Bronchiectasis
C. Pneumothorax
D. Atelectasis
E. Abscess

184. Microscopy of dental plaque revealed unicellular organisms. Their cytoplasm had two distinct layers, barely visible core, wide pseudopodia. The patient is most likely to have:
A. Entamoeba gingivalis
B. Lamblia
C. Trichomonas tenax
D. Entamoeba histolytica
E. Entamoeba coli

185. The patient's condition after blood transfusion has been aggravated by post-transfusion shock. Name the type of allergic reaction causing this pathology.
A. Cytotoxic
B. Anaphylactic
C. Immune complex
D. Delayed-type hypersensitivity
E. Receptor-mediated

186. The patient's eye accommodation process has been disrupted. What muscle is damaged?
A. Musculus ciliaris
B. Musculus sphincter pupillae
C. Musculus dilatator pupillae
D. Musculus rectus superior
E. Musculus rectus inferior

187. A histological specimen represents an organ whose wall consists of the mucosa, submucosa, fibrocartilage, and adventitious cartilage. The organ is lined by pseudostratified ciliary epithelium, the muscular layer of the mucosa is absent, the submucosa contains seromucous glands. Hyaline cartilage C-rings are present. What organ has described morphological characteristics?
A. Trachea
B. Bronchiole
C. Secondary bronchus
D. Terminal bronchiole
E. Larynx

188. Continuous treatment of cancer patients with methotrexate over time reduces the target cell's sensitivity to the drug. In this case, gene amplification of the following enzyme is observed:
A. Dihydrofolate reductase
B. Thiaminase
C. Deaminase
D. Thioredoxin reductase Thioredoxin reductase
E. –

189. To conduct serum diagnostics of typhoid fever, a test is carried out, when diagnosticums of three types of microorganisms are being added into different solutions of patient's serum; then agglutinate formation is checked. Name the author of this kind of test.
A. Widal
B. Wassermann
C. Ouchterlony
D. Wright
E. Sachs-Witebsky

190. In the course of an experiment, researchers stimulate a branch of a sympathetic nerve that innervates heart. What changes in cardiac activity should be registered?
A. Increase in heart rate and heart force
B. Decrease in heart force
C. Increase in heart rate
D. Increase in heart force
E. Increase in arterial pressure

191. A patient has chronic rhinitis. Nasal cavity mucosa swelling causes disruption of the olfactory nerve receptors placed in the nasal cavity olfactory region. What formation allows for olfactory nerve endings to enter into anterior cranial fossa?
A. Lamina cribrosa os ethmoidale
B. Foramen ethmoidale anterior

C. Foramen ethmoidale posterior
D. Foramen sphenopalatinum
E. Foramen incisivum

192. The ability to divide is characteristic of prokaryotic and eukaryotic cells. Prokaryotic cell division is different from that of eukaryotic, but there is one molecular process that is the basis of both types of division. Name this process.
A. DNA replication
B. Transcription
C. Reparation
D. Translation
E. Gene amplification

193. An isolated heart of a mammal has had a diastolic arrest in the process of perfusion with an ion-rich solution. The solution had an excess of the following ions:
A. Potassium
B. Sodium
C. Chlorine
D. Magnesium
E. Calcium

194. A patient with hypoparathyreosis has multiple carious lesions of teeth. This pathology is caused by insufficiency of the following hormone:
A. Calcitonin
B. Thyroxin
C. Triiodothyronine
D. Thyroid-stimulating hormone
E. Somatotropin

195. As a result of a rapid change from horizontal to vertical body position, a 16-year-old girl lost consciousness. What is the reason for it?
A. Decreased venous return
B. Increased venous return
C. Heart rate decrease
D. Arterial pressure rise
E. –

196. A patient has a myocardial infarction. The first several hours of such medical condition will be characterized by a significant increase of activity of the following enzyme in his blood serum:
A. Creatine phosphokinase
B. Lactate dehydrogenase4
C. Aspartate aminotransferase
D. Lactate dehydrogenase5
E. Alanine-aminotransferase

197. A 54-year-old patient with viral hepatitis has the complication of hepatic coma caused by massive necrosis of liver epithelial cells. What kind of hepatic coma is it characteristic of?
A. Parenchymatous
B. Shunt
C. Mixed type
D. Porto-caval
E. Ketoacidotic

198. A 9-month-old infant is on bottle feeding. The formula used in feeding has insufficient content of vitamin *B*6. The infant has seizures possibly caused by a disruption in production of the following substance in the body:
A. Gamma-aminobutyric acid (GABA)
B. Serotonin
C. Histamine
D. Dopamine
E. β-alanine

199. Novocaine acts as an anesthetic by making nerve fibers unable to conduct stimulation. What mechanism of action regarding the membrane's permeability to ions does this drug have?
A. Sodium ion-selective channels blockade
B. Potassium ion-selective channels blockade
C. Calcium ion-selective channels blockade
D. Sodium-potassium pump blockade
E. Sodium-proton pump blockade

200. There is a 7-year-old child with complaints of cough, lacrimation, rhinitis, skin

plaints of cough, lacrimation, rhinitis, skin rash, photophobia, and three-day-long fever as high as 38*oC*. Physical examination has revealed the following: conjunctivitis; bright red maculopapular rash covering the skin of face, neck, and torso; hyperemic pharynx; serous purulent secretions from the nose; dry rales in the lungs. What is the most probable diagnosis?

A. Measles
B. Scarlet fever
C. Rubella
D. Adenovirus infection
E. Chickenpox

1. Carious cavities of a 29-year-old patient contain parasitic protozoa. It is determined that they relate to the Sarcodina class. Specify these single-celled organisms:
A. Entamoeba gingivalis
B. Entamoeba coli
C. Entamoeba histolutica
D. Amoeba proteus
E. Lamblia intestinalis

2. A puncture sample taken from the lymph node of a patient with a preliminary diagnosis of the protozoan disease has been investigated. The preparation was processed with Giemsa stain, and the following was detected: crescent-shaped bodies with pointed tips, blue cytoplasm, and red nuclei. What protozoa have been detected in the preparation?
A. Toxoplasma
B. Plasmodium malariae
C. Dermatotropic Leishmania
D. Viscerotropic Leishmania
E. Trypanosoma

3. It is necessary to perform urinary bladder catheterization of an adult man. Resistance to the catheter can occur in the following structure or part of the urethra:
A. Membranous part
B. Prostatic part
C. Spongiose part
D. External urethral orifice
E. Internal urethral orifice

4. A woman addressed a dentist with complaints of bruise and swelling around her eye. Anamnesis is as follows: several days prior, her 1st premolar tooth had been extracted, with infraorbital anesthesia administered; several days later, hematoma appeared in the area of foramen intraorbitale. Branch of the following artery was damaged:
A. Maxillary artery
B. Facial artery
C. Superficial temporal artery
D. Superior labial artery
E. Masseteric artery

5. A patient consulted a doctor about difficult chewing. On examination, he was found to have atrophy of the right temporal muscle and masticatory muscles. Upon opening the mouth, the patient's jaw deviates to the left. What nerve is affected?
A. Motor portion of the mandibular nerve
B. Facial
C. Inferior alveolar
D. Maxillary
E. Mandibulohyoid

6. Examination of a 23-year-old patient reveals that, when his tongue is protruded, its tip deviates to the side. This is caused by the dysfunction of the following tongue muscle:
A. Genioglossus
B. Hyoid
C. Superior longitudinal
D. Inferior longitudinal
E. Styloglossus

7. It is required to anesthetize the right lower molars. The proper injection site for the conduction anesthesia is:
A. The region of the right mandibular foramen
B. The gums to the right of the mandible
C. The region of the right mental foramen
D. The region of the suborbital foramen
E. The region of the oval foramen

8. A patient consulted a doctor about an inflammation of the ethmoid bone cells (ethmoiditis). Examination revealed the disorder of blood supply to the bone. Ethmoidal cells are normally supplied with blood through the branches of the following artery:
A. ophthalmica
A. infraorbitalis
A. facialis
A. cerebri anterior

A. transversa faciei

9. Due to a cranial trauma leading to damage of the eye socket superior wall, a patient has lost the ability to lift the upper eyelid and look upwards. What nerve is most likely damaged?
B. R. superior n.oculumotorii
C. R. inferior n.oculumotorii
D. N. trochlearis
E. N. abducens
F. N. ophthalmicus

10. A woman with a tumour of the pancreas has developed mechanic jaundice due to compression of a bile-excreting duct. Which duct is compressed?
A. Ductus choledochus
B. Ductus cysticus
C. Ductus hepaticus communis
D. Ductus hepaticus dexter
E. Ductus hepaticus sinister

11. On the longitudinal section of a tooth, there are tubules visible in the dentin. What is inside these tubules?
A. Processes of odontoblasts
B. Processes of ameloblasts
C. Odontoblast bodies
D. Fibroblasts
E. Elastic fibers

12. The study of the histological specimen of a baby's primary tooth revealed hypoplasia (underdevelopment) of enamel. This abnormality is caused by the disruptions in the activity of the following cells:
A. Inner enamel epithelium
B. Pulp cells of the enamel organ
C. Outer enamel epithelium
D. Cells of the stratum intermedium of the enamel organ
E. Odontoblasts

13. The proliferation of connective tissue in the parenchyma of the liver (fibrosis) caused by chronic diseases is typically accompanied by an impairment of blood circulation in the classic lobules. What is the direction of blood flow in these lobules?
A. From the periphery to the center
B. From the center to the periphery
C. Around the lobule
D. From the top to the base
E. From the base to the top

14. A histological preparation shows organ, where lymphocytes form three types of lymphoid structures: lymph nodules, medullary cords, and lymphatic sinuses. What organ is it?
A. Lymph node
B. Spleen
C. Thymus
D. Tonsil
E. Redbone marrow

15. During the formation of mantle dentin in a deciduous tooth, there occurred a disruption of odontoblast secretory activity. Such disruption will affect the formation of the following fibers:
A. Von Korff's radial collagen fibers
B. Reticular fibers
C. Elastic fibers
D. Ebner's tangential collagen fibers
E. Nerve fibers

16. A micro specimen of the heart shows rectangular cells from 50 to 120 micrometer large with the central position of the nucleus and developed myofibrils. Intercalated discs connect the cells. These cells are responsible for the following function:
A. Function of heart contractions
B. Function of impulse conduction
C. Endocrine
D. Protective
E. Regeneratory

17. Histological investigation of a 40-year-

old man's thymus revealed the following: decreased part of parenchymatous elements, increased part of adipose and loose connective tissues, high concentration of thymic bodies with total organ weight remaining the same. Name this phenomenon:
A. Age-related thymic involution
B. Accidental thymic involution
C. Thymic hypotrophy
D. Thymic dystrophy
E. Thymic atrophy

18. A heart micro slide demonstrates cells in the shape of pale chords, which have few myofibrilla, glycogen inclusions, and eccentric nuclei. Name these cells:
A. Purkinje's fibers
B. Leading pacemaker cells
C. Leading transitional cells
D. Endocrine cells
E. Contractile cells

19. In the preparation of a 10-day-old human embryo, there are two contacting sacs visible (amniotic and vitelline). Name the structure situated at the place of the contact:
A. Embryonic shield
B. Fundus of the amniotic sac
C. Fornix of the vitelline sac
D. Amniotic pedicle
E. Extraembryonic mesoderm

20. A patient has petechial hemorrhages on the gums, hard and soft palate, buccal mucosa. This is caused by the dysfunction of the following blood corpuscles:
A. Platelets
B. Eosinophils
C. Monocytes
D. Lymphocytes
E. Erythrocytes

21. A patient with gastric juice hypersecretion has been recommended to exclude from the diet rich broths and vegetable infused water. A doctor recommended it because these food products stimulate the production of the following hormone:
A. Gastrin
B. Secretin
C. Cholecystokinin
D. Somatostatin
E. Neurotensin

22. After a hemorrhage into the brainstem, a patient has lost reflex of myosis as a reaction to increasing of illumination. What structure was damaged?
A. Vegetative nuclei of oculomotor nerve
B. Lateral reticular nuclei
C. Medial reticular nuclei
D. Red nuclei
E. Black substance

23. An oculist detected increased time of darkness adaptation of a patient's eye. What vitamin deficiency can cause such symptoms?
A. A
B. E
C. C
D. K
E. D

24. Examination of a patient revealed dermatitis, diarrhea, dementia. What vitamin deficiency is the cause of this condition?
A. Nicotinamide
B. Ascorbic acid
C. Folic acid
D. Biotin
E. Rutin

25. A woman has scalded her hand with boiling water. The affected area of her skin became red, swollen, and painful. The accumulation of the following substance causes this effect:
A. Histamine
B. Lysine

C. Thiamine
D. Glutamine
E. Asparagine

26. Various diseases cause a sharp increase of active oxygen, thus leading to cell membranes destruction. Antioxidants are used to prevent it from happening. The most potent natural antioxidant is:
A. α-tocopherol
B. Glucose
C. Vitamin D
D. Fatty acids
E. Glycerol

27. A pregnant woman developed severe toxemia with exhausting recurrent vomiting throughout a day. By the end of the day, she developed tetanic convulsions and bodily dehydration. The following type of acid-base disbalance caused the described changes:
A. Nongaseous excretory alkalosis
B. Gaseous alkalosis
C. Gaseous acidosis
D. Nongaseous metabolic acidosis
E. Nongaseous excretory acidosis

28. A 49-year-old patient was found to have a disproportionate enlargement of hands, feet, nose, ears, superciliary arches, and cheekbones. The blood test revealed hyperglycemia, impaired glucose tolerance. What is the most likely cause of this pathology development?
A. Hypersecretion of growth hormone
B. Posterior pituitary hormone hypersecretion
C. Insulin hyposecretion
D. Vasopressin hyposecretion
E. Glucocorticoid hypersecretion

29. A patient suffers from the mutation of a gene that corresponds with hemoglobin synthesis. This condition led to the development of the sickle-cell disease. Name the pathological hemoglobin characteristic of this disease:
A. HbS
B. HbA
C. HbF
D. HbA1
E. Bart-Hb

30. A patient who had suffered severe blood loss three days ago underwent a blood test. The following data were obtained in leukogram: leukocytes - 12 109/l, basophils – 0, eosinophils – 3 myelocytes – 0, juvenile – 3, stab neutrophils – 12, segmented neutrophils – 62, lymphocytes – 16, monocytes – 4. What change of leukocyte content occurred in this case?
A. Neutrophilia with regenerative left-shift
B. Neutrophilia with degenerative left-shift
C. Neutrophilia with right-shift
D. Absolute lymphopenia
E. Absolute monocytopenia

31. After the traumatic tooth extraction, a patient is complaining of severe dull poorly -localized pain in the gingiva, body temperature rises up to 37, 5oC. The patient has been diagnosed with alveolitis. Specify the kind of a pain in this patient:
A. Protopathic
B. Epicritic
C. Visceral
D. Heterotopic
E. Phantom

32. Due to recurring vomiting, a patient has lost a significant amount of gastric juice, which led to the development of acid-base dysbalance. What type of acid-base dysbalance has developed?
A. Nongaseous alkalosis
B. Gaseous acidosis
C. Nongaseous acidosis
D. Gaseous alkalosis
E. Metabolic acidosis

33. Microscopy of an extracted tooth has

33. Microscopy of an extracted tooth has revealed a focus of enamel destruction at the dentin enamel junction. Within this focus accumulation of microorganisms occurs; calcium salts disappear from enamel columns; intercolumn substance and enamel columns are partially destroyed. What diagnosis is the most likely?
A. Superficial caries
B. Median caries
C. Deep caries
D. Fluorosis
E. Cemental caries

34. A patient with a long history of chronic periodontitis underwent removal of a maxillary cyst located at the root of the affected tooth. Microscopy shows that the bone wall is made up of fibrous tissue infiltrated by lymphocytes and plasma cells. The inner surface of the cyst is covered with stratified squamous epithelium with no signs of keratinization. What is the most likely diagnosis?
A. Radicular cyst
B. Follicular cyst
C. Primordial cyst
D. Eosinophilic granuloma
E. Gingival fibromatosis

35. An autopsy of the body of an older man, who was suffering from acute intestinal disorder during his last two weeks of life, has revealed the following change in the rectum and sigmoid colon: brown and green film covering the mucosa is detected. The intestinal wall is thickened; the cavity sharply narrows down. Microscopy reveals mucosa necrosis of varying depth, necrotic tissue is pierced through with fibrin threads, leucocytic infiltration is observed. What diagnosis is the most probable?
A. Fibrinous colitis
B. Catharrhal colon
C. Ulcerative colitis
D. Follicular colitis
E. –

36. The macroscopic examination of lung tissue revealed areas of high airiness with small bubbles. Histological examination revealed thinning and rupture of alveolar septa accompanied by the formation of large diversiform cavities. What disease was revealed in the lung?
A. Pulmonary emphysema
B. Multiple bronchiectasis
C. Cavernous tuberculosis
D. Chronic bronchitis
E. Fibrosing alveolitis

37. A 28-year-old patient had been diagnosed with a multifragmental fracture of the right hip. On the third day after the injury, he began to complain of pain in the right side of the chest, difficult respiration. One day later, the patient died of progressive heart and respiratory failure. Histological study of the pulmonary and cerebral blood vessels revealed orange sudanophilic droplets that completely obstructed the vessels of the microvasculature. What complication caused the death of the patient?
A. Fat embolism
B. Gas embolism
C. Drug-induced embolism
D. Microbial embolism
E. Thromboembolism

38. Autopsy of a man who had tuberculosis revealed a 3x2 cm large cavity in the superior lobe of the right lung. The cavity was interconnected with a bronchus, its wall was dense and consisted of three layers: the internal layer was pyogenic, the middle layer was composed of tuberculous granulation tissue, and the external one consisted of connective tissue. What is the most likely diagnosis?
A. Fibrous cavernous tuberculosis
B. Fibrous focal tuberculosis
C. Tuberculoma

D. Acute focal tuberculosis
E. Acute cavernous tuberculosis

39. Autopsy of a man who died from ethylene glycol poisoning revealed that his kidneys are a little bit enlarged, edematic; their capsule can be easily removed. The cortical substance is broad and light-grey. The medullary substance is dark-red. What pathology had this man?
A. Necrotic nephrosis
B. Acute pyelonephritis
C. Acute glomerulonephritis
D. Acute tubular-interstitial nephritis
E. Lipoid nephrosis

40. While studying blood and mucus samples from the nasopharynx, a bacteriologist took certain measures to conserve the pathogens in the material. The bacterioscopic study revealed the presence of gram-negative cocci resembling coffee beans and arranged in pairs or tetrads. Name the pathogen that was isolated by the bacteriologist:
A. Neisseria meningitidis
B. Staphilococcus aureus
C. Neisseria gonorrhoeae
D. Moraxella lacunata
E. Acinetobacter calcoaceticus

41. In a micro slide of the patient's regional lymph node stained with the Giemsa method, a doctor detected thin microorganisms with 12-14 uniform tendrils with pointed tips, 10-13 micrometers in length, pale pink in color. In this case, they can be identified as infectious agents of the following disease:
A. Syphilis
B. Trypanosomiasis
C. Leptospirosis
D. Relapsing fever
E. Leishmaniasis

42. There are several cases of children from boarding school suffering from sore throat. Microscopy of tonsil smears stained according to the Neisser method has revealed thin yellow bacilli with dark brown grains on their ends situated in the shape of the Roman numeral five. What infection can be suspected in this case?
A. Diphtheria
B. Infectious mononucleosis
C. Listeriosis
D. Tonsillitis
E. Scarlet fever

43. In a maternity hospital, a newborn should receive vaccination against tuberculosis. What vaccine should be chosen?
A. BCG vaccine
B. STI vaccine
C. EV vaccine
D. DPT vaccine
E. Tuberculin

44. A patient had been provisionally diagnosed with syphilis. A laboratory assistant took the blood serum for an immunologic test based on the detection of antibodies preventing the movement of treponemes and causing their death. What reaction was used to make the diagnosis?
A. Immobilization
B. Complement binding
C. Agglutination
D. Precipitation
E. Neutralization

45. A 50-year-old patient with a hypertensive crisis had been administered magnesium sulfate, which led to an abrupt decrease in blood pressure. The side effects of magnesium sulfate can be prevented if the following drug is administered:
A. Calcium chloride
B. Potassium chloride
C. Trilon B
D. Sodium bromide
E. Sodium sulfate

46. A schizophrenic patient has been prescribed aminazine. What pharmacodynamic action of this drug justifies its prescription in this case?
A. Antipsychotic
B. Antiemetic
C. Hypothermic
D. Muscle relaxant
E. Hypotensive

47. A patient has a slowly healing fracture. What medicine can be used to accelerate the formation of a connective tissue matrix?
A. Methyluracil
B. Prednisolone
C. Cyclophosphan
D. Methotrexate
E. Cyclosporine

48. A 17-year-old girl has attempted to commit suicide by overdosing on phenobarbital. Upon arrival at the site, an emergency doctor urgently performed gastric lavage on the patient and introduced bemegride and solution of sodium hydrocarbonate intravenously. The doctor introduced sodium hydrocarbonate to:
A. Increase renal excretion of phenobarbital
B. Stimulate respiration
C. Normalise blood pressure
D. Inactivate phenobarbital
E. Wake up the patient

49. Genetic information is stored in DNA but does not participate directly in protein synthesis within DNA cells. What process ensures the transfer of genetic information into the polypeptide chain?
A. Translation
B. Formation of rRNA
C. Formation of tRNA
D. Formation of iRNA
E. Replication

50. A woman who had been consuming alcohol excessively during her pregnancy had a child with a cleft palate and upper lip. These presentations are indicative of some chromosomal anomalies. What process do they result from?
A. Teratogenesis
B. Carcinogenesis
C. Mutagenesis
D. Phylogenesis
E. Ontogenesis

51. A 67-year-old patient has ordered a full functional denture. It was necessary to extract the left upper canine. After infraorbital anesthesia, the patient presented with a progressing hematoma in the frontal part of the face. The patient was found to have an injury of an artery that is the branch of:
A. maxillaris
A. facialis
A. temporalis superficialis
A. ophthalmica
A. labialis superior

52. A patient has sustained a traumatic injury of the greater pectoral muscle. This resulted in a decrease of:
B. Inspiratory reserve volume
C. Expiratory reserve volume
D. Tidal volume
E. Residual volume
F. Functional residual lung capacity

53. A 53-year-old patient with a long history of nephrolithiasis underwent nephrectomy. The kidney resembles a thin-walled sac filled with urine. Renal parenchyma is atrophied. Specify this complication of nephrolithiasis:
A. Hydronephrosis
B. Pyelonephritis
C. Pyonephrosis
D. Multicystic kidney disease
E. Nephrosclerosis

54. The contents of vesicles that appeared on the mucous membrane of a patient with variola have been sent to a virological

variola have been sent to a virological laboratory. Which of the listed changes were revealed during the smear microscopy?
A. Paschen bodies
B. Babes-Negri bodies
C. Guarnieri bodies
D. Babes-Ernst bodies
E. Syncytium

55. A child with signs of rickets has been prescribed a certain liposoluble vitamin drug by pediatrician and dentist. This drug affects the metabolism of phosphorus and calcium in the body and facilitates calcium accumulation in bone tissue and dentine. If its content in the body is insufficient, there develop disruptions of the ossification process, dental structure, and occlusion. Name this drug:
A. Ergocalciferol
B. Retinol acetate
C. Tocopherol acetate
D. Menadione (Vicasolum)
E. Thyroidin

56. During a bacteriological examination of the purulent discharge obtained from a postoperative wound, an inoculation on meat infusion agar has been performed. The inoculation has resulted in large colorless mucous colonies that, in 24 hours with exposure to sunlight, developed green-blue pigmentation and the smell of honey or jasmine. Bacterioscopy revealed gram-negative lophotrichea. What bacterial culture is contained in purulent discharge?
A. Pseudomonas aeruginosa
B. Proteus vulgaris
C. Klebsiella osaenae
D. Streptomyces griseus
E. Brucella abortus

57. Due to a stroke (cerebral hemorrhage), a patient has lost the ability of voluntary movement of the head and neck muscles. Brain examination revealed the hematoma to be situated within the genu of the internal capsule. What conduction pathway is damaged?
A. Tr.cortico-nuclearis
B. Tr.cortico-spinalis
C. Tr.cortico-thalamicus
D. Tr.cortico-fronto-pontinus
E. Tr.thalamo-corticalis

58. A woman presents with ovarian hyperemia, increased permeability of the blood-follicle barrier with the development of edema, infiltration of the follicle wall with segmental leukocytes. The follicle is large in volume. Its wall is thickened. The described situation is typical for the following period of the sex cycle:
A. Preovulatory stage
B. Ovulation
C. Menstrual period
D. Postmenstrual period
E. Period of relative rest

59. The total number of leukocytes in the patient's blood is 90 109/l. Leukogram: eosinophils – 0 %, basophils – 0 %, juvenile – 0 %, stab neutrophils – 2 %, segmented neutrophils – 20 %, lymphoblasts - 1 %, prolymphocytes – 2 %, lymphocytes – 70 %, monocytes – 5 %, Botkin-Gumprecht cells. Clinical examination revealed enlarged cervical and submandibular lymph nodes. Such clinical presentations are typical of the following pathology:
A. Chronic lympholeukosis
B. Acute lympholeukosis
C. Lymphogranulomatosis
D. Infectious mononucleosis
E. Chronic myeloleukosis

60. A patient has a history of chronic heart failure. Which of the following hemodynamic parameters is a major symptom of cardiac decompensation development?
A. Decreased stroke volume

B. Tachycardia development
C. Tonogenic dilatation
D. Increased peripheral vascular resistance
E. Increased central venous pressure

61. After serious psychoemotional stress, a 48-year-old patient suddenly developed acute heartache irradiating to the left arm. Nitroglycerine relieved the pain attack after 10 minutes. What is the leading pathogenetic mechanism of this process development?
A. Spasm of coronary arteries
B. Dilatation of peripheral vessels
C. Obstruction of coronary vessels
D. Compression of coronary vessels
E. Increase in myocardial oxygen consumption

62. A patient with chronic hepatitis complains of increased sensitivity to barbiturates that previously induced no symptoms of intoxication. What hepatic function is disrupted and primarily responsible for such a reaction in this patient?
A. Metabolic
B. Bilification
C. Hemodynamic
D. Hemopoietic
E. Phagocytic

63. Having completed work in a laboratory, a student must tidy up the workspace, perform disinfection of the workbench and tools. What chemicals should be used for disinfection?
A. Chloramine
B. Hydrochloric acid
C. Formalin
D. Chloroform
E. Ether

64. Histological preparation of the cerebellum transverse section shows a large number of multipolar neurons in the grey matter. What morphological feature allows identifying them as multipolar?
A. Number of cellular processes
B. Length of cellular processes
C. Shape of axon terminals
D. Shape of perikaryon
E. Cell size

65. A patient is diagnosed with seborrheic dermatitis caused by vitamin H (biotin) deficiency. Observed is activity disruption of the following enzyme:
A. Acetyl-CoA carboxylase
B. Pyruvate decarboxylase
C. Alcohol dehydrogenase
D. Aminotranspherases
E. Carbamoyl phosphate synthetase

66. A 56-year-old woman is registered with a psychoneurological dispensary due to her suffering from epilepsy, specifically, minor attacks (optimal). What drug is the most efficient in this case?
A. Sodium valproate
B. Phenobarbital
C. Trihexyphenidyl
D. Levodopa
E. Phenytoin

67. The glucose content of blood keeps at a sufficient level after one week of starvation. Is it caused by activation of the following process:
A. Gluconeogenesis
B. Glycolysis
C. Glycogenolysis
D. Tricarboxylic acid cycle
E. Glycogen phosphorolysis

68. A 60-year-old patient with a history of bronchial asthma has had several attacks during the day. What is the optimal drug to be used for attack prevention?
A. Salbutamol
B. Isadrinum
C. Adrenaline hydrochloride
D. Dobutamine
E. Methacinum

69. In the armpits of a patient, there are small (1-1,5 mm), dorsoventrally flattened, wingless, blood-sucking insects. Their larvae developed in the armpits too. What disease is caused by these insects?
A. Phthiriasis
B. Sleeping sickness
C. Chagas' disease
D. Plague
E. Relapsing fever

70. A student, who unexpectedly met his girlfriend, developed an increase in systemic arterial pressure. This pressure change was caused by the intensified realization of the following reflexes:
A. Conditional sympathetic
B. Conditional parasympathetic
C. Conditional sympathetic and parasympathetic
D. Unconditional parasympathetic
E. Unconditional sympathetic

71. After the exposure to ionizing radiation, a person was found to have a decreased blood granulocyte level. What mechanism underlies these changes?
A. Leikopoiesis inhibition
B. Increased passage of granulocytes into the tissues
C. Autoimmune process development
D. Increased disintegration of leucocytes
E. Disrupted release of mature leukocytes from the bone marrow

72. A patient with acute retention of urine has been brought to an admission room. During the examination, a doctor found out that the patient has urethral obturation caused by the pathology of the surrounding organ. Name this organ.
A. Prostate
B. Testicle
C. Seminal vesicle
D. Spermatic cord
E. Epididymis

73. A connective tissue preparation stained with hematoxylin-eosin shows isogenous cell groups surrounded with basophilic intercellular substance. No fibrous structure can be detected. What type of connective tissue is it?
A. Hyaline cartilage tissue
B. Elastic cartilage tissue
C. Dense fibrous tissue
D. Loose fibrous tissue
E. Splenial bone tissue

74. What factor results in the maximal dilation of the gemomicrocirculatory pathway vessels and their increased permeability?
A. Histamine
B. Endothelin
C. Vasopressin
D. Noradrenaline
E. Serotonin

75. A 46-year-old patient consulted an oculist about drooping of the upper eyelid. On examination, he was diagnosed with a brain tumor. The pathological process must have affected the nuclei of the following pair of cranial nerves:
A. III
B. II
C. IV
D. VI
E. VII

76. A 36-year-old patient consulted an ophthalmologist about eye ache. The examination revealed the erosion of the cornea, specifically, the lack of superficial and spinous layers of the epithelium. What cells will provide regeneration of the damaged epithelium?
A. Cells of the stratum basale
B. Cells of the stratum corneum
C. Cells of the stratum granulosum
D. Cells of the stratum lucidum
E. Cell of the stratum superficiale

77. On the 4th day of treatment with diclofenac sodium, a 55-year-old patient has developed gastric hemorrhage due to an ulcer appearing on the gastric mucosa. Ulcerogenic action of this drug is caused by decreased secretion of:
A. Prostaglandin E2
B. Leukotriene
C. Prostaglandin E1
D. Cyclic endoperoxides
E. Thromboxane

78. A 43-year-old woman complains of weight loss, hyperhidrosis, low-grade fever, increased irritability. She has been found to have hyperfunction of the sympathetic-adrenal system and basal metabolism. These disorders can be caused by hypersecretion of the following hormone:
A. Thyroxine
B. Somatotropin
C. Corticotropin
D. Insulin
E. Aldosterone

79. During examination a patient presents with the following: hypertrophy and inflammation of lymphoid tissue, mucosa swelling between the arches of the soft palate. What tonsil is situated there?
A. Tonsilla palatina
B. Tonsilla pharyngealis
C. Tonsilla tubaria
D. Tonsilla lingualis
E. –

80. The cytochemical investigation has revealed a high content of hydrolytic enzymes in cytoplasm. This phenomenon indicates the high activity of the following organelles:
A. Lysosomes
B. Cytocentrum
C. Endoplasmic reticulum
D. Polysomes
E. Mitochondria

81. A patient suffering from parkinsonism has been prescribed levodopa, which resulted in rapid improvement of the patient's condition. What mechanism of action is characteristic of this drug?
A. Stimulation of dopamine synthesis
B. Block of muscarinic receptors
C. Stimulation of dopamine receptors
D. Anticholinesterase action
E. Stimulation of muscarinic receptors

82. A blood test was performed for a patient with allergic rhinitis. Blood smear stained after Romanowsky reveals a large number of cells with the following structure: segmented nucleus consists of 2-3 segments; cytoplasm is filled with bright-pink oxyphil granularity; granules are large. Name these cells:
A. Eosinophils
B. Lymphocytes
C. Monocytes
D. Basocytes
E. Neutrophils

83. For several days a 55-year-old woman has been suffering from pain attacks in the right upper quadrant after eating fatty foods. Visually, there is yellowness of sclera and skin. The patient has an acholic stool, beer-colored urine. What substance present in the patient's urine causes its dark color?
A. Conjugated bilirubin
B. Ketone bodies
C. Unconjugated bilrubin
D. Stercobilin
E. Bilirubin glucuronides

84. A patient with diabetes mellitus has been delivered to a hospital unconscious. BP is low, Kussmaul's respiration is observed; the smell of acetone can be detected from the patient's mouth. What mechanism is leading in the coma development in this case?
A. Accumulation of ketone bodies in blood

blood
B. Accumulation of potassium ions
C. Accumulation of sodium ions
D. Accumulation of chlorine ions
E. Accumulation of urea

85. A 45-year-old woman has addressed a doctor with complaints of rapid mood swings, tearfulness, apathy. Antidepressants prescribed for her treatment are monoamine oxidase inhibitors. These drugs have a certain effect on catecholamines, which results in their medicinal action. Name this effect:
A. Increased concentration
B. Increased deaminization
C. Decreased concentration
D. Neutralization activation
E. Inhibition of back transfer

86. Pupil dilation occurs when a person steps from a light room into a dark one. What reflex causes such a reaction?
Sympathetic unconditioned reflex
Sympathetic conditioned reflex
Metasympathetic reflex
Parasympathetic unconditioned reflex
Parasympathetic conditioned reflex

87. A 49-year-old man with myocardial infarction has been admitted to a cardiology department. What changes in the peripheral blood cells are induced by the necrotic changes in the myocardium?
A. Neutrophilic leukocytosis
B. Monocytosis
C. Eosinophilia
D. Thrombocytopenia
E. Lymphopenia

88. A patient with limb fracture should be prescribed a depolarizing muscle relaxant for a brief surgical invasion. Name this drug:
A. Dithylinum
B. Tubocurarin chloride
C. Cytisinum (Cytitonum)
D. Atropine sulfate
E. Azamethonium bromide (Pentaminum)

89. In the area that is the epicenter of the registered rabies cases among wild animals, a 43-year-old man arrived at a clinic and claimed to have been bitten by a stray dog. He was given a course of anti-rabies vaccine. This preparation belongs to the following type of vaccines:
A. Attenuated
B. Inactivated
C. Molecular
D. Toxoids
E. Synthetic

90. A 25-year-old man presents with tumourous growth situated in the area of the body of the maxilla, which results in face deformation. Biopsy material consists of fibrous tissue containing juvenile bone trabeculae, spindle, and stellate cells. There is no clear margin between the normal bone tissue and lesion focus, capsule is absent. No pathologic changes can be detected in the other organs. Make the diagnosis:
A. Simple fibrous dysplasia
B. Osteoclastoma
C. Odontogenic fibroma
D. Osteosarcoma
E. Ossifying fibroma

91. In Western Europe, nearly half of all congenital malformations occur in the children conceived in the period, when pesticides were used extensively in the region. Those congenital conditions result from the following influence:
A. Teratogenic
B. Carcinogenic
C. Malignization
D. Mutagenic
E. Mechanical

92. A 40-year-old woman suffering from diffuse toxic goiter presents with a constant increase in her body temperature. What

mechanism results in such a clinical presentation?
A. Separation of oxidation and phosphorization in cell mitochondria
B. Increased breakdown of glycogen in hepatic cells
C. Increased catabolism of protein in cells
D. Increased excitability of nerve cells
E. Increased cell sensitivity to catecholamines

93. A 19-year-old young man has been examined in a nephrological hospital. Increased potassium content was detected in the secondary urine of the patient. Such changes have been most likely caused by the increased secretion of the following hormone:
A. Aldosterone
B. Oxytocin
C. Adrenalin
D. Glucagon
E. Testosterone

94. A person with dental disease cannot always pinpoint the location of the affected tooth. What principle of excitatory diffusion in nerve centers causes such a phenomenon?
A. Irradiation
B. Reverberation
C. Occlusion
D. Dominant
E. Divergence

95. Injection of an anesthetic before the tooth extraction resulted in the development of anaphylactic shock accompanied by oliguria. What pathogenetic mechanism caused a decrease in diuresis in this case?
A. Decrease in hydrostatic pressure in the renal corpuscle capillaries
B. Increase in hydrostatic pressure in the Bowman's capsule
C. Damage of the glomerular filter
D. Increase in oncotic pressure of blood plasma
E. Increase in vasopressin secretion

96. A patient has vesicles on the mucous membrane of the oral cavity, lips, and nose. A dentist suspected vesicular stomatitis. What analysis will allow confirming the diagnosis?
A. Recovery of virus from the vesicular fluid
B. Allergy test
C. Recovery of bacteria from the vesicular fluid
D. Contamination of animals with the vesicular fluid
E. Microscopy of the vesicular fluid

97. A patient complains of a toothache. On examination, he has been diagnosed with pulpitis. Which factor played the main pathogenic role in the development of pain syndrome in this case?
A. Increased intratissular pressure in the dental pulp
B. Vasospasm
C. Inadequate stimulation of the mandibular nerve branch
D. Activation of one of the components of the complement system
E. Interleukin action

98. Periodontitis induces the development of lipid peroxidation in the periodontal tissues, as well as an increase in malondialdehyde and hydrogen peroxide concentration in the oral cavity. Which of the following enzymes provides antioxidant protection?
A. Catalase
B. Amylase
C. Maltase
D. Lactase
E. Invertase

99. Osteolaterism is characterized by a decrease in collagen strength caused by the significantly less intensive formation of

cross-links in collagen fibrils. This phenomenon is caused by the low activity of the following enzyme:
A. Lysyl oxidase
B. Monoamine oxidase
C. Prolyl hydroxylase
D. Lysyl hydroxylase
E. Collagenase

100. On examination, a patient was revealed to have a large amount of mucus accumulated in the nasal cavity. The mucus covers the mucosa and blocks the olfactory receptors. Where exactly are these receptors situated in a nasal cavity?
A. Superior nasal concha
B. Middle nasal concha
C. Inferior nasal concha
D. Common nasal meatus
E. –

101. A histological specimen of the kidney shows a structure consisting of a glomerulus of fenestrated capillaries and a bilayer epithelial capsule. Specify this structure:
A. Renal corpuscle
B. Proximal tubule
C. Distal tubule
D. Henle's loop
E. Receiving tube

102. A patient with symptoms of acute heart failure, namely pallor, acrocyanosis, and rapid shallow breathing, has been delivered to an emergency department. Which of these drugs is indicated in this case?
A. Corglycon
B. Digitoxin
C. Cordiamine
D. Nitroglycerine
E. Adrenalin hydrochloride

103. After the transfusion of the concentrated red blood cells, the patient developed posttransfusion shock. What is the leading mechanism of acute renal failure in this case?
A. Glomerular filtration disorder
B. Tubular reabsorption disorder
C. Tubular secretion disorder
D. Urinary excretion disorder
E. Impairment of the renal incretory function

104. A victim of an earthquake has been remaining under debris for seven days without food or water. What type of starvation is it?
A. Complete
B. Complete with continued hydration
C. Quantitative
D. Qualitative
E. Incomplete

105. A 50-year-old patient has been referred for treatment of neck lymphadenitis. His individual penicillin sensitivity was tested. In 30 seconds, full-body fever raised in the patient, and his arterial blood pressure dropped to 0 mm Hg, followed by cardiac arrest. Resuscitation was unsuccessful. Autopsy revealed acute venous hyperemia of viscera. Histological study revealed mast cells (tissue basocytes) degranulation in the skin (at the area of injections), myocardium, and lungs. What kind of hypersensitivity reaction occurred in the patient?
A. Anaphylactic
B. Delayed-type hypersensitivity
C. Complement-mediated cytotoxic
D. Immune complex-mediated
E. –

106. A 78-year-old patient who has atherosclerosis has been delivered to a surgical ward with signs of acute abdomen. Laparoscopy revealed blackened and flaccid small intestine loops; the demarcation line is not clear. Diagnose the changes that occurred in the patient's small intestine:
A. Hemorrhagic infarction complicated with humid gangrene
B. Hemorrhagic infarction complicated with dry gangrene

C. Ischemic stroke complicated with humid gangrene
D. Ischemic stroke complicated with dry gangrene
E. –

107. A histological specimen of the mandible of an embryo shows a tooth germ with the dental papilla made up of small stellate basophilic cells. What tissue forms this part of the tooth germ?
A. Mesenchyme
B. Epithelial
C. Reticular
D. Cartilaginous
E. Osseous

108. During the examination of a child's oral cavity, a dentist noted the appearance of the first permanent molars on the child's lower jaw. How old is the child?
A. 6-7
B. 4-5
C. 8-9
D. 10-11
E. 12-13

109. Examination of a 29-year-old patient revealed a dense, immobile, ill-defined tumor-like formation in the lower jaw. The overlying mucosa was pale. Biopsy of the neoplasm revealed osteoid structures lined with atypical osteoblasts, numerous pathologic mitotic figures, a great number of thin -walled vessels. What is the most likely diagnosis?
A. Osteosarcoma
B. Osteoblastoclastoma
C. Exacerbation of chronic osteomyelitis
D. Ameloblastoma
E. Primary jaw carcinoma

110. Microscopic examination of a skin tumor revealed that it invaded the underlying tissue, destroyed it, and formed nests and cords of the atypical epithelium, which include pearl-like formations. Specify the tumor:
A. Keratinizing squamous cell carcinoma
B. Squamous cell non-keratinizing carcinoma
C. Solid carcinoma
D. Adenocarcinoma
E. Medullary carcinoma

111. A child is six years old. The permanent teeth have started to take the place of the primary teeth. What teeth are the first to emerge?
A. Lower first molars
B. Lower first premolars
C. Upper first premolars
D. Upper medial incisors
E. Lower canines

112. Histological examination of the myocardium of a 47-year-old patient with rheumatic heart disease (section material) revealed big, visually empty vacuoles within the cardiomyocytes. They turn black, when stained with osmic acid, and yellow-red when stained with sudan III. What pathological process is it?
A. Adipose degeneration
B. Hyaline droplet degeneration
C. Hydropic degeneration
D. Carbohydrate degeneration
E. Dysproteinosis

113. A 38-year-old woman complains of bleeding gums, halitosis, exposure of tooth necks. Objectively: the patient has gingivitis, plaque and tartar. Inflammation involves the alveolar part of gingiva with dental pockets. The bone tissue exhibits signs of bone resorption. What pathology does the patient have?
A. Parodontitis
B. Periostitis
C. Periodontitis
D. Gingivitis
E. –

114. The vestibular surface of the left lower incisor has a pink fungoid formation up to 2 cm large, which is fixed to the supra-alveolar tissue by a wide pedicle. Histological examination revealed branched capillary vessels with multiple hemorrhages and foci of hemosiderosis. What is the most likely diagnosis?
A. Angiomatous epulis
B. Fibrous epulis
C. Giant cell epulis
D. Gingival fibromatosis
E. Cavernous hemangioma

115. A routine investigation of the microbiological sanitary condition of air in a hospital is performed once in 3 months. What microorganism is the sanitary indicator of air condition in an enclosed space?
A. S.aureus
B. E.coli
C. E.faecalis
D. P.aeruginosa
E. C.perfringens

116. In the course of evolution, there developed molecular mechanisms for the correction of damaged DNA molecules. This process is called:
A. Reparation
B. Transcription
C. Translation
D. Replication
E. Processing

117. The patient's examination in a hospital specialized in diseases of the nervous system has revealed the absence of light-induced miosis. It is caused by the damage of the following brain structures:
A. Vegetative nuclei of the 3rd pair of cranial nerves
B. Red nuclei of the mesencephalon
C. Reticular nuclei of the mesencephalon
D. Hypothalamus nuclei
E. Reticular nuclei of the medulla oblongata

118. A doctor noted in the patient's case history that the wound entry hole is situated in the submandibular triangle. What anatomical landmark binds this area?
A. Lower jaw edge
B. Neck midline
C. M.sternocleidomastoideus
D. M.trapezius
E. M.omohyoideus

119. A patient during examination presents with prolongation of the II heart sound. The II heart sound occurs due to:
A. Closure of semilunar valve
B. Opening of semilunar valve
C. Opening of mitral valve
D. Opening of tricuspid valve
E. Closure of tricuspid valve

120. A patient with pituitary tumor complains of increased daily diuresis (polyuria). Glucose concentration in blood plasma equals 4,8 mmol/l. What hormone can be the cause of this, if its secretion is disturbed?
A. Vasopressin
B. Aldosterone
C. Natriuretic hormone
D. Insulin
E. Angiotensin I

121. A patient with heart failure and tachycardia has been prescribed digoxin. After five days of taking digoxin, the patient's heart rate was normalized. After two weeks, the patient addressed a doctor due to the continuous decrease of heart rate down to 52/min. What phenomenon has caused such changes of heart rate?
A. Cumulation
B. Idiosyncrasy
C. Tachyphylaxis
D. Tolerance
E. Allergy

122. A woman suffering from essential hypertension had suddenly lost consciousness;

she was delivered to a resuscitation unit in a comatose state with the diagnosis of disturbed cerebral circulation. The patient died one day after her hospitalization. An autopsy revealed a cavity in the left hemisphere of the brain. The cavity is 5x4 cm in size and filled with blood clots and liquid blood. What hemorrhage is it according to the mechanism of its origin?
A. Hemorrhage caused by vessel rupture
B. Hemorrhage caused by vessel erosion
C. Diapedetic hemorrhage
D. Hemorrhagic extravasation
E. Petechial hemorrhage

123. During AB0 blood grouping by using zoliclons (diagnostic monoclonal antibodies), hemagglutination did not occur with any of the zoliclons. What is the blood group of the patient under examination?
A. 0 (I)
B. A (II)
C. B (III)
D. AB (IV)
E. –

124. Autopsy of a young man revealed lung cavities with inner walls made up of granulation tissue of varying degrees of maturity, pronounced pneumosclerosis, and bronchiectasis. Some cavities had caseation areas. What is your presumptive diagnosis?
A. Fibrous cavernous tuberculosis
B. Infiltrative tuberculosis
C. Caseous pneumonia
D. Acute cavernous tuberculosis
E. Bronchiectasis

125. A 42-year-old woman has been administered propranolol for ischemic heart disease. Yet she has been found to have a concomitant condition that renders propranolol to be contraindicated. What disease is it?
A. Bronchial asthma
B. Cholecystitis
C. Arterial hypertension
D. Duodenal ulcer
E. Myasthenia

126. During exacerbation of peptic gastric ulcer disease, a patient complains of heart pain. What vegetative reflex can cause these painful sensations?
A. Viscerovisceral reflex
B. Viscerodermal reflex
C. Visceromotor reflex
D. Dermatovisceral reflex
E. Motor visceral reflex

127. A man submerged into the ice-cold water and died soon as a result of abrupt exposure to cold. In such cases, an organism loses heat most intensively by way of:
A. Heat conduction
B. Radiation
C. Convection
D. Heat conduction and radiation
E. No correct answer

128. A person performs flexion-extension movements of the forearm with the elbow resting on a table. What type of muscle contraction occurs in the m.biceps brachii?
A. Isotonic
B. Auxotonic
C. Isometric
D. Smooth muscle tetanus
E. Serrated muscle tetanus

129. A patient is diagnosed with acute morphine hydrochloride poisoning. Choose the oxidant to be prescribed for gastric lavage:
A. Potassium permanganate
B. Chloramine
C. Sulfocamphocainum (Procaine + Sulfocamphoric acid)
D. Cerigel
E. Chlorhexidine digluconate

130. A woman had been taking synthetic hormones during her pregnancy. Her newborn girl presents with excessive hairiness, which has a formal resemblance to adrenogenital syndrome. This sign of variability is

called:
A. Phenocopy
B. Mutation
C. Recombination
D. Heterosis
E. Replication

131. Microelectrode technique allowed registering a potential following ”all-or-none” law and capable of undecremental spreading. Specify this potential:
A. Action potential
B. Excitatory postsynaptic potential
C. Rest potential
D. Inhibitory postsynaptic potential
E. Receptor potential

132. A concerned mother addressed a pediatrician with complaints of her child suffering from frequent stomachaches, loss of appetite, nausea, constipation. Feces analysis detected rounded eggs with double capsules and oncospheres localized in their centers. The child was diagnosed with hymenolepiasis. Specify the type of infection transmission, considering that the invasion intensity was extremely high:
A. Autoinvasion
B. Alimentary
C. Sexual
D. Contamination
E. Immediate contagion

133. Sulfanilamides are applied as antimicrobial agents in clinical practice. Sulfanilamide treatment, however, can result in hemolytic anemia development in patients that suffer from the genetic defect of the following enzyme of pentose phosphate metabolism in erythrocytes:
A. Glucose-6-phosphate dehydrogenase
B. Hexokinase
C. Transketolase
D. Transaldolase
E. Pyruvate kinase

134. An autopsy is performed on the body of a 58-year-old woman who suffered from diabetes mellitus. On histological examination of kidneys, the following was revealed: segmental homogenous oxyphilic deposits are detected in the glomerules; arteriole walls are diffusely thickened, homogenous, oxyphilic. Diagnose the morphologic changes that occurred in the renal glomerulus and vessels:
A. Hyalinosis
B. Hyaline droplet degeneration
C. Amyloidosis
D. Mucoid degeneration
E. Fibrinoid degeneration

135. Under the influence of physical factors, there can develop defects in a DNA molecule. Ultraviolet irradiation, for instance, can cause the development of dimers. Dimers are two adjacent pyrimidine bases joined together. Name these bases:
A. Thymine and cytosine
B. Adenine and thymine
C. Guanine and cytosine
D. Adenine and guanine
E. Guanine and thymine

136. For pain relief, a patient has taken a tablet of paracetamol and a tablet of diclofenac sodium simultaneously. What type of drug interaction did the patient use for self-treatment?
A. Additive synergism
B. Potentiated synergism
C. Synergic antagonism
D. Competitive antagonism
E. Non-competitive antagonism

137. Ketoacidosis that develops due to the accumulation of ketone bodies in blood serum is a primary complication of diabetes mellitus. What acid-base disbalance develops during this condition?
A. Metabolic acidosis
B. Metabolic alkalosis
C. Respiratory acidosis

D. Respiratory alkalosis
E. –

138. During auscultation, a 26-year-old patient was asked to breathe deep. After ten breaths, the patient lost consciousness, which is associated with the development of the following condition:
A. Respiratory alkalosis
B. Carbon dioxide acidosis
C. Erythropenia
D. Polycythemia
E. Reduced oxygen capacity of the blood

139. When examining a patient presumptively diagnosed with food toxic infection, a doctor on duty has detected symptoms characteristic of botulism. The patient named the meals he ate the day before. What is the most probable cause of infection?
A. Homemade canned meat
B. Custard pastry from a private bakery
C. Sour cream from a local dairy factory
D. Strawberries from a suburban vegetable garden
E. Fried eggs

140. A patient has an inflammation in the pterygopalatine fossa. The infection has spread into the nasal cavity. Which anatomical structure has the infection spread through?
A. Foramen sphenopalatinum
B. Foramen rotundum
C. Canalis palatinus major
D. Canalis palatinus minor
E. Canalis ptherygoideus

141. Phenylketonuria is a disease caused by a recessive gene that is localized in an autosome. Parents are heterozygous for this gene. They already have two sons with phenylketonuria and one healthy daughter. What is the probability that their fourth child will have the disease too?
A. 25 %
B. 0 %
C. 50 %
D. 75 %
E. 100 %

142. A 32-year-old patient has B2 hypovitaminosis. The specific symptoms such as epithelial, mucosal, skin, and corneal lesions are the most likely to be caused by the deficiency of:
A. Flavin coenzymes
B. Cytochrome a1
C. Cytochrome oxidase
D. Cytochrome b
E. Cytochrome c

143. A 40-year-old patient suffers from the intolerance of dairy food products. This condition has likely developed due to insufficiency of the following digestive enzyme:
A. Lactase
B. Lipase
C. Maltase
D. Invertase
E. Amylase

144. A patient has been diagnosed with severe B12-deficient anemia with hemopoiesis. Anamnesis states total gastrectomy. What cells allow confirming this diagnosis, if they are absent in the peripheral blood?
A. Megalocytes
B. Microcytes
C. Ovalocytes
D. Normocytes
E. Anulocytes

145. To prevent wound infection associated with surgical procedures, a patient was given a synthetic anti- protozoan drug with high activity against Helicobacter pylori. Specify this drug:
A. Metronidazole
B. Doxycycline hydrochloride
C. Chingamin
D. Acyclovir
E. Isoniazid

146. Roentgenologically confirmed an obstruction of the common bile duct that prevents bile from inflowing to the duodenum. What process is likely to be disturbed?
A. Fat emulgation
B. Protein absorption
C. Carbohydrate hydrolysis
D.Hydrochloric acid secretion in the stomach
E. Salivation inhibition

147. A doctor examines a 17-year-old girl. The following is detected: pharyngitis, cervical lymphadenopathy, fever. The preliminary diagnosis is infectious mononucleosis. What method of investigation allows confirming this diagnosis at the disease onset?
A. Determining antibodies IgM to Epstein-Barr virus
B. Microscopy of blood smear according to Giemsa method
C. Determining antibodies IgG to Epstein-Barr virus
D. Sabin-Feldman dye test
E. Determining the amount of C-reactive protein

148. A 60-year-old patient has taken a drug to relieve angina pectoris attack; in several minutes, the pain felt in the breastbone area abated, but it was followed by the feeling of vertigo, headache, tinnitus, and hyperemia of the face. What drug has the patient taken?
A. Nitroglycerine
B. Validol
C. Nifedipine
D. Verapamil
E. Amiodarone

149. For relief of hypertensive crisis, a doctor has administered a patient a drug that, apart from antihypertensive effect has also sedative, spasmolytic, and anticonvulsive action. The drug was taken parenterally. When it is taken enterally, it acts as a laxative and cholagogue. What drug was administered?
A. Magnesium sulfate
B. Dibasolum
C. Reserpine
D. No-spa
E. Apressin

150. A 13-year-old girl has been prescribed a certain drug for the treatment of megaloblastic anemia. This drug stimulates a transfer from megaloblastic hemopoiesis to normoblastic, participates in the synthesis of purine and pyrimidine bases, activates protein and methionine synthesis. What drug does the patient take?
A. Cyanocobalamin
B. Ferric sulfate
C. Haemostimulinum
D. Erythropoietin
E. Rosehip tea

151. A patient in a grave condition has been delivered into an admission ward. Examination revealed pupil mydriasis, no reaction to the light, considerable reddening, and dryness of skin and mucous membranes. What drug might have caused the intoxication symptoms?
A. Atropine sulphate
B. Proserin
C. Adrenalin hydrochloride
D. Pilocarpine hydrochloride
E. Dithylinum

152. When examining a female patient, a doctor observed the following: misshapen auricles, elevated palate, teeth growth disorder; mental retardation; no disruption of reproductive function. The provisional diagnosis is the "super woman" syndrome. Point out the karyotype of this disease:
A. (47, XXX)
B. (47, XXY)
C. (47, YYY)
D. (47, XYY)
E. (45, X0)

153. Histological preparation of skin demonstrates dense unformed connective tissue. What layer of this organ is formed by such tissue?
A. Reticular dermis
B. Epidermis
C. Papillary dermis
D. Hypodermis
E. Basal membrane

154. During ascent into mountains at the altitude of 5000 meters, the group of climbers has developed the following complaints: dyspnea, increased heart rate, headache, vertigo, tinnitus. What is the cause of such symptoms?
A. Hypoxemia
B. Hypokalemia
C. Hypothermia
D. Erythropenia
E. Leucopenia

155. As a result of an injury, a child developed an abscess of the buccal adipose tissue. With time the process spread to the lateral surface of the pharynx. Pus spread along the following fascia:
A. Bucco-pharyngeal
B. Temporal
C. Masticatory
D. Parotid
E. –

156. The most common disease of economically developed countries is dental caries. Over 95% of the population is afflicted with this disease. Carious demineralization of hard dental tissues is caused primarily by:
A. Organic acids
B. Malnutrition
C. Extreme conditions
D. Metabolic disorder
E. Vitamin C deficiency

157. A patient has been administered conduction anesthesia with novocaine in preparation for tooth extraction. After the anesthesia administration, the patient developed swelling and hyperemia around the injection site, skin itch, general fatigue, motor agitation. Name the developed complication:
A. Allergy
B. Idiosyncrasy
C. Tachyphylaxis
D. Drug dependence
E. Inflammation

158. Due to a contusion that suffered in a traffic accident, a patient has lost vision. Ophthalmoscopy revealed no changes in the eyeball. What artery is damaged in this case?
A. Posterior cerebral artery
B. Anterior cerebral artery
C. Medial cerebral artery
D. Ophthalmic artery
E. Central retinal artery

159. During a foot trauma, both cuboid and cuneiform bones have been crushed. As a result, the foot must be amputated at the following joint:
A. Transversa
B. Cuneonavicularis
C. Tallocruralis
D. Tarsimetatarsea
E. Intermetatarsea

160. Specify the calcium-binding enamel protein, which plays a significant part in carious destruction of enamel, when its function is disrupted:
A. Amelogenin
B. Calmodulin
C. Osteocalcin
D. Calcitonin
E. Parotin

161. A patient has a skull fracture located in front of the foramen magnum. What bone is damaged?
A. Pars basilaris ossis occipitalis

B. Pars lateralis ossis occipitalis
C. Pars squamosa ossis occipitalis
D. Pars squamosa ossis temporalis
E. Pars petrosa ossis temporalis

162. A 36-year-old patient underwent tooth extraction at a dental clinic. After two weeks, the stratified squamous epithelium regenerated at the site of extraction. What organelles were involved in the restoration of the mucous membrane?
A. Ribosomes
B. Centrosomes
C. Postlysosomes
D. Smooth EPR
E. Mitochondria

163. A 30-year-old patient after a case of viral hepatitis type B has developed complaints of continuous nasal hemorrhages. What drug would be the most advisable for the treatment of this condition?
A. Menadione (Vicasolum)
B. Nadroparin calcium (Fraxiparine)
C. Folic acid
D. Dipiridamol
E. Asparcam

164. A patient is being prepared for surgery - partial mandibular resection. What drug should be administered to decrease salivation?
A. Atropine sulfate
B. Carbacholine
C. Armine
D. Tubocurarin chloride
E. Lobeline

165. A dentist has detected symptoms of parodontosis in a patient. What antiprotozoal drug should be prescribed?
A. Metronidazole
B. Levamisole
C. Griseofulvin
D. Mykoseptin
E. Furazolidone

166. An oral surgery unit admitted a woman with a phlegmon on the anterior surface of the neck in the region of the carotid triangle. What muscle demarcates the posterior wall of this triangle?
A. Sternocleidomastoid
B. Thyrohyoid
C. Sternohyoid
D. Omohyoid
E. Sternothyroid

167. When processing a molar tooth with a dental cutter, a dentist has accidentally deeply wounded the patient's cheek and damaged not only the mucosa but also a muscle. Which muscle was injured?
A. Buccal muscle
B. Greater zygomatic muscle
C. Masticatory muscle
D. Orbicular muscle of the mouth
E. Mylohyoid muscle

168. During the microscopy of renal biopsy material, there are tubules revealed in the cortical substance. The tubules are approximately 60 micrometers in diameter; their wall consists of the tall cuboidal epithelium with pronounced apical frame and basal folds. Name these structures:
A. Proximal tubules
B. Distal tubules
C. Capsule of renal corpuscle
D. Collection duct
E. Henle's loop

169. A man has developed a downturning mouth and smoothed out nasolabial fold due to influenza complications. What nerve is damaged?
A. Facial nerve
B. Maxillary nerve
C. Mandibular nerve
D. Trochlear nerve
E. Oculomotor nerve

170. Calcification of dental tissues is significantly influenced by osteocalcin protein

that can bind calcium ions due to the presence of the following modified amino acid residues in the polypeptide chain:
A. γ-carbon glutamine
B. Alanine
C. γ-aminobutyric
D. Carboxy aspargine
E. δ-aminopropionic

171. A 65-year-old patient had been treated for three days in a resuscitation unit for cardiac pathology. Suddenly he developed ventricular fibrillation that became the immediate cause of death of this patient. Microscopy of the left ventricular myocard revealed a large focus of cardiomyocyte karyolysis demarcated by the zone of hyperemia. What cardiac pathology was the cause of death?
A. Acute myocardial infarction
B. Ischemic myocardial degeneration
C. Acute myocarditis
D. Diffuse cardiosclerosis
E. Postinfarction cardiosclerosis

172. To drain the oral cavity, a dentist places a tampon between the cheek and the 2nd upper molar. This way secretion of the following salivary gland **WILL NOT** be able to accumulate in the oral cavity:
A. Parotid gland
B. Submandibular gland
C. Sublingual gland
D. Lingual gland
E. Labial glands

173. Microscopy of an extracted tooth has revealed the following: odontoblasts and pulpocytes are decreased in size and number; thickened connective fibers of the pulp are stretched between the cells that remain. What general pathological process is likely to be occurring in the tooth pulp?
A. Atrophy
B. Adipose degeneration
C. Amyloidosis
D. Local hyalinosis
E. Local hemosiderosis

174. A 28-year-old patient complains of frequent gingival hemorrhages. The blood test revealed the clotting factor II (prothrombin) deficiency. What phase of blood coagulation is impaired in this patient?
A. Thrombin generation
B. Vascular-platelet hemostasis
C. –
D. Fibrinolysis
E. Clot retraction

175. During perfusion of an isolated heart of a mammal with a high ion content solution, the cardiac arrest in diastole occurred. The cardiac arrest was caused by the following ions present excessively in the solution:
A. Potassium
B. Sodium
C. Chlorine
D. Magnesium
E. Calcium

176. Which of the named below is the substrate of activated Christmas factor that takes part in blood coagulation?
A. Factor X
B. Vitamin K
C. Fibrinogen
D. Fibrin
E. Thrombin

177. Students have been remaining for a long time in a badly ventilated room. They developed respiratory changes caused by irritation of their peripheral chemoreceptors that react primarily to:
A. Decrease of oxygen tension in arterial blood
B. Increase of oxygen tension in arterial blood
C. Decrease of carbon dioxide tension in arterial blood

D. Increase of hydrogen ion concentration in arterial blood
E. Decrease of hydrogen ion concentration in arterial blood

178. A 2-year-old child presents with mental development retardation, intolerance of proteins, severe hyperammonemia against the background of low blood urea content. This condition is caused by the congenital deficiency of the following mitochondrial enzyme:
A. Carbamoyl phosphate synthetase
B. Citrate synthase
C. Succinate dehydrogenase
D. Malate dehydrogenase
E. Monoamine oxidase

179. A woman is diagnosed with Turner's syndrome (karyotype 45, X0). How many autosomal pairs would her somatic cells contain?
A. 22
B. 24
C. 23
D. 44
E. 45

180. Corticosteroid analogues induce the breakdown of muscle proteins into free amino acids. Under such conditions these amino acids become involved with the following processes:
A. Gluconeogenesis in liver
B. Glycolysis in muscles
C. Synthesis of higher fatty acids
D. Glycogenolysis
E. Decarboxylation

181. Microscopy of an autopsy material sampled from lungs has revealed that alveolar lumen is filled with exudate consisting mostly of erythrocytes. What type of pneumonia is the most likely to be the cause?
A. Influenza virus pneumonia
B. Typhoid pneumonia
C. Measles pneumonia
D. Staphylococcal pneumonia
E. Pneumococcal pneumonia

182. A patient diagnosed with acute respiratory failure has been administered artificial lung ventilation in the conditions of high partial oxygen pressure. This measure resulted in the aggravation of the patient's condition and development of respiratory distress syndrome. Name the likely cause of this complication:
A. Intense oxidation of lung surfactant
B. Inflammatory process
C. Fibrosis
D. Atelectasis
E. Pulmonary congestion

183. Parkinson's disease is caused by disrupted dopamine synthesis. What brain structure synthesizes this neurotransmitter?
A. Substantia nigra
B. Pallidum
C. Quadrigeminal plate
D. Red nuclei
E. Hypothalamus

184. A diet must include fats. Fats perform the plastic function in an organism due to their inclusion in:
A. Cell membranes
B. Cell ion channel
C. Cell ion pumps
D. Cell end-organs
E. Glycocalyx

185. A 50-year-old man addressed a hospital with complaints of memory disorders, painful sensations along the nerve trunks, decreased mental ability, circulatory disorders, and dyspepsia. Anamnesis states excessive alcohol consumption. What vitamin deficiency can result in such signs?
A. Thiamine
B. Niacin
C. Retinol
D. Calciferol
E. Riboflavin

186. Specify the type of jaundice, during which there is no direct bilirubin in the blood, and urine urobilinogen level is high:
A. Suprarenal
B. Hepatic
C. Subhepatic
D. Mechanical
E. –

187. After long-term antibiotic treatment, a patient has developed whitish spots on the oral mucosa. Gram-positive oval budding cells were detected in the smear preparations. What causative agents were detected?
A. Candida fungi
B. Staphylococci
C. Sarcinae
D. Actinomycete
E. Tetracocci

188. The indigenous population of Pamir has the following characteristic features: high rate of base metabolism, elongated tubular bones, wide rib cage, high blood oxygen capacity due to an increased number of erythrocytes, high hemoglobin content. What type of ecological adaptation is it?
A. Mountain
B. Temperate
C. Arctic
D. Tropical
E. Subtropical

189. A 30-year-old man died from electrocution. What was the cause of death?
A. Central respiratory arrest
B. Acute renal failure
C. Acute respiratory failure
D. Shock
E. Internal hemorrhage

190. The chromosomal complement of a woman contains a chromosome with arms p and q of equal length. What morphological type does this chromosome belong to?
A. Metacentric
B. Acrocentric
C. Submetacentric
D. Telocentric
E. Subacrocentric

191. A patient with damaged muscles of the lower limbs has been delivered to a first-aid center. What cells enable reparative regeneration of muscle fibers and restoration of muscle function?
A. Myosatellitocytes
B. Adipocytes
C. Fibroblasts
D. Endotheliocytes
E. Plasmocytes

192. Patients suffering from xeroderma pigmentosum have extremely photosensitive skin due to disrupted excision repair. Specify the process that is affected in such patients:
A. Repair of DNA molecule
B. Synthesis of iRNA
C. Maturation of iRNA
D. Synthesis of protein primary structure
E. Intron extraction and exon connection

193. A doctor has determined the disruption of pain and temperature sensitivity of the mucosa of the anterior 2/3 of the patient's tongue. Gustatory sensitivity is retained. The patient suffers from the functional disorder of the following cranial nerve:
A. Trigeminal nerve
B. Hypoglossal nerve
C. Facial nerve
D. Vagus nerve
E. Glossopharyngeal nerve

194. A significant amount of biogenic amines in body tissues can be subject to oxidative deaminization due to the action of the following enzyme:
A. Monoamine oxidase
B. Transaminase
C. D-amino acid oxidase

D. Isomerase
E. L-amino acid dehydrogenase

195. A victim has a deep incised wound in the area of the external surface of the gonial angle. What muscle is damaged in this case?
A. M. masseter
B. M. zygomaticus
C. M. buccinator
D. M. orbicularis oris
E. M. depressor anguli oris

196. Autopsy of the body of a 46-year-old man, who had been suffering from typhoid fever and died of intestinal hemorrhage, has revealed sequestration areas, tissue rejection in the areas of lymphoid follicle clusters. What stage of typhoid fever is it?
A. Dirty ulcers
B. Healing
C. Clean ulcers
D. Brain-like swelling of the follicles
E. Necrosis

197. During the autopsy of the body of a patient, who had died due to heart failure, the following has been detected: myogenic dilatation of the heart left ventricle, micro focal cardiosclerosis, vasculitis, Aschoff bodies with disorganization of connective tissue, myocardosis. Make the diagnosis:
A. Rheumatic productive myocarditis
B. Rheumatic exudative myocarditis
C. Cardiac infarction
D. Systemic lupus erythematosus
E. Myocardial ischemic dystrophy

198. A 30-year-old man addressed a doctor with complaints of enlarged submandibular lymph nodes. Anamnesis states that the patient previously had been treated for acute apical periodontitis of the 36th and 46th teeth. Histologically the following could be detected in the removed lymph node: hyperemia, edema, increased amount of plasmocytes, and plasmablasts in the medullary area and germinal centers of follicles. What can cause such changes in lymph nodes?
A. Antigenic stimulation
B. Immunodeficiency state
C. Metastasis of a malignant tumor
D. Granulomatous inflammation
E. Lymphoma

199. A 35-year-old woman complains of the swollen neck. Subtotal thyroidectomy is performed. On histological examination of the removed part of the thyroid gland, the following was detected: atrophy of parenchyma, moderate sclerosis development, diffuse infiltration by lymphocytes, and plasma cells leading to the formation of lymphatic follicles. What pathology has developed in the thyroid gland?
A. Hashimoto's thyroiditis
B. Follicular adenoma
C. Riedel's thyroiditis
D. Papillary carcinoma of the thyroid gland
E. Diffuse toxic goiter

200. A 12-year-old patient who has acute leukemia presents with a fever up to 39,8oC, acute pain in the throat. Examination of the oral cavity has revealed swollen tonsils, their surface is covered in deep lesions with uneven margins, numerous petechial hemorrhages in the pharyngeal mucosa, and around the tonsils. Determine the type of tonsillitis that complicates the disease progress in this case:
A. Necrotic
B. Catarrhal
C. Fibrinous
D. Lacunar
E. Purulent

1. Heterozygous parents with A (II) and B (III) blood groups, according to the AB0 system, gave birth to a child. What is the probability of the child having 0 (I) blood group?
A. 25 %
B. 100 %
C. 75 %
D. 50 %
E. 0 %

2. During dehelmintization, a patient expelled long fragments of a segmented helminth. In some segments, their width exceeds their length; there is a rosette-like uterus in the segment center. Name the helminth:
A. Diphylobotrium latum
B. Taenia solium
C. Taeniarhynchus saginatus
D. Echinococcus
E. Hymenolepis nana

3. Carious cavities of a 29-year-old patient contain parasitic protozoa. It is established that they belong to the Sarcodina class. Specify these protozoa:
A. Entamoeba gingivalis
B. Entamoeba coli
C. Entamoeba histolutica
D. Amoeba proteus
E. Lamblia intestinalis

4. According to the law of constancy of chromosome numbers, most animal species have definite and constant chromosome number. The mechanism that maintains this constancy during sexual reproduction of organisms is called:
A. Meiosis
B. Schizogony
C. Amitosis
D. Regeneration
E. –

5. At a certain stage of human ontogenesis, a physiological bond occurs between the circulatory systems of the mother and the fetus. This function is being carried out by the following provisory organ:
A. Placenta
B. Yolk sac
C. Amnion
D. Serous tunic
E. Allantois

6. It is necessary to perform urinary bladder catheterization of an adult man. Resistance to the catheter can occur in the following structure or part of the urethra:
A. Membranous part
B. Prostatic part
C. Spongiose part
D. External urethral orifice
E. Internal urethral orifice

7. A woman has come to a dentist with complaints of bruising and swelling around her eye. Anamnesis is as follows: several days prior, her 1st premolar tooth had been extracted, with infraorbital anesthesia administered; several days later, hematoma appeared in the area of foramen intraorbitale. The branch of the following artery was damaged:
A. Maxillary artery
B. Facial artery
C. Superficial temporal artery
D. Superior labial artery
E. Masseteric artery

8. A patient consulted a doctor about an increased pain sensitivity of the ear skin and ear canal. The palpation behind the sternocleidomastoid muscle was painful. Such clinical presentations are typical of the irritation of the following nerve:
A. N. auricularis magnus
B. N. occipitalis minor
C. Nn. supraclaviculares
D. N. vagus
E. N. transversus colli

9. In a 12-year-old patient, an inflammatory

process in the internal ear spread to the meninges, diffusely affecting them. A doctor suspects the process to have spread through the connection between the subarachnoid space of the brain and the perilymphatic space of the internal ear. What anatomic structure became the pathway for the spreading inflammation?
A. Aqueductus vestibule
B. Fossa subarcuata
C. Hiatus canalis n. petrosi majoris
D. Hiatus canalis n. petrosi minoris
E. Fissura petrosquamosa

10. A woman with essential hypertension has been hospitalized. The patient presents with aneurysm ofA. communicans posterior of the cerebrum arterial circle. What vessels of the arterial circle are normally joined with this artery?
A.A. carotis interna etA. cerebri posterior
B.A. carotis interna etA. cerebri media
C.A. carotis externa etA. cerebri anterior
D.A. cerebri anterior etA. cerebri media
E.A. cerebri media etA. cerebri posterior

11. In the skin biopsy material in the epidermis, there are cells with processes and cytoplasm that contains dark brown granules. Name these cells:
A. Melanocytes
B. Intraepidermal macrophages
C. Keratinocytes
D. Merkel's cells
E. Lymphocytes

12. Gastroscopy of a patient revealed the lack of mucus in the coating of the mucous membrane. This can be caused by the dysfunction of the following cells of the gastric wall:
A. Cells of prismatic glandular epithelium
B. Parietal cells of gastric glands
C. Main exocrinocytes
D. Cervical cells
E. Endocrinocytes

13. Alcoholic intoxication is accompanied by disturbed motor coordination and equilibrium due to the damage caused to structural elements of the cerebellum. Functional disturbance of the following cells occurs in the first place:
A. Pyriform cells
B. Basket cells
C. Granule cells
D. Stellate cells
E. Fusiform cells

14. Histologic specimen demonstrates an oral cavity organ with mucosa covered with keratinized stratified squamous epithelium. Specify this organ or its part:
A. Gum
B. Inferior surface of the tongue
C. Labial mucosa
D. Uvula
E. Soft palate

15. During gastrulation, an embryo proceeds from histiotrophic to hematotrophic nutrition. What provisory organ makes it possible at first?
A. Chorion
B. Trophoblast
C. Yolk sac
D. Amnion
E. Allantois

16. One of the coats of a hollow organ has anastomotic fibers with nuclei. The fibers consist of cells that form intercalated disks at the places of contact. What tissue forms this coat?
A. Cross-striated cardiac muscle
B. Cross-striated skeletal muscle
C. Unstriped muscle
D. Loose fibrous connective tissue
E. Dense irregular connective tissue

17. A 30-year-old woman has decreased enzyme content in the pancreatic juice. This condition can be caused by insufficient secretion of the following hormone:
A. Cholecystokinin-pancreozymin

A. Cholecystokinin-pancreozymin
B. Somatostatin
C. Secretin
D. Gastric inhibitory polypeptide
E. Vasoactive intestinal peptide

18. Electric current has affected skeletal muscle fiber resulting in depolarization of the membrane. Depolarisation develops due to the following ions penetrating the membrane:
A. N a+
B. HCO3−
C. Ca2+
D. Cl−
E. K

19. The psychological evaluation determined that a person is able to adapt to changing situation quickly, has a good memory, is emotionally stable, possesses high working ability. This person is the most likely to be:
A. Sanguine
B. Choleric
C. Melancholic
D. Phlegmatic
E. Phlegmatic with melancholic traits

20. An oculist has detected increased time of darkness adaptation of a patient's eye. What vitamin deficiency can cause such symptoms?
A. A
B. E
C. C
D. K
E. D

21. A patient suffers from diabetes mellitus with fasting hyperglycemia over 7,2 mmol/l. What blood plasma protein would allow assessing the patient's glycemia level retrospectively (4-8 weeks before examination)?
A. Glycated hemoglobin
B. Albumin
C. Fibrinogen
D. C-reactive protein
E. Ceruloplasmin

22. A patient is in a state of hypoglycemic coma. What hormone can cause this condition if overdosed?
A. Insulin
B. Progesterone
C. Cortisol
D. Somatotropin
E. Corticotropin

23. A 24-year-old patient has been administered glutamic acid to treat epilepsy. The medicinal effect, in this case, occurs not due to glutamate itself, but due to the product of its decarboxylation:
A. γ-aminobutyric acid
B. Histamine 4-monooxygenase
C. Serotonin
D. Dopamine
E. Taurine

24. Mucin aggregates retain water, which results in their viscosity and protective action. It is possible because the mucin structure contains:
A. Glycosaminoglycans
B. Homopolysaccharides
C. Disaccharides
D. Oligosaccharides
E. Glucose

25. Along with normal hemoglobin types, there can be pathological ones in the body of an adult. Specify one of them:
A. HbS
B. HbF
C. HbA1
D. HbA2
E. HbO2

26. Chronic overdosage of glucocorticoids leads to the development of hyperglycemia. What process of carbohydrate metabolism is responsible for this effect?
A. Gluconeogenesis

B. Glycogenolysis
C. Aerobic glycolisis
D. Pentose-phosphate cycle
E. Glycogenesis

27. After anesthetic application during tooth extraction, the patient developed marked soft tissue edema of the upper and lower jaw, skin rash on the face, reddening, and itching. What pathological process results in such a reaction to the anesthetic?
A. Allergy
B. Toxic action of a drug
C. Inflammation
D. Circulatory deficiency
E. Disturbed lymph drainage

28. Due to the morbid affection of the supraoptic and paraventricular nuclei of the hypothalamus, a 40-year-old patient has developed polyuria (10-12 liters per day) and polydipsia. The following hormone is deficient, thus leading to this disturbance:
A. Vasopressin
B. Oxytocin
C. Corticotropin
D. Somatotropin
E. Thyrotropin

29. A patient with glossitis presents with the disappearance of lingual papillae, reddening, and burning pain in the tongue. Blood test: erythrocytes - 2, 2 1012/l, hemoglobin - 103 g/l, color index - 1,4. What type of anemia is it?
A. B12 folate-deficient
B. Iron deficiency
C. α-thalassemia
D. β-thalassemia
E. Iron refractory

30. A patient with chronic renal failure presents with reduced inulin clearance of 60 ml/min. The following renal function is disturbed:
A. Glomerular filtration
B. Tubular secretion
C. Reabsorption in the proximal tubular segment of the nephron
D. Reabsorption in the distal tubular segment of the nephron
E. Reabsorption in the tubules of collecting duct

31. Histological investigation of an extracted tooth revealed the presence of necrotic detritus with fatty acid crystals and numerous microbe colonies in the pulp chamber. What diagnosis is the most likely?
A. Pulp gangrene
B. Chronic pulpitis
C. Complicated chronic pulpitis
D. Serous pulpitis
E. Purulent pulpitis

32. Autopsy of a man with tuberculosis has revealed a 3x2 cm large cavity in the superior lobe of the right lung. The cavity was interconnected with a bronchus, its wall was dense and consisted of three layers: the internal layer was pyogenic, the middle layer was made of tuberculous granulation tissue, and the external one was made of connective tissue. What is the most likely diagnosis?
A. Fibrous cavernous tuberculosis
B. Fibrous focal tuberculosis
C. Tuberculoma
D. Acute focal tuberculosis
E. Acute cavernous tuberculosis

33. Histological investigation of renal biopsy material taken from a patient with tuberculosis has revealed chaotically located chromatin granules in the focus of caseous necrosis. These changes are the result of:
A. Karyorhexis
B. Karyolysis
C. Karyopyknosis
D. Mitotic activity of nuclei
E. Apoptosis

34. During the inspection of dental tools for sterility in one case, gram-positive cocci

were detected. They were situated in clusters and yielded positive plasma coagulation reaction; the cocci were fermenting mannitol in anaerobic conditions and exhibiting lecithinase activity. What microorganism was detected?
A. St. Aureus
B. St. epidermidis
C. St. saprophiticus
D. Str. pyogenes
E. Corinebacterium xerosis

35. Analysis of sputum taken from a patient with suspected pneumonia revealed slightly elongated gram-positive diplococci with tapered opposite ends. What microorganisms were revealed in the sputum?
A. Streptococcus pneumoniae
B. Staphylococcus aureus
C. Klebsiella pneumoniae
D. Neisseria meningitidis
E. Neisseria gonorrhoeae

36. Microscopic examination of pus sample taken from the mandibular fistula canal and stained by Gram's method has revealed druses with gram-positive coloring in the center and cone-shaped structures with gram-negative coloring. Such morphology is characteristic of the agent of:
A. Actinomycosis
B. Candidiasis
C. Anaerobic infection
D. Staphylococcal osteomyelitis
E. Fusobacteriosis

37. A puncture sample has been taken from the inguinal lymph nodes of a patient provisionally diagnosed with the plague. The sample was inoculated into a hard nutrient medium. What shape will the colonies have, if the diagnosis is confirmed?
A. Lace handkerchief"
B. "Mercury drops"
C. "Dewdrops"
D. "Shagreen leather"
E. "Lion's mane"

38. To perform conduction anesthesia, a patient had been administered a drug used in dental surgery. The patient developed the symptoms of poisoning: central nervous system excitation followed by paralysis and acute cardiovascular insufficiency (collapse). Additionally, there were allergic reactions (itching, swelling, erythema). Name this drug:
A. Lidocaine
B. Suxamethonium chloride
C. Thiopental sodium
D. Tubocurarin chloride
E. Pipecuronium bromide

39. Enzymes and other active substances regulating connective tissue density and permeability are being produced in connective tissue cells. What enzyme drug is used to make the connective tissue growths looser and more permeable?
A. Lydase
B. Amylase
C. Lipase
D. Cocarboxylase
E. Cholinesterase

40. A schizophrenic patient has been prescribed aminazine. What pharmacodynamic action of this drug justifies its prescription in this case?
A. Antipsychotic
B. Antiemetic
C. Hypothermic
D. Muscle relaxant
E. Hypotensive

41. A patient with maxillofacial joint arthritis has come to a dentist. The dentist prescribed an ointment with an anti-inflammatory agent that is a pyrazolone derivative. Name this agent:
A. Butadion (Phenylbutazone)
B. Mefenamic acid
C. Ibuprofen
D. Indometacin
E. Diclofenac sodium

42. A 55-year-old man with acute heart failure has been administered a quick- relief cardiac glycoside. Which of the following drugs has been given to the patient?
A. Strophanthin
B. Adonisidum
C. Digitoxin
D. Celanid
E. Milrinone

43. A patient suffering from ciliary arrhythmia with anamnesis of bronchial asthma should be prescribed an antiarrhythmic drug. What antiarrhythmic drug is contraindicated in this case?
A. Anaprilin (Propranolol)
B. Ajmaline
C. Verapamil
D. Nifedipine
E. Novocainamide (Procainamide)

44. A 35-year-old woman is diagnosed with faucial diphtheria. The patient died with signs of acute heart failure. On autopsy: heart cavities are enlarged in the diameter, the heart muscle is dull, flaccid, striped on section, with yellowish areas under the endocardium. What type of degeneration was detected in cardiac hystiocytes?
A. Fatty
B. Carbohydrate
C. Ballooning
D. Hyaline droplet
E. Hydropic

45. A 67-year-old patient has ordered a full functional denture. It was necessary to extract his left upper canine. After infraorbital anaesthesia, the patient presented with progressing hematoma in the frontal part of his face. The patient was found to have an injury of the artery that is the branch of:
A.A. maxillaris
B.A. facialis
C.A. temporalis superficialis
D.A. ophthalmica
E.A. labialis superior

46. A woman, who had undergone a mastectomy due to breast cancer, was prescribed a course of radiation therapy. What vitamin preparation has marked the antiradiation effect due to its antioxidant activity?
A. Tocopherol acetate
B. Ergocalciferol
C. Riboflavin
D. Cyanocobalamin
E. Folic acid

47. Often the cause of secondary immunodeficiency is an infectious affection of an organism when agents reproduce directly in the cells of the immune system and destroy them. Specify the diseases, during which the described above occurs:
A. Infectious mononucleosis, AIDS
B. Tuberculosis, mycobacteriosis
C. Poliomyelitis, viral hepatitis type A
D. Dysentery, cholera
E. Q fever, typhus

48. Premature babies often develop respiratory distress syndrome. This pathology is caused by the deficiency of a certain component of the blood–air barrier. Name this component:
A. Surfactant
B. Capillary endothelium
C. Endothelial basement membrane
D. Alveolar basement membrane
E. Alveolocytes

49. A forensic laboratory received clothes of a citizen, who a day before was reported missing. The clothes were found in a shed, there are red stains identified as blood by an expert. What reaction should be performed to determine whether these red stains are dried human blood?
A. Circular precipitation
B. Complement binding
C. Flocculation
D. Enzyme immunoassay
E. Agglutination

50. A patient has a history of chronic heart failure. Which of the following hemodynamic parameters is a major symptom of cardiac decompensation development?
A. Decreased stroke volume
B. Tachycardia development
C. Tonogenic dilatation
D. Increased peripheral vascular resistance
E. Increased central venous pressure

51. A 45-year-old patient with essential hypertension, who has been taking an antihypertensive drug for four days, notes that his blood pressure is normalized; however, the patient complains of sleepiness and sluggishness. What drug is the patient taking?
A. Clophelin (Clonidine)
B. Prazosin
C. Captopril
D. Enalapril
E. Apressin (Hydralazine)

52. Due to trauma, the patient's parathyroid glands have been removed, which resulted in inertness, thirst, sharp increase of neuromuscular excitability. Metabolism of the following substance is disturbed:
A. Calcium
B. Manganese
C. Chlorine
D. Molybdenum
E. Zinc

53. A doctor has established significant growth retardation, disproportional body build, and mental deficiency of a child. What is the most likely cause of this pathology?
A. Hypothyroidism
B. Insufficient nutrition
C. Hyperthyroidism
D. Genetic defects
E. Hypopituitarism

54. To terminate the hypertensive crisis, the patient was administered the solution of magnesium sulfate. What route of drug administration should be chosen?
A. Intravenous
B. Duodenal
C. Rectal
D. Oral
E. Intra-arterial

55. A specimen presents an endocrine system organ covered with a capsule made of connective tissue. Septa branch off from the capsule inwards and divide the organ into lobules. Each lobule consists of two cell types: neurosecretory pinealocytes (polygonal cells with processes) located in the center and gliacytes (astrocytes) located at the periphery. What organ is represented in this specimen?
A. Epiphysis
B. Pituitary gland
C. Hypothalamus
D. Thyroid gland
E. Adrenal medulla

56. After the introduction of adrenaline, the patient's blood glucose level increased. It is caused by intensified:
A. Glycogenolysis in the liver
B. Glycolysis in the liver
C. Glycolysis in the skeletal muscles
D. Glycogen synthesis
E. Glycogenolysis in the muscles

57. A 20-year-old young man, who started to train systematically in athletics, has the following resting-state blood values: erythrocytes - 5, 5 1012/l, reticulocytes – 12 %, hemoglobin - 160 g/l, color index - 1,03. Such blood values indicate erythropoiesis stimulation due to the following occurring in the process of his training:A. Hypoxemia
B. Hypercapnia
C. Physical activity
D. Hyperventilation
E. Hyperglycemia

58. In the armpits of a patient, there are small (1-1,5 mm), dorsoventrally flattened, wingless, blood-sucking insects. Their lar-

wingless, blood-sucking insects. Their larvae have been developing in the armpits as well. What disease is caused by these insects?
A. Phthiriasis
B. Sleeping sickness
C. Chagas' disease
D. Plague
E. Relapsing fever

59. To treat peptic ulcer disease of the stomach, a patient has been prescribed famotidine. Specify the mechanism of action of this drug:
A. H2 histamine receptors block
B. Effect on ion channels of cell membranes
C. Antienzyme action
D. Physicochemical interaction
E. Effect on cell membrane transport system

60. A student, who unexpectedly met his girlfriend, developed an increase in systemic arterial pressure. This pressure change was caused by the intensified realization of the following reflexes:
A. Conditioned sympathetic
B. Conditioned parasympathetic
C. Conditioned sympathetic and parasympathetic
D. Unconditioned parasympathetic
E. Unconditioned sympathetic

61. A connective tissue specimen stained with hematoxylin-eosin shows isogenous cell groups surrounded with basophilic intercellular substance. No fibrous structures are detected. What type of connective tissue is it?
A. Hyaline cartilage tissue
B. Elastic cartilage tissue
C. Dense fibrous tissue
D. Loose fibrous tissue
E. Splenial bone tissue

62. A 46-year-old patient consulted an oculist about drooping of the upper eyelid. On examination, he was diagnosed with a brain tumor. The pathological process must have affected the nuclei of the following pair of cranial nerves:
A. III
B. II
C. IV
D. VI
E. VII

63. A 36-year-old patient consulted an ophthalmologist about eye ache. The examination revealed erosion of the cornea, which is the lack of superficial and spinous layers of the epithelium. What cells will provide regeneration of the damaged epithelium?
A. Cells of stratum basale
B. Cells of stratum corneum
C. Cells of stratum granulosum
D. Cells of stratum lucidum
E. Cells of stratum superficial

64. A patient undergoing treatment with nitrofurans has imbibed a small amount of alcohol, which resulted in severe poisoning. The poisoning developed due to:
A. Accumulation of acetic aldehyde
B. Allergic reaction
C. Neural disorder
D. Cardiovascular collapse
E. Disturbed renal function

65. During the development of frostbite, the exposed skin becomes pale, and its temperature drops. What mechanism is the basis of these developments?
A. Reflex vasoconstriction
B. Dermal and subcutaneous vasodilatation
C. Visceral vasoconstriction
D. Decreased heart rate
E. Closure of arteriovenous anastomoses

66. A patient during fasting developed ketoacidosis as a result of increased fatty acids decomposition. This decomposition can be inhibited with:

A. Insulin
B. Glucagon
C. Adrenaline
D. Thyroxin
E. Cortisol

67. The examination of a patient revealed glycosuria and hyperglycemia. He complains of dry mouth, itchy skin, frequent urination, thirst. He has been diagnosed with diabetes mellitus. What is the cause of polyuria in this patient?
A. Increased urine osmotic pressure
B. Decreased plasma oncotic pressure
C. Increased filtration pressure
D. Decreased cardiac output
E. Increased plasma oncotic pressure

68. Due to the overdosage of a vasodilator, a 58-year-old patient has developed acute vascular insufficiency. What drug would be advisable for termination of this pathological condition?
A. Mesaton (Phenylephrine)
B. Euphyllin (Aminophylline)
C. Dopamine
D. Cordiamin
E. Aethimizolum (Methylamide)

69. To treat chronic heart failure, a patient takes digoxin. What diuretic can increase digoxin toxicity due to increased excretion of K+ ions?
A. Hydrochlorothiazide
B. Spironolactone
C. Panangin
D. Silibor
E. Lisinopril

70. A patient who had been eating only polished rice developed polyneuritis caused by thiamine deficiency. What compound can be indicative of this kind of avitaminosis when excreted with urine?
A. Pyruvic acid
B. Malate
C. Methylmalonic acid
D. Uric acid
E. Phenylpyruvate

71. A doctor examined a patient, studied the patient's blood analyses, and concluded that the peripheral organs of immunogenesis are damaged. What organs are the most likely to be affected?
A. Tonsils
B. Thymus
C. Kidneys
D. Redbone marrow
E. Yellow bone marrow

72. In what organ biotransformation (metabolic transformation) of most medicinal agents occurs upon their introduction into an organism?
A. Liver
B. Kidneys
C. Intestine
D. Skin
E. Lungs

73. A patient with diabetes mellitus has been delivered to a hospital unconscious. BP is low, Kussmaul's respiration is observed; the smell of acetone can be detected from the patient's mouth. What mechanism is leading in the coma development in this case?
A. Accumulation of ketone bodies in blood
B. Accumulation of potassium ions
C. Accumulation of sodium ions
D. Accumulation of chlorine ions
E. Accumulation of urea

74. A patient has been diagnosed with bicuspid valve insufficiency. Where is this valve located?
A. Between the left atrium and left ventricle
B. Between the right atrium and right ventricle
C. Between the left and right atria
D. Between the left and right ventricles
E. At the aortic orifice

E. At the aortic orifice

75. In the epicenter of the registered rabies cases among wild animals, a 43-year-old man came to a clinic and claimed to have been bitten by a stray dog. He was given a course of anti-rabies vaccine. This preparation belongs to the following type of vaccines:
A. Attenuated
B. Inactivated
C. Molecular
D. Toxoids
E. Synthetic

76. In Western Europe, nearly half of all congenital malformations occur in the children conceived in the period when pesticides were used extensively in the region. These congenital conditions are the result of the following factor:
A. Teratogenic
B. Carcinogenic
C. Malignization
D. Mutagenic
E. Mechanical

77. Gastrulation is the period of embryogenesis when germinal layers are formed, resulting in a three-layered structure of an embryo. What gastrulation mechanism is characteristic of a human embryo?
A. Delamination and immigration
B. Invagination
C. Epiboly
D. Immigration and invagination
E. Delamination and epiboly

78. A 19-year-old young man has been examined in a nephrological hospital. Increased potassium content was detected in the secondary urine of the patient. Such alterations are the most likely to be caused by the increased secretion of the following hormone:
A. Aldosterone
B. Oxytocin
C. Adrenaline
D. Glucagon
E. Testosterone

79. A 12-year-old boy has tetanic convulsions. What gland can be functionally impaired in this case?
A. Glandulae parathyroidae
B. Hypophisis
C. Glandula thyroidea
D. Thymus
E. Glandula pinealis

80. A man came to a surgeon with complaints of pain in his lower right abdomen. On deep palpation, the doctor detected a painful area in the right inguinal region. What part of the intestine is the most likely to be affected with the pathological process?
A. Cecum
B. Transverse colon
C. Descending colon
D. Sigmoid colon
E. Rectum

81. During the investigation of skin epithelium, it was determed that it consists of several cellular layers. Epithelial cells of the external layer have no nuclei. What type of epithelium is it?
A. Keratinized stratified squamous epithelium
B. Non-keratinized stratified squamous epithelium
C. Transitional epithelium
D. Multirow ciliary epithelium
E. Multirow columnar epithelium

82. A histological specimen shows terminal secretory parts of glands made of conic cells with basophilic cytoplasm and a roundish nucleus in the centre. Specify the type of terminal secretory parts by the type of secretion:
A. Serous
B. Sebaceous

C. Combined
D. Mucous
E. Seromucous

83. The electron diffraction pattern of a spermatozoon clearly presents a sheath-like structure localized in the spermiocalyptrotheca and participating in the dissolution of ovular membranes. Name this structure:
A. Acrosome
B. Centriole
C. Microtubules
D. Axoneme
E. Segmented columns

84. A patient complains of a toothache. On examination, he has been diagnosed with pulpitis. Which factor played the main pathogenic role in the development of pain syndrome in this case?
A. Increased intratissular pressure in the dental pulp
B. Vasospasm
C. Inadequate stimulation of the mandibular nerve branch
D. Activation of one of the complement system components
E. Interleukin action

85. The patient's saliva has been tested for antibacterial activity. What saliva component has antibacterial properties?
A. Lysozyme
B. Amylase
C. Ceruloplasmin
D. Parotin
E. Cholesterol

86. A patient with a bleeding knife wound in the area of the carotid triangle has been delivered to a hospital. Blood flowing from the wound is dark. What vessel is injured?
A. Internal jugular vein
B. External jugular vein
C. Internal carotid artery
D. Facial artery
E. Facial vein

87. A patient with symptoms of acute heart failure, namely pallor, acrocyanosis, and rapid shallow breathing, has been delivered to an emergency department. Which of these drugs is indicated in this case?
A. Corglycon
B. Digitoxin
C. Cordiamine
D. Nitroglycerine
E. Adrenalin hydrochloride

88. A victim of an earthquake has been remaining under debris for seven days without food or water. What type of starvation is it?
A. Complete
B. Complete with continued hydration
C. Quantitative
D. Qualitative
E. Incomplete

89. Micromanipulator was used to extract one of the two centrioles of the centrosome (cell center) from hepatocyte (liver cell). What process will stop occurring in this cell?
A. Division
B. Energy exchange
C. Glycogen synthesis
D. Protein biosynthesis
E. Lipid synthesis

90. During an experiment aimed at the study of respiration regulation processes, the peripheral chemoreceptors of test animals were stimulated, which resulted in changed respiratory rate and depth. Where are these receptors localized?
A. Aortic arch, carotid sinus
B. Capillary bed, aortic arch, carotid sinus
C. Capillary bed, aortic arch
D. Capillary bed, carotid sinus
E. Atria, carotid sinus

91. After an abortion, a 25-year-old woman developed oliguria, anuria, and increasing azotemia. The patient died of acute renal

failure. The autopsy revealed degeneration and necrosis of the convoluted renal tubules epithelium. What disease was the cause of death in this case?
A. Acute necrotizing nephrosis
B. Acute pyelonephritis
C. Chronic glomerulonephritis
D. Renal amyloidosis
E. Rapidly progressive glomerulonephritis

92. A child with a foreign body in the lungs has been hospitalized. What bronchus is the most likely to contain this foreign body, if its diameter approximates to 1,5 cm?
A. Right primary bronchus
B. Lobar bronchus
C. Left primary bronchus
D. Left segmental bronchus
E. Right segmental bronchus

93. During the examination of the oral cavity at the vestibular surface of the lower right incisor, there was detected a rounded growth on the thin pedicle. Histologically: in the connective tissue, there are numerous thin-walled sinusoids, hemorrhage areas, hemosiderin foci, and giant cells resembling osteoclasts. Make the diagnosis:
A. Giant cell epulis
B. Granular cell ameloblastoma
C. Angiomatous epulis
D. Gingival fibromatosis
E. Cavernous hemangioma

94. A 35-year-old man has come to a dentist with complaints of the decreased density of the dental tissue and increased brittleness of his teeth during the consumption of hard food. Laboratory analysis measured Ca/P correlation in the enamel sample. What value of Ca/P indicates increased demineralization?
A. 0,9
B. 1,67
C. 1,85
D. 2,5
E. 1,5

95. During the examination, a dentist noticed bowl-shaped defects on the frontal surface of the patient's canines in the cervical area. Microscopically the pulp is covered with compacted dentin, slightly atrophied and sclerosed. What pathological process occurs in the patient?
A. Cuneiform defects
B. Superficial caries
C. Median caries
D. Stage of chalky white spots
E. Deep caries

96. A patient complains of frequent bowel movements and stool with blood admixtures ("raspberry jelly" stool). Microscopic examination revealed large mononuclear cells with absorbed red blood cells. What protozoon is this morphological structure typical of?
A. Entamoeba histolytica
B. Giardia lamblia
C. Campylobacter jejuni
D. Toxoplasma gondii
E. Balantidium coli

97. During teeth examination on the lateral surface of the first upper molar, there was detected a cone-shaped carious cavity with base oriented towards the tooth surface and apex - towards the tooth center. Softened dentin is visible on the floor of the carious cavity. Make the diagnosis:
A. Dentin caries
B. Enamel caries
C. Cement caries
D. Tooth erosion
E. –

98. After the restoration of maxillary incisors with artificial crowns, a 44-year-old woman was found to have a brownish growth in the form of a node 15 mm in diameter. Histological study revealed that under the stratified squamous epithelium of the gingiva, there was a connective tissue mass with numerous sinusoidal vessels,

oval-shaped mononuclear cells forming osteoid substance, and polynuclear giant cells that destroyed the alveolar ridge of the upper jaw. What is the most likely diagnosis?
A. Giant cell epulis
B. Fibromatous epulis
C. Angiomatous epulis
D. Gingival fibromatosis
E. Eosinophilic granuloma

99. A woman is diagnosed with fatty tissue inflammation located between the leaves of the broad ligament of the uterus. Name this anatomical structure:
A. Parametrium
B. Perimetrium
C. Myometrium
D. Endometrium
E. Mesometrium

100. Normal metabolic rate and energy expenditure should be taken into account when the actual basal metabolic rate of a patient is being determined by means of indirect calorimetry. Normal metabolic rate can be determined most accurately based on the patient's:
A. Sex, age, height and weight
B. Body surface area and weight
C. Respiratory coefficient and body surface area
D. Height and respiratory coefficient
E. –

101. Respiratory coefficient and caloric coefficient of oxygen On microscopic examination of leftovers of the canned meat eaten by a patient with severe food toxic infection, the following was detected: gram-positive bacilli with subterminal staining defect and configuration alteration of bacilli generally resembling a tennis racket. What agent was detected?
A.C. botulinum
B. S. aureus
F. coli
C. S. enteritidis
D. P. vulgaris

102. The patient's examination in a hospital specialized in diseases of the nervous system has revealed the absence of light-induced miosis. It is caused by the damage of the following brain structures:
A. Vegetative nuclei of the 3-rd pair of cranial nerves
B. Red nuclei of the mesencephalon
C. Reticular nuclei of the mesencephalon
D. Hypothalamus nuclei
E. Reticular nuclei of the medulla oblongata

103. A newborn boy has been diagnosed with hydrocephalus. Doctors consider it to be caused by teratogenic factors. What germ layers are affected by the teratogen?
A. Ectoderm
B. All embryo germ layers
C. Endoderm and mesoderm
D. Endoderm
E. Mesoderm

104. A patient on the 2nd day after cardiac infarction presents with an acute decrease of systolic blood pressure down to 60 mm Hg with tachycardia 140/min., dyspnea, loss of consciousness. What mechanism is essential in the pathogenesis of shock developed in this case?
A. Decreased cardiac output
B. Increased myocardial excitability caused by products of necrotic disintegration
C. Decreased circulating blood volume
D. Development of paroxysmal tachycardia
E. Development of anaphylactic reaction to myocardial proteins

105. For biochemical diagnostics of cardiac infarction, it is necessary to determine the activity of a number of enzymes and their isoenzymes in the blood. What enzyme assay is considered to be optimal for confirming or ruling out cardiac infarction at the early stage, after the patient develops tho-

racic pain?
A. Creatine kinase MB isoenzyme
B. Creatine kinase MM isoenzyme
C. LDH1 isoenzyme
D. LDH5 isoenzyme
E. Cytoplasmic isoenzyme of aspartate aminotransferase

106. A 56-year-old man presents with a parathyroid tumor. The following is observed: muscle weakness, osteoporosis, bone deformation, nephroliths consisting of oxalates and phosphates. The patient's condition is caused by:
A. Increased secretion of parathyroid hormone
B. Decreased secretion of parathyroid hormone
C. Increased secretion of calcitonin
D. Decreased secretion of calcitriol
E. Increased secretion of thyroxin

107. There is increased activity of AST, LDH1, LDH2, and CPK in the patient's blood. The pathological process most likely occurs in the:
A. Heart
B. Skeletal muscles
C. Kidneys
D. Liver
E. Adrenal glands

108. A patient suffering from acute vascular purpura is prescribed a first-generation antihistamine with local anesthetic, antispasmodic, and sedative action. Specify this drug:
A. Dimedrol (Diphenhydramine)
B. Diazolin (Mebhydrolin)
C. Dithylin
D. Droperidol
E. Dibazol (Bendazol)

109. A patient with autoimmune thyroiditis has been prescribed a peptide hormonal agent. Specify this agent:
A. L-thyroxin
B. Trimethoprim
C. Triamcinolone
D. Triquilar
E. Tamoxifen

110. A 42-year-old woman, who has been keeping to a vegetarian diet for a long period of time, consulted a doctor. The examination revealed a negative nitrogen balance in the patient. What factor is the most likely cause of such a condition?
A. Insufficient amount of proteins in the diet
B. Insufficient amount of dietary fiber
C. Excessive amount of fats in the diet
D. Insufficient amount of fats in the diet
E. Decreased rate of metabolic processes

111. The cytogenetic analysis allowed determining the patient's karyotype - 47, XY, +21/46, XY. Name this condition:
A. Mosaicism
B. Deletion
C. Translocation
D. Genocopy
E. Phenocopy

112. A patient, who after a trauma suffers from impeded active flexion of the elbow, consulted a traumatologist. What muscle is the most likely to be damaged?
A. M. biceps brachii
B. M. pectoralis major
C. M. deltoideus
D. M. coracobrachialis
E. M. latissimus dorsi

113. In the patient's feces, there were eggs of Fasciola hepatica. The doctor, however, refrained from making the diagnosis and insisted on a repeat of analysis, with beef liver excluded from the patient's diet. What led the doctor to make such a decision?
A. Possible phenomenon of transient eggs
B. Absent symptoms of invasion
C. Uncertainty regarding the analysis precision

D. Insufficient qualification of a laboratory assistant
E. Lack of trust towards the investigation method

114. A patient presents with dysfunction of the cerebral cortex accompanied by epileptic seizures. He has been administered a biogenic amine synthesized from glutamate and responsible for central inhibition. What substance is it?
A. γ-aminobutyric acid
B. Serotonin
C. Dopamine
D. Acetylcholine
E. Histamine

115. Redbone marrow has been damaged under radioactive emission of 5 Gy. What determines the red bone marrow sensitivity towards ionizing radiation?
A. Intensive cell division
B. High content of free radicals in the cells
C. High content of peroxides in the cells
D. Radiosensitizers in the cells
E. Destructive effect of radiotoxins on DNA synthesis

116. A 40-year-old patient suffers from the intolerance of dairy products. This condition has likely developed due to insufficiency of the following digestive enzyme:
A. Lactase
B. Lipase
C. Maltase
D. Invertase
E. Amylase

117. A patient has been diagnosed with severe B12-deficient anemia with hemopoiesis disturbance. Anamnesis states total gastrectomy. What cells allow confirming this diagnosis, if they are absent in the peripheral blood?
A. Megalocytes
B. Microcytes
C. Ovalocytes
D. Normocytes
E. Anulocytes

118. To prevent wound infection associated with surgical procedures, a patient was given a synthetic antiprotozoan drug demonstrating high activity against Helicobacter pylori. Specify this drug:
A. Metronidazole
B. Doxycycline hydrochloride
C. Chingamin
D. Acyclovir
E. Isoniazid

119. A specimen of intestine demonstrates complex branching tubuloalveolar glands with their ends embedded in the submucous layer. What organ is it?
A. Duodenum
B. Jejunum
C. Ileum
D. Colon
E. Cecum

120. After examining a patient, a doctor recommended him to exclude rich meat and vegetable broths, spices, and smoked products from the diet, since the patient was found to have:
A. Increased secretion of hydrochloric acid by the stomach glands
B. Reduced secretion of hydrochloric acid by the stomach glands
C. Reduced motility of the gastrointestinal tract
D. Reduced salivation
E. Biliary dyskinesia

121. Roentgenologically confirmed obstruction of the common bile duct resulted in preventing bile from inflowing to the duodenum. What process is likely to be disturbed?
A. Fat emulgation
B. Protein absorption
C. Carbohydrate hydrolysis
D. Hydrochloric acid secretion in the stom-

ach
E. Salivation inhibition

122. Typical signs of food poisoning caused byC. botulinum include diplopia, swallowing, and respiration disorders. These signs develop due to:
A. Exotoxin action
B. Enterotoxin action
C. Enterotoxic shock development
D. Adenylate cyclase activation
E. Adhesion of the agent to enterocyte receptors

123. A patient in a grave condition has been delivered to an admission ward. Examination revealed pupil mydriasis, no reaction to the light, considerable reddening, and dryness of skin and mucous membranes. What drug could have caused the intoxication symptoms?
A. Atropine sulphate
B. Proserin
C. Adrenalin hydrochloride
D. Pilocarpine hydrochloride
E. Dithylinum

124. A patient consulted a therapeutist with complaints of pain in the chest, cough, fever. The X-ray revealed eosinophilic infiltrates in the lungs, further investigation of which allowed detecting the presence of larvae. What helminthiasis is it characteristic of?
A. Ascariasis
B. Echinococcosis
C. Fascioliasis
D. Cysticercosis
E. Trichiniasis

125. As a result of an injury, a child developed an abscess of adipose tissue of the cheek. With time the process spread to the lateral surface of the pharynx. Pus had spread along the following fascia:
A. Bucco-pharyngeal
B. Temporal
C. Masticatory
D. Parotid
E. –

126. Brain investigation by means of nuclear magnetic resonance revealed the patient to have a hematoma in the genu of the internal capsule. What pathway is damaged in this case?
A. Tr. cortico-nuclearis
B. Tr. cortico-spinalis
C. Tr. cortico-fronto-pontinus
D. Tr. cortico-thalamicus
E. Tr. thalamo-corticalis

127. Cytochemical investigation revealed a high content of hydrolytic enzymes in the cytoplasm. This phenomenon indicates the activity of the following organelles:
A. Lysosomes
B. Endoplasmic reticulum
C. Mitochondria
D. Polysomes
E. Cell center

128. A victim of a traffic accident has lost thoracic respiration but retaines diaphragmal. The spinal cord is most likely to be damaged at:
A. VI-VII cervical segments
B. I-II cervical segments
C. XI-XII cervical segments
D. I-II lumbar segments
E. I-II sacral segments

129. Preventative examination of a 55- year -old patient revealed type II diabetes mellitus. An endocrinologist detected an increase in body weight and liver enlargement. The man is a non-smoker and does not abuse alcohol but likes to have a ”hearty meal”. Histological examination by means of diagnostic liver puncture revealed that the hepatocytes were enlarged mostly on the lobule periphery, their cytoplasm had transparent vacuoles that reacted positively with sudan III. What liver pathology

was revealed?
A. Fatty hepatosis
B. Acute viral hepatitis
C. Chronic viral hepatitis
D. Alcohol hepatitis
E. Portal liver cirrhosis

130. On microscopic examination of surgical biopsy material (part of the lip with an ulcer) near the ulcer margins and under the ulcer floor in the connective tissue of mucosa, there are epithelial complexes composed of the atypical stratified epithelium with pathological mitotic figures. Within these complexes, there are accumulations of bright pink concentric formations. What pathology is it?
A. Squamous cell keratinous carcinoma
B. Squamous cell nonkeratinous carcinoma
C. Papilloma
D. Transitional cell carcinoma
E. Basal cell carcinoma

131. During the examination of a patient with periodontal disease, it would be advisable to investigate the functional state of blood vessels of the dentomaxillary area. What method can be applied in this case?
A. Rheography
B. Gnathodynamometry
C. Sphygmography
D. Chronaximetry
E. Electroodontodiagnostics

132. A patient with a displaced fracture of the right coronoid process of the mandible has been delivered to a first-aid center. What muscle had displaced the coronoid process?
A. Right temporal muscle
B. Right masticatory muscle
C. Right lateral pterygoid muscle
D. Right medial pterygoid muscle
E. Left masticatory muscle

133. A patient with bronchial asthma has developed a bronchial spasm during the visit to a dentist. Name the drug necessary to arrest the spasm:
A. Salbutamol
B. Naphthizin
C. Mesaton (Phenylephrine)
D. Anaprilin (Propranolol)
E. Bisoprolol

134. Microscopy of an oval cell, 150 micron in size, revealed the following: cytoplasm has yolk inclusions but no centrioles. Name this cell:
A. Oocyte
B. Leucocyte
C. Myocyte
D. Fibroblast
E. Macrophage

135. A worker of a cattle farm consulted a surgeon about fever up to 40oC, headache, weakness. An objective examination of his back revealed hyperemia and a dark red infiltration up to 5 cm in diameter with a black bottom in its center, which was surrounded with pustules. What disease are these presentations typical of?
A. Anthrax
B. Plague
C. Tularemia
D. Furuncle
E. Abscess

136. The autopsy of a 37-year-old man has revealed the following: in the aorta on the smooth glossy ivory-colored intima, yellowish-gray spots are blending with each other, which form stripes that do not protrude from the intima surface. Microscopy reveals swelling and destruction of elastic membranes, diffuse impregnation of the aortic wall with orange granules (if stained with Sudan III), the orange coloring of macrophage cytoplasm, and nonstriated muscle elements. Specify this process:
A. Lipoidosis of the aorta
B. Liposclerosis of the aorta
C. Atheromatosis of the aorta

D. Atherocalcinosis of the aorta
E. Imbibition of the aorta with cadmium salts

137. A patient with acute bronchitis has been prescribed sulfanilamide drugs for treatment. In an hour after administration, the patient developed itching and vesicles filled with light transparent liquid on the face, palms, and soles. Name the mechanism of the immune response:
A. Reaginic reaction
B. Antibody-mediated cytolysis
C. Cell cytotoxicity
D. Immune complex-mediated hypersensitivity
E. –

138. A 47-year-old man consulted a dentist about difficult mouth opening (trismus). The patient has a history of a stab wound of the lower extremity. What infection can be manifested by these symptoms?
A. Tetanus
B. Brucellosis
C. Whooping cough
D. Anaerobic wound infection
E. Tularemia

139. A 69-year-old patient developed a small plaque with subsequent ulceration on the skin of the lower eyelid. The formation was removed. The microscopic examination of dermis revealed complexes of atypical epithelial cells arranged perpendicularly to the basal membrane on the periphery. The cells were dark, of polygonal prismatic shape, and had hyperchromic nuclei with frequent mitoses. What is the histological form of carcinoma in this patient?
A. Basal cell carcinoma
B. Keratinizing squamous cell carcinoma
C. Nonkeratinizing squamous cell carcinoma
D. Adenocarcinoma
E. Undifferentiated carcinoma

140. A 68-year-old man, who had been suffering from essential hypertension for a long time, was delivered to a resuscitation unit with hemiplegia. The patient died after 7 hours. On autopsy: in the right cerebral hemisphere, there is a cavity 5x5 cm in size with uneven margins, filled with dark red blood clots. What cerebral circulation disorder developed in the patient?
A. Hematoma
B. Hemorrhagic infiltration
C. Thrombosis
D. Petechial hemorrhage
E. Local venous hyperemia

141. What factor results in the highest energy expenditure under the normal vital activity conditions?
A. Action of skeletal muscles
B. Increase of environment temperature
C. Decrease of environment temperature
D. Mental work
E. Food rich in calories

142. To drain the oral cavity, a dentist places a tampon between the cheek and the 2nd upper molar. This way secretion of the following salivary gland WILL NOT be able to accumulate in the oral cavity:
A. Parotid gland
B. Submandibular gland
C. Sublingual gland
D. Lingual gland
E. Labial glands

143. During thermal stimulation, it is characteristic of oral cavity blood vessels to:
A. Dilate in response to both cold and hot stimuli
B. Present no response towards thermal stimuli
C. Respond with constriction to cold stimuli
D. Respond with constriction to hot stimuli
E. Respond depending on the vessel functional condition

144. After the cerebral hemorrhage, a patient developed aphasia - lost the ability to articulate words. The hemorrhage is localized in the:
A. Inferior frontal gyrus
B. Superior frontal gyrus
C. Middle frontal gyrus
D. First temporal convolution
E. Second temporal convolution

145. To assess the rate of collagen disintegration during certain connective tissue disturbances, it is necessary to measure the urine content of the following:
A. Oxyproline
B. Ornithine
C. Proline
D. Lysine
E. Urea

146. Deaf parents with genotypes DDee and ddEE gave birth to a girl with normal hearing. Specify the form of D and E genes interaction:
A. Complementary interaction
B. Complete dominance
C. Epistasis
D. Polymery
E. Overdominance

147. A 33-year-old man has a cystic growth connected to the 2nd molar of the lower jaw. Within the cystic cavity, there is a rudimentary tooth. On microscopy: the inner cystic surface is covered with stratified squamous epithelium, there are groups of mucin-producing cells. What diagnosis is the most likely?
A. Follicular cyst
B. Periodontitis
C. Primordial cyst
D. Radicular cyst
E. Follicular ameloblastoma

148. In the course of an experiment, researchers stimulate a branch of the sympathetic nerve that innervates heart. What alterations of cardiac activity should be registered?
A. Increase in heart rate and heart force
B. Decrease in heart force
C. Increase in heart rate
D. Increase in heart force
E. Increase in arterial pressure

149. A patient with a nasal trauma presents with a skull fracture that circles the piriform opening. What bone is damaged?
A. Nasal
B. Lacrimal
C. Maxillary
D. Frontal
E. Ethmoid

150. During tooth brushing, it is not uncommon for oral mucosa to be injured. However, bleeding quickly stops on its own. What substances in saliva quickly staunch the flow of blood during minor oral injuries?
A. Procoagulants
B. Lipolytic enzymes
C. Amylolytic enzymes
D. Mineral substances
E. Lysozyme and mucin

151. The autopsy of a 45-year-old man, who worked in organic acid production and died from uremia, has revealed reduced and completely destroyed crowns of the upper and lower incisors. Microscopy detects the destruction of dentin and enamel, the pulp is covered with dense replacing dentin. What pathological process occurred in the teeth in this case?
A. Necrosis of the hard tooth tissues
B. Fluorosis
C. Teeth erosion
D. Cuneiform defects
E. Hypercementosis

152. During the postmortem examination of a 9-month-old infant, it was determined that the cause of death was cerebral edema.

What water-electrolyte imbalance is the most likely cause of edema development?
A. Hypoosmolar hyperhydration
B. Hyperosmolar hyperhydration
C. Isoosmolar dehydration
D. Isoosmolar hyperhydration
E. Hyperosmolar dehydration

153. An accident had resulted in a 65-year-old man drowning in a lake. Resuscitation measures allowed to restore his respiration and cardiac function. What factor prolongs the period of apparent death?
A. Hypothermia
B. Hyperthermia
C. Prolonged preagony and agony
D. Elderly age
E. –

154. An athlete (a long-distance runner) during competition has developed acute heart failure. This pathology developed due to:
A. Volume overload
B. Coronary blood flow disturbance
C. Direct damage to myocardium
D. Pericardial pathology
E. Pressure overload

155. In the postabsorptive state, glycogen synthesis is increased in the liver and muscles. The synthesis involves the following substance:
A. Uridine triphosphate (UTP)
B. Guanosine triphosphate (GTP)
C. Cytidine triphosphate (CTP)
D. Thymidine triphosphate (TTP)
E. Adenosine triphosphate (ATP)

156. A 50-year-old man, who has been suffering for a long time from viral hepatitis, developed mental impairments, impairments of consciousness, and motor disturbances (tremor, ataxia, etc.). What is the mechanism of such a condition?
A. Decreased detoxification function of the liver
B. Insufficient phagocytic function of stellate macrophages
C. Decreased synthesis of albumins and globulins in the liver
D. Disturbed lipid exchange in the liver
E. Alterations in the lipid composition of blood

157. A 30-year-old man had suffered a thoracic trauma in a traffic accident, which resulted in the disturbance of external respiration. What ventilatory failure can be observed in this case?
A. Extrapulmonary restrictive
B. Pulmonary restrictive
C. Obstructive
D. Dysregulatory
E. Mixed type

158. A girl is diagnosed with primary microcephaly that is a monogenic autosomal recessive disease. Her natural brother develops normally. What genotypes do the parents of these children have?
A. Aa x Aa
B. AA x AA
C. aa x aa
D. AA x aa
E. AABB x AABB

159. A patient diagnosed with botulism has been prescribed antibotulinic serum for treatment. What immunity will be formed in the given patient?
A. Antitoxic passive immunity
B. Antitoxic active immunity
C. Antimicrobic active immunity
D. Antimicrobic passive immunity
E. Infection immunity

160. An 84-year-old patient suffers from parkinsonism. One of the pathogenetic development elements of this disease is the deficiency of a certain mediator in some of the brain structures. Name this mediator:
A. Dopamine
B. Adrenaline

C. Noradrenaline
D. Histamine
E. Acetylcholine

161. High-altitude dwellers typically demonstrate chronically intensified respiration and decreased pCO2 value of blood. What mechanism is leading in the compensation of their acid-base imbalance?
A. Desreased renal reabsorption of bicarbonate
B. Increased ammonia excretion with urine
C. Decreased pulmonary ventilation
D. Increased pulmonary ventilation
E. –

162. A patient has suffered a head injury. On examination, there is a subcutaneous hematoma in the temporal area. What vessel was damaged, thus resulting in hematoma development?
A. A. temporalis superficialis
B. A. maxillaris
C. A. auricularis posterior
D. A. buccalis
E. A. Occipitalis

163. Due to severe pain syndrome, a patient has been prescribed a narcotic analgesic. Specify the prescribed drug:
A. Morphine
B. Analgin (Metamizole)
C. Nimesulid
D. Dimexid
E. Indometacin

164. A 50-year-old man came to a hospital with complaints of memory disorders, painful sensations along the nerve trunks, decreased mental ability, circulatory disorders, and dyspepsia. Anamnesis states excessive alcohol consumption. What vitamin deficiency can result in such symptoms?
A. Thiamine
B. Niacin
C. Retinol
D. Calciferol
E. Riboflavin

165. A young man has been performing physical exercises, holding a weight for a long time. What kind of muscle contraction is the most characteristic of these exercises?
A. Isometric
B. Isotonic
C. Single
D. Asynchronous
E. Isovolumetric

166. A patient presents with the lymphocytic-monocytic leukogram pattern. It is characteristic of:
A. Chronic inflammatory process
B. Acute inflammatory process
C. Allergies
D. Chronic radiation sickness
E. –

167. A patient has been hospitalized with a provisional diagnosis of diphyllobothriasis. What food products can be the cause of this condition?
A. Fish
B. Pork
C. Beef
D. Milk and eggs
E. Fruit and vegetables

168. During the examination of a woman, she was found to have a luminal narrowing of the right jugular foramen (foramen jugulare). What cranial bones from this foramen?
A. Temporal and occipital
B. Occipital and frontal
C. Temporal and cuneiform
D. Occipital and cuneiform
E. Cuneiform and palatine

169. What coenzyme of flavin-dependent dehydrogenases participates in the reactions of the tricarboxylic acid cycle?
A. Flavin adenine dinucleotide (FAD)

B. Flavin mononucleotide (FMN)
C. Nicotinamide-adenine dinucleotide (NAD+)
D. Thymidine diphosphate (TDP)
E. Heme

170. A patient is diagnosed with the inflammatory process in the area of the excretory duct of the submandibular gland. This duct opens to:
A. Caruncula sublingualis
B. Vestibulum oris
C. Foramen caecum linguae
D. Linea terminalis
E. Recesus gingivalis

171. A patient who has arthritis is prescribed a COX2 selective inhibitor with anti-inflammatory action. Specify this drug:
A. Celecoxib
B. Butadion (Phenylbutazone)
C. Dimexid
D. Indometacin
E. Analgin (Metamizole)

172. A patient has undergone recurring blood tests that revealed sharp fluctuations of glucose content: a significant increase in absorptive state and a significant decrease in the postabsorptive state. What pathology can be the cause of it?
A. Aglycogenosis (glycogenosis type 0)
B. Diabetes mellitus type I
C. Diabetes mellitus type II
D. Acromegaly
E. Endemic goiter

173. A person found oneself in an emotionally straining situation. As a result the blood adrenaline level has risen, therefore increasing the strength of cardiac contractions. In what way does adrenaline increase the strength of cardiac contractions?
A. Activates cardiac β-adrenergic receptors
B. Activates vascular baroreceptors
C. Decreases tone of vagus nerves
D. Activates peripheral chemoreceptors
E. Decreases excitability of pacemaker cells

174. During brain surgery, stimulation of the cerebral cortex resulted in tactile and thermal sensations in the patient. What gyrus was stimulated?
A. Postcentral gyrus
B. Cingulate convolution
C. Parahippocampal gyrus
D. Superior temporal gyrus
E. Precentral gyrus

175. A patient suffering from malaria has developed hemolytic anemia after taking primaquine antimalarial drugs. Hereditary insufficiency of the following enzyme in erythrocytes will be observed in this case:
A. Glucose 6-phosphate dehydrogenase
B. Triosephosphate isomerase
C. Lipase
D. Fructose 1-phosphate aldolase
E. Phosphofructokinase

176. Bacilli were extracted from the investigated sample. The bacilli are curved, extremely mobile, gram-negative, form no spores or capsules, have the anaerobic form of respiration. They form transparent, smooth colonies in alkaline agar, ferment saccharose and mannose into acid, produce exotoxin, fibrinolysin, collagenase, and hyaluronidase. What agent was extracted?
A. Comma bacillus
B. Blue pus bacillus
C. Proteus
D. Colibacillus
E. Dysentery bacillus

177. A 30-year-old man with glomerulonephritis has developed the nephrotic syndrome. What symptom invariably accompanies nephrotic syndrome?
A. Proteinuria
B. Glucosuria
C. Low urine specific gravity
D. Anemia

D. Anemia
E. Azotemia

178. Ulcer disease of the duodenum has been detected in a 38-year-old man. Treatment was prescribed, after which the patient considered himself to be healthy. However, half a year later, the patient developed pain in the epigastrium, heartburn, and insomnia. The patient's condition can be estimated as a:
A. Relapse
B. Remission
C. Development of chronic disease
D. Latent period
E. Pathological state

179. Autosomal nondisjunction had occurred in a woman during meiosis. An ovum with a third copy of the 18th chromosome was formed. A normal spermatozoon impregnated the ovum. The resulting child will suffer from:
A. Edwards' syndrome
B. Klinefelter's syndrome
C. Patau's syndrome
D. Turner's syndrome
E. Down's syndrome

180. Amino acids join to each other in ribosomes of the granular endoplasmic reticulum. Knowing the sequence of amino acids and applying genetic code, it is possible to determine the sequence of nucleoids in:
A. mRNA
B. Introns
C. Proteins
D. Carbohydrates
E. rRNA

181. A patient suffers from an inflammatory process in the area of the lower wall of the orbital cavity. What anatomical structure makes it possible for the inflammatory process to spread to the pterygopalatine fossa?
A. Inferior orbital fissure
B. Superior orbital fissure
C. Supraorbital incisure
D. Posterior ethmoidal foramen
E. Optic canal

182. 8 days after surgery, the patient developed tetanus. The surgeon suspects this condition to be caused by suture material contaminated by the tetanus agent. The material is delivered to a bacteriological laboratory. What nutrient medium is required for the primary inoculation of the suture material?
A. Kitt-Tarozzi medium
B. Endo agar
C. Sabouraud agar
D. Egg-yolk salt agar
E. Hiss medium

183. A patient is diagnosed with the deformed posterior portion of the nasal septum. What bone is deformed?
A. Vomer
B. Medial pterygoid plate
C. Lateral pterygoid plate
D. Perpendicular plate of the ethmoid bone
E. Vertical plate of palatine bone

184. A patient suffers from disturbed blood supply of the superior lateral surface of the cerebral hemispheres. What blood vessel is damaged?
A. Medial cerebral artery
B. Anterior cerebral artery
C. Posterior cerebral artery
D. Anterior communicating artery
E. Posterior communicating artery

185. A victim of an accident has a hemorrhage in the area of the lateral surface of the mastoid process. What branch of the external carotid artery supplies this area with blood?
A.A. auricularis posterior
B. A. temporalis superficialis
C.A. facialis
D.A. maxillaris

E.A. pharyngea ascendens

186. A 33-year-old man presents with disturbed pain and thermal sensitivity after a spinal cord trauma. The following ascending tract is injured:
A. Spinothalamic
B. Lateral corticospinal
C. Anterior corticospinal
D. Ventral spinocerebellar
E. Dorsal spinocerebellar

187. A patient is diagnosed with pancreatitis. Starch decomposition disturbance occurs in the patient's intestine due to deficiency of the following pancreatic enzyme:
A. Amylase
B. Tripsin
C. Chymotrypsin
D. Lipase
E. Carboxypeptidase

188. Histologic specimen of a tooth slice shows a tissue consisting of intercellular substance permeated with tubules, in which cellular processes of odontoblasts are situated. What tissue is presented in this histologic specimen?
A. Dentin
B. Enamel
C. Pulp
D. Cement
E. Periodontium

189. To test teeth sensitivity, they are sprayed with cold or hot water. What structure of the cerebral cortex provides a subjective estimation of this thermal test?
A. Posterior central gyrus
B. First temporal convolution
C. Precentral gyrus
D. Middle frontal gyrus
E. Central fissure

190. During the oral cavity examination, a dentist noticed the eruption of the permanent canines in a child. The child grows and develops normally. Determine the child's age:
A. 11-13 years
B. 13-16 years
C. 6-7 years
D. 8-9 years
E. 9-10 years

191. Autopsy of a 58-year-old man, who had been suffering from rheumatic heart disease and died of cardiopulmonary decompensation, revealed diffuse gray film- and fiber-shaped coating in his pericardium. What type of inflammation is characteristic of this pericarditis?
A. Croupous fibrinous
B. Serous
C. Hemorrhagic
D. Diphtheritic fibrinous
E. Suppurative

192. During the examination of the patient's oral cavity, a dentist noticed the deformation of the teeth and a crescent indentation on the upper right inscisor. The teeth are undersized, barrel-shaped - tooth cervix is wider than its edge. The patient uses a hearing aid, suffers from visual impairment. What type of syphilis affects teeth in such a way?
A. Late congenital
B. Primary
C. Early congenital
D. Secondary
E. Neurosyphilis

193. Autopsy of a 45-year-old man revealed the following: wrinkled shagreen-resembling intima in the ascending aorta; elastic staining is negative. The wall of the left ventricle is up to 1,5 cm in width; no myocardial alterations. Specify the most probable disease of the aorta:
A. Syphilitic mesaortitis
B. Atherosclerosis of the aorta
C. Rheumatic vasculitis
D. Aortic failure

E. –

194. A patient has developed a painful sore with soft ragged edges in the oral cavity. Microscopically there is lymphocytic infiltration with epithelioid and giant multinucleate Langhans cells in the sore floor. What diagnosis is the most likely?
A. Tuberculosis
B. Syphilis
C. Ulcerative stomatitis (Vincent's stomatitis)
D. Ulcer-cancer
E. Gangrenous stomatitis

195. Lateral X-ray of the occipital bone area demonstrates the fracture of the occipital condyle. The integrity of the following anatomical structure is disturbed:
A. Canalis nervi hypoglossi
B. Canalis caroticus
C. Foramen ovale
D. Foramen stylomastoideum
E. Foramen mastoideum

196. In the process of embryogenesis of the dentomaxillary system, there was an enamel disturbance detected. What source of tooth development is damaged in this case?
A. Oral cavity epithelium
B. Dental saccule
C. Dental bulb
D. Mesenchyme
E. Mesoderm

197. The autopsy of the body of a man, who suffered from toxic diphtheria and died on the 9th day from the onset of disease with signs of cardiac decompensation, has revealed the following: dilated cardiac cavities, dull, flaccid myocardium, the myocardial section is variegated. Microscopy revealed fatty degeneration of cardiac hystiocytes, large foci of myocytolysis, stromal edema with scant lymphocytic, and macrophageal infiltration. Specify the type of myocarditis in this case:
A. Alterative
B. Granulomatous
C. Focal intermediate exudative
D. Septic
E. Interstitial

198. A doctor has made a diagnosis of gingivitis and recommended the patient to rinse the oral cavity with an oxidizing agent. Specify this agent:
A. Hydrogen peroxide
B. Boric acid
C. Salicylic acid
D. Phenol
E. Brilliant green

199. In dental practice, atropine sulfate is used to decrease salivation. This drug belongs to the following group:
A. Muscarinic antagonists
B. α-adrenergic agonists
C. β-adrenoceptor antagonists
D. Ganglionic blockers
E. Muscle relaxants

200. A patient has developed a grayish-white dense protruding focus on the oral mucosa. Histologically there are hyperkeratosis, parakeratosis, and acanthosis of the epithelium with lymphocytic and plasmacytic infiltration of underlying connective tissue in this area. What pathology has developed in the oral mucosa?
A. Leukoplakia
B. Hyalinosis
C. Leukoderma
D. Local tumor-like amyloidosis
E. –

1. Several patients with similar complaints came to the doctor. They all present with weakness, pain in the intestines, indigestion. Feces analysis revealed the need for urgent hospitalization of the patient, who had microbial cysts with four nuclei detected in his samples. Such cysts are characteristic of the following protozoan:
A. Entamoebahistolytica
B. Balantidium
C. Entamoebacoli
D. Trichomonad
E. Lamblia

2. A patient was diagnosed with a monogenic hereditary disease. Name this disease:
A. Hemophilia
B. Hypertension
C. Peptic ulcer disease of the stomach
D. Poliomyelitis
E. Hymenolepiasis

3. According to the law of constancy of chromosome numbers, most animal species have definite and constant chromosome number. The mechanism that maintains this constancy during sexual reproduction of organisms is called:
A. Meiosis
B. Schizogony
C. Amitosis
D. Regeneration
E. –

4. At a certain stage of human ontogenesis, a physiological bond occurs between the circulatory systems of the mother and the fetus. This function is being carried out by the following provisory organ:
A. Placenta
B. Yolk sac
C. Amnion
D. Seroustunic
E. Allantois

5. According to the data collected by WHO researchers, every year, there are approximately 250 million malaria cases occur in the world. This disease can be encountered predominantly in tropical and subtropical areas. The spread of this disease matches the natural habitat of the following genus of mosquitoes:
A. Anopheles
B. Culex
C. Aedes
D. Mansonia
E. Culiseta

6. A hunter was drinking raw water from a pond. He risks infection with the following type of trematodiasis:
A. Fascioliasis
B. Opisthorchiasis
C. Paragonimiasis
D. Clonorchiasis
E. Dicroceliasis

7. A patient complains of urine excretion that occurs during sexual intercourse. What organ is affected?
A. Prostate
B. Testicle
C. Seminal vesicles
D. Epididymis
E. Urinary bladder

8. After facial trauma, the patient developed a buccal hematoma. What salivatory gland has its outflow blocked by the hematoma?
A. Parotid
B. Sublingual
C. Submandibular
D. Lingual
E. Buccal

9. A woman complains of painful chewing, especially when she moves her lower jaw backwards. What muscles are affected?
A. Posterior bundles of the temporal muscles
B. Anteriorbundlesofthetemporal muscles
C. Medial pterygoid muscles

D. Lateral pterygoid muscles
E. Masseter muscles

10. A patient complains of painful chewing, especially when his lower jaw moves forward and to the side. It indicates the functional disorder of the following muscles:
A. Lateral pterygoid muscle
B. Medial pterygoid muscles
C. Masseter muscles
D. Mylohyoidmuscles
E. Temporalmuscles

11. A patient consulted a doctor about an increased pain sensitivity of the ear skin and ear canal. The palpation behind the sternocleidomastoid muscle was painful. Such clinical presentations are typical of the irritation of the following nerve:
A. N. auricularismagnus
B. N. occipitalisminor
C. Nn.supraclaviculares
D. N.vagus
E. N. transversuscolli

12. Due to sustained trauma, the patient presents with unevenly dilated pupils (anisocoria). What muscle is blocked?
A. Musculus sphincterpupillae
B. Musculusciliaris
C. Musculus rectuslateralis
D. Musculus rectussuperior
E. Musculus rectus inferior

13. Microphotogram made with an electron microscope shows alveolar cells that compose the blood-air barrier. Name these cells:
A. Alveolar respiratory epithelial cells
B. Alveolar secretory epithelial cells
C. Alveolar macrophages
D. Clara cells(club cells)
E. Villousepithelialcells

14. During the experiment, the myotome was destroyed in the rabbit fetus. This manipulation will result in malformation of the following structure:
A. Skeletal muscles
B. Axial skeleton
C. Dermal connective tissue
D. Smooth muscles
E. Serous membranes

15. Electronic microscopy of a kidney shows tubules paved with cuboidal epithelium. In the epithelium, there are light and dark cells. The light cells contain few organelles; their cytoplasm form folds. These cells provide reabsorption of water from primary urine into the blood. The dark cells structurally and functionally resemble gastric parietal cells. What tubules are shown on the micro slide?
A. Collecting tubules
B. Proximal tubules
C. Distal tubules
D. Ascending limb of the loop of Henle
E. Descending limb of the loop of Henle

16. Gastroscopy of a patient revealed the lack of mucus in the coating of the mucous membrane. This can be caused by the dysfunction of the following cells of the gastric wall:
A. Cells of prismatic glandular epithelium
B. Parietal cells of gastric glands
C. Mainexocrinocytes
D. Cervical cells
E. Endocrinocytes

17. At the cementoenamel junction, there are non-calcified areas, through which infection often penetrates into the tooth. Name these structures:
A. Enameltufts
B. Enamelprisms
C. Ameloblasts
D. Odontoblasts
E. Tomes' dentinal fiber

18. A slide mount of an ovary presents a rounded structure with glandular cells that

contain lipid droplets. Name this structure:
A. Corpusluteum
B. Primordial ovarian follicle
C. Primary ovarian follicle
D. Mature ovarian follicle
E. Corpusalbicans

19. A micro specimen of the heart shows rectangular cells from 50 to 120 micrometers in size with the central position of the nucleus and developed myofibrils. Intercalated discs connect the cells. These cells are responsible for the following function:
A. The function of heart contractions
B. The function of impulse conduction
C. Endocrine
D. Protective
E. Regeneratory

20. After inhalation of dust, a person develops a cough, which results from stimulation of:
A. Irritantreceptors
B. Juxtacapillaryreceptors
C. Pulmonarychemoreceptors
D. Pulmonarythermoreceptors
E. Nociceptors

21. Electric current has affected skeletal muscle fiber resulting in depolarization of the membrane. Depolarization develops due to the following ions penetrating the membrane:
A. Na+
B. HCO3−
C. Ca2+
D. Cl−
E. K+

22. An experimental animal, a dog, received a weak solution of hydrochloric acid through a tube inserted into the duodenum. Primarily it will result in increased secretion of the following hormone:
A. Secretin
B. Gastrin
C. Histamine
D. Cholecystokinin
E. Neurotensin

23. A woman presents with edemas. In her urine, there is a large amount of protein excreted. What is the nephron segment functionally disturbed in this case?
A. Renal corpuscle
B. Proximal convoluted tubule
C. Distal convoluted tubule
D. Descending limb of the loop of Henle
E. Ascending limb of the loop of Henle

24. A patient suffers from diabetes mellitus with fasting hyperglycemia over 7.2 mmol/L. What blood plasma protein would allow assessing the patient's glycemia level retrospectively (4-8 weeks before examination)?
A. Glycated hemoglobin
B. Albumin
C. Fibrinogen
D. C-reactive protein
E. Ceruloplasmin

25. The patient exhausted by starvation presents with the intensification of the following process in the liver and kidneys:
A. Gluconeogenesis
B. Urea synthesis
C. Bilirubinsynthesis
D. Hippuric acid synthesis
E. Uric acid synthesis

26. Mucin aggregates retain water, which results in their viscosity and protective action. It is possible because the mucin structure contains:
A. Glycosaminoglycans
B. Homopolysaccharides
C. Disaccharides
D. Oligosaccharides
E. Glucose

27. A diabetes mellitus patient developed unconsciousness and convulsions after the administration of insulin. What result of blood glucose analysis is the most likely in

this case?
A. 1.5mmol/L
B. 3.3 mmol/L
C. 8mmol/L
D. 10mmol/L
E. 5.5mmol/L

28. Chronic overdosage of glucocorticoids leads to the development of hyperglycemia. What process of carbohydrate metabolism is responsible for this effect?
A. Gluconeogenesis
B. Glycogenolysis
C. Aerobic glycolysis
D. Pentose-phosphate cycle
E. Glycogenesis

29. Apatientwithglossitispresentswithdisappearance of lingual papillae, reddening, and burning pain in the tongue. Blood tests: erythrocytes-2.21012/l,hemoglobin-103 g/l, color index - 1.4. What type of anemia is it?
A. B12folate-deficiency
B. Iron deficiency
C. α-thalassemia
D. β-thalassemia
E. Ironrefractory

30. A pregnant woman developed severe toxemia with exhausting recurrent vomiting throughout a day. By the end of the day, she developed tetanic convulsions and dehydration. The following type of acid-base imbalance caused the described changes:
A. Nongaseous excretory alkalosis
B. Gaseousalkalosis
C. Gaseousacidosis
D. Nongaseous metabolic acidosis
E. Nongaseous excretory acidosis

31. A 13-year-old girl is an in-patient at the hematology department of the regional children's hospital. She was diagnosed with iron-deficiency anemia. What type of hypoxia does this patient have?
A. Hemic
B. Circulatory
C. Tissue
D. Respiratory
E. Mixed

32. A 55-year-old man was diagnosed with acute glomerulonephritis. Name the main mechanism of anemia development in this case:
A. Decreased erythropoietin synthesis
B. Decreased glomerular filtration
C. Decreasedsynthesisofrenal prostaglandins
D. Renalazotemia
E. Decreased tubular reabsorption

33. A man, who for a long time has been suffering from chronic mandibular osteomyelitis, died of chronic kidney disease. The autopsy revealed large lardaceous kidneys. What process had occurred in the kidneys?
A. Renal amyloidosis
B. Arterialnephrosclerosis
C. Glomerulonephritis
D. Necroticnephrosis
E. Contractedkidney

34. The macroscopic examination of lung tissue revealed areas of high airiness with small bubbles. Histological examination revealed thinning and rupture of alveolar septa accompanied by the formation of large diversiform cavities. What disease was revealed in the lung?
A. Pulmonary emphysema
B. Multiplebronchiectasis
C. Cavernoustuberculosis
D. Chronic bronchitis
E. Fibrosing alveolitis

35. On autopsy of a 69-year-old woman, who for a long time, had been suffering from hypertension, the pathologist determined that both of her kidneys are dense, markedly diminished, with the fine-grained surface. These changes are indicative of:
A. Atrophyduetoinadequatebloodsupply

B. Compressionatrophy
C. Senile renal atrophy
D. Dysfunctionalatrophy
E. Hypoplasia

36. Autopsy of a man who died of ethylene glycol poisoning revealed that his kidneys are slightly enlarged, edematic; their capsule can be easily removed. The cortical substance is broad and light gray. The medullary substance is dark red. What pathology did this man develop?
A. Necroticnephrosis
B. Acute pyelonephritis
C. Acute glomerulonephritis
D. Acute tubular-interstitial nephritis
E. Lipoidnephrosis

37. A significant shortcoming of microscopy in infection diagnostics is its insufficient information value due to the morphological similarity between many species of microorganisms. What immunoassay can significantly increase the informativity of this method?
A. Fluorescenceimmunoassay
B. Coombs' test
C. Immune-enzyme assay
D. Opsonization
E. Radioimmunoassay

38. What drugs are used for the specific treatment of diphtheria?
A. Antitoxicserum
B. Placental gammaglobulin
C. Nativeplasma
D. Antibiotics
E. Anatoxin

39. An ophthalmologist suspects blennorrhea (gonococcal conjunctivitis) in a child with signs of suppurative keratoconjunctivitis. What laboratory diagnostics should be conducted to confirm the diagnosis?
A. Microscopy and bacteriological analysis
B. Serum diagnostics and allergy test
C. Biologicalanalysisandphagodiagnostics
D. Biological analysis and allergy test
E. Microscopy and serum diagnostics

40. Analysis of sputum taken from a patient with suspected pneumonia revealed slightly elongated gram-positive diplococci with tapered opposite ends. What microorganisms were revealed in the sputum?
A. Streptococcus pneumonia
B. Staphylococcus aureus
C. Klebsiella pneumonia
D. Neisseria meningitides
E. Neisseria gonorrhea

41. In a closed community, it is necessary to determine community members' immunity to diphtheria and verify the need for their vaccination. What investigation is necessary in this case?
A. Determine antitoxin titer by means of indirect hemagglutination assay
B. Test community members for diphtheria bacillus carriage
C. Determine diphtheria antibody titer
D. Check medical records for vaccination
E. Determinecommunitymembersimmunity to diphtheria bacillus

42. For two weeks, a woman has been taking the mixture for neurasthenia, which was prescribed by a neurologist. Her general state slightly improved, but shortly she started complaining of rhinitis, conjunctivitis, skin rashes, fatigue, and memory impairment. What group of drugs can have such a side effect?
A. Brominesalts
B. Valerianpreparations
C. Motherwortpreparations
D. Adaptogens
E. Hoppreparations

43. A patient developed a burning sensation in the oral cavity and white fuzzy coating on the tongue. Oral thrush is diagnosed. What drug of those listed below should be used?

used?
A. Nystatin
B. Amphotericin
C. Griseofulvin
D. Tetracycline
E. Gentamicin

44. A dental patient was prescribed a psycho sedative for his fear of pain. What drug would be the most effective in this case?
A. Diazepam
B. Aminazine
C. Lithium carbonate
D. Valerian tincture
E. Sodium bromide

45. A patient with skin burns was delivered to a hospital. To clean the wound from necrotic tissues and mucus, the doctor prescribed an enzymatic drug for topical treatment. Name this drug:
A. Tripsin
B. Pancreatin
C. Asparaginase
D. Pepsin
E. Streptokinase

46. A patient suffering from ciliary arrhythmia with anamnesis of bronchial asthma should be prescribed an antiarrhythmic drug. What antiarrhythmic drug is **CONTRAINDICATED** in this case?
A. Anaprilin(Propranolol)
B. Ajmaline
C. Verapamil
D. Nifedipine
E. Novocainamide(Procainamide)

47. A newborn failed to take his first breath. The autopsy revealed that despite unobstructed airways, the lungs of the newborn were unable to stretch. What is the most likely cause of this condition?
A. Absence of surfactant
B. Bronchialnarrowing
C. Bronchialrupture
D. Pleural thickening
E. Alveolarenlargement

48. A 35-year-old woman is diagnosed with faucial diphtheria. The patient died with signs of acute heart failure. On autopsy: heart cavities are enlarged in the diameter, the heart muscle is dull, flaccid, striped on section, with yellowish areas under the endocardium. What type of degeneration was detected in cardiac histiocytes?
A. Fatty
B. Carbohydrate
C. Ballooning
D. Hyalinedroplet
E. Hydropic

49. During acute inflammation of the parotid gland, there is damage to the cells of secretory segments observed. What cells are damaged in this case?
A. Serous cells, myoepithelial cells
B. Albuminous cells, serous cells, mucous cells
C. Serous cells, cells with basal striation, stellate cells
D. Seromucouscells
E. Brush-bordered epithelial cells, cells with basal striation

50. A child with signs of rickets has been prescribed a certain liposoluble vitamin drug by the pediatrician and dentist. This drug affects the metabolism of phosphorus and calcium in the body and facilitates calcium accumulation in bone tissue and dentine. If its content in the body is insufficient, there develop disorders of ossification process, dental structure, and occlusion. Name this drug:
A. Ergocalciferol
B. Retinol acetate
C. Tocopherol acetate
D. Menadione(Vicasolum)
E. Thyroidin

51. A patient with parodontosis was prescribed a fat-soluble vitamin that actively

participates in redox processes in the organism. This antioxidant is a growth factor, has antixerophthalmic action, and contributes to the maintenance of normal vision. In dental practice, it is used to accelerate mucosal reepithelization during parodontosis. Name this substance:
A. Retinol acetate
B. Ergocalciferol
C. Tocopherol acetate
D. Menadione(Vicasolum)
E. Cyanocobalamin

52. Apatienthasdeeplaceratedwoundwith uneven edges. The wound is suppurating; its edges present with moist granulation tissue that does not protrude above the wound level. Name the type of wound healing:
A. Healing by secondary intention
B. Healing by primary intention
C. Healing under the scab
D. Direct closure of the epithelial defect
E. Wound organization

53. Often the cause of secondary immunodeficiency is an infectious affection of an organism when agents reproduce directly in the cells of the immune system and destroy them. Specify the diseases, during which the described above occurs:
A. Infectious mononucleosis, AIDS
B. Tuberculosis, mycobacteriosis
C. Poliomyelitis, viral hepatitis type A
D. Dysentery, cholera
E. Q fever, typhus

54. A 30-year-old woman complains of intense thirst and dryness of the mouth that developed after a severe emotional shock. Laboratory analysis revealed an increase in the patient's blood sugar level up to 10 mmol/L. What endocrine gland is affected in the patient?
A. Pancreas
B. Thyroid gland
C. Gonads
D. Adrenal glands
E. Pineal gland

55. A 45-year-old man came to the hospital complaining of sensory loss in the posterior 1/3 of his tongue. Which pair of the cranial nerves is functionally disturbed?
A. IX
B. X
C. VIII
D. V
E. XII

56. A patient presents with disturbed patency of the airways at the level of small and medium bronchial tubes. What acid-base imbalance can the patient develop?
A. Respiratory acidosis
B. Respiratory alkalosis
C. Metabolic acidosis
D. Metabolic alkalosis
E. Acid-base balance remains unchanged

57. Due to trauma, the patient's parathyroid glands have been removed, which resulted in inertness, thirst, sharp increase of neuromuscular excitability. Metabolism of the following substance is disturbed:
A. Calcium
B. Manganese
C. Chlorine
D. Molybdenum
E. Zinc

58. A patient presents with a high content of vasopressin (antidiuretic hormone) in the blood. What changes in the patient's diuresis will occur?
A. Oliguria
B. Polyuria
C. Anuria
D. Glycosuria
E. Natriuria

59. To terminate a hypertensive crisis, the patient was administered the solution of magnesium sulfate. What route of drug administration should be chosen?

A. Intravenous
B. Duodenal
C. Rectal
D. Oral
E. Intra-arterial

60. A patient presents with osteoporosis; hypercalcemia and hypophosphatemia are observed in the patient's blood. What is the cause of this condition?
A. Increased parathormone secretion
B. Increased thyroxin secretion
C. Inhibited parathormone secretion
D. Increased corticosteroid secretion
E. Inhibited corticosteroid secretion

61. During their expedition to the Middle East, the students found a 7-centimeter-long arthropod. Its body consists of cephalothorax with four pairs of ambulatory legs and a segmented abdomen with two venom glands in its last segment. The gland openings are located on the tip of the hook-shaped sting. The animal was identified as a nocturnal predator, its venom is dangerous for humans. It belongs to the following order:
A. Scorpiones
B. Aranei
C. Acarina
D. Solpugae
E. Aphaniptera

62. The patient, who for a long time, has been keeping to an unbalanced low-protein diet, developed fatty liver infiltration. Name the substance, absence of which in the diet can lead to this condition:
A. Methionine
B. Alanine
C. Cholesterol
D. Arachidonic acid
E. Biotin

63. After the introduction of adrenaline, the patient's blood glucose level increased. It is caused by intensified:
A. Glycogenolysis in the liver
B. Glycolysis in the liver
C. Glycolysis in the skeletal muscles
D. Glycogen synthesis
E. Glycogenolysis in the muscles

64. A student, who unexpectedly met his girlfriend, developed an increase in systemic arterial pressure. This pressure change was caused by the intensified realization of the following reflexes:
A. Conditionalsympathetic
B. Conditionalparasympathetic
C. Conditionalsympatheticand parasympathetic
D. Unconditionalparasympathetic
E. Unconditionalsympathetic

65. It is necessary to decrease the pumping ability of the patient's heart. What membrane cytoreceptors must be blocked to achieve this effect?
A. β-adrenergic receptors
B. α-adrenergic receptors
C. α- and β-adrenergic receptors
D. Muscarinic acetylcholine receptors
E. Nicotinic acetylcholine receptors

66. Oxidative decarboxylation of pyruvic acid is catalyzed by a multienzyme complex with several functionally linked coenzymes. Name this complex:
A. Thymidine diphosphate (TDP), flavin adenine dinucleotide (FAD), coenzyme A (CoASH), nicotine amide adenine dinucleotide (NAD), lipoic acid
B. Flavin adenine dinucleotide (FAD), tetrahydrofolic acid, pyridoxal-5-phosphate, thymidine diphosphate (TDP), choline
C. Nicotine amide adenine dinucleotide (NAD), pyridoxal-5-phosphate, thymidine diphosphate (TDP), methylcobalamin, biotin
D. Coenzyme A (CoASH), flavin adenine dinucleotide (FAD), pyridoxal-5- phosphate, tetrahydrofolic acid, carnitine

E. Lipoic acid, tetrahydrofolic acid, pyridoxal-5-phosphate, methylcobalamin

67. To take a sample of cerebrospinal fluid for analysis, a doctor makes a puncture into subarachnoid space. To prevent damage to the spinal cord, the needle must be inserted between the two following vertebrae:
A. III and IV lumbar
B. XI and XII thoracic
C. XII thoracic and I lumbar
D. I and II lumbar
E. IV and V thoracic

68. Resuscitation unit received a patient with acute poisoning caused by unidentified medicine. To quickly excrete the poison from the patient's body, forced diuresis was induced. What substance was used to perform this procedure?
A. Furosemide
B. Hydrochlorothiazide
C. Omeprazole
D. Spironolactone
E. Dithylinum (Suxamethoniumchloride)

69. It is known that in the metabolism of catecholamine mediators, the special role belongs to monoamine oxidase (MAO). How does this enzyme activate these mediators (noradrenaline, adrenaline, dopamine)?
A. Oxidative deaminization
B. Amino group attachment
C. Methyl group removal
D. Carboxylation
E. Hydrolysis

70. A patient with acute pancreatitis presents with significantly increased urine diastase content. What proteolysis inhibitor must be included in the complex therapy of this patient?
A. Contrykal(Aprotinin)
B. Festal
C. Pancreatin
D. Digestal
E. Mezymforte

71. A bacteriological laboratory received a sample of dried fish from an outbreak of food poisoning. Inoculation of the sample on the Kitt-Tarozzi medium revealed microorganisms resembling a tennis racket. These microorganisms are causative agents of the following disease:
A. Botulism
B. Salmonellosis
C. Dysentery
D. Diphtheria
E. Typhoid fever

72. A man with signs of intestinal obstruction was delivered to a hospital. In the process of treatment, roundworms 25-40 cm in size were extracted from the patent's intestine. Determine the species of this helminth:
A. Ascaris lumbricoides
B. Ancylostoma duodenale
C. Trichocephalus trichiurus
D. Strongyloides stercoralis
E. Enterobius vermicularis

73. A patient suffering from acute bronchitis with difficult expectoration was prescribed acetylcysteine. What drug action will provide a curative effect?
A. Mucoproteins depolymerization
B. Activation of ciliated bronchial epithelium
C. Reflex stimulation of bronchiolar peristalsis
D. Alkalinization of sputum
E. Stimulation of the bronchial glands

74. A patient with ischemic heart disease presents with increased blood plasma content of triglycerides and very-low-density lipoproteins. What drug should be prescribed?
A. Fenofibrate
B. Famotidine
C. Amiodarone

D. Lisinopril
E. Dobutamine

75. In what organ biotransformation (metabolic transformation) of most medicinal agents occurs upon their introduction into an organism?
A. Liver
B. Kidneys
C. Intestine
D. Skin
E. Lungs

76. Among organic substances of a cell, there is a polymer composed of dozens, hundreds, and thousands of monomers. This molecule is capable of self-reproduction and can be an information carrier. X-ray structure analysis shows this molecule to consist of two complementary spiral threads. Name this compound:
A. DNA
B. RNA
C. Cellulose
D. Carbohydrate
E. Hormone

77. In Western Europe, nearly half of all congenital malformations occur in the children conceived in the period when pesticides were used extensively in the region. Those congenital conditions result from the following influence:
A. Teratogenic
B. Carcinogenic
C. Malignization
D. Mutagenic
E. Mechanical

78. A 30-year-old breastfeeding woman keeps to the diet that daily provides her with 1000 mg of calcium, 1300 mg of phosphorus, and 20 mg of iron. How should the daily dosages of minerals in this diet be adjusted?
A. Increase phosphorus intake
B. Increase calcium intake
C. Decrease fluorine intake
D. Increase iron intake
E. Decrease iron intake

79. A patient presents with damaged fibers of the ninth pair of cranial nerves (glossopharyngeal nerve). What gustatory sensation will be disturbed in this case?
A. Bitterness
B. Sweetness
C. Saltiness
D. Sourness
E. All gustatory sensations

80. A 49-year-old man presents with facial edema, significant proteinuria, hypoproteinemia, dysproteinemia, and hyperlipidemia. What provisional diagnosis can be made?
A. Nephrotic syndrome
B. Urolithiasis
C. Prostatitis
D. Pyelonephritis
E. Cystitis

81. A dentist prescribed the patient with maxillofacial arthritis diclofenac sodium. What is the mechanism of action of this drug?
A. Cyclooxygenase-2inhibition
B. Catalaseinhibition
C. Opiate receptors activation
D. Opiate receptors block
E. Phosphodiesteraseactivation

82. A surgeon must amputate the damaged part of the patient's foot along the line of the Lisfranc joint. What ligament must be cut in this case?
A. Medial interosseous tarsometatarsal ligament
B. Calcaneonavicular ligament
C. Bifurcated ligament
D. Talonavicular ligament
E. Talocalcaneal ligament

83. A histological specimen shows terminal secretory parts of glands made of conic cells with basophilic cytoplasm and a roundish nucleus in the center. Specify the type of terminal secretory parts by the type of secretion:
A. Serous
B. Sebaceous
C. Combined
D. Mucous
E. Seromucous

84. Microscopy of a plaque-like structure extracted from the lateral surface of the tongue of a man with dentures revealed significant thickening of the epithelial layer along with processes of parakeratosis, hyperkeratosis, and acanthosis; in the connective tissue, there are small round cell infiltrations. Make the diagnosis of the given pathological state:
A. Leukoplakia
B. Ichthyosis
C. Chronicstomatitis
D. Chronicglossitis
E. Atrophic (Hunter's)glossitis

85. A patient is registered for regular check -ups. Laboratory analyses for viral hepatitis diagnostics are made. In the blood serum, only antibodies to Hbs Ag are detected. Such a result is indicative of:
A. Past case of viral hepatitis type B
B. Acute viral hepatitis type B
C. Acute viral hepatitis type C
D. Viral hepatitis type A
E. Chronic viral hepatitis type C

86. To treat tuberculosis, an antibiotic that colors urine red is prescribed. Name this antibiotic:
A. Rifampicin
B. Erythromycin
C. Amoxicillin
D. Nitroxoline
E. Cefotaxime

87. Holocrine secretion is characteristic of sebaceous glands. What structural components ensure the renewal of the cells of these glands?
A. Germinative layer cells
B. Sebocytes
C. Myoepithelial cells
D. Stratified squamous epithelium of the excretory duct
E. Nonstratified cuboidal epithelium of the excretory duct

88. During the experiment, the processes of food and water hydrolysis products absorption were studied. It was determined that these processes mainly occur in the following gastrointestinal segment:
A. Small intestine
B. Stomach
C. Large intestine
D. Rectum
E. Oral cavity

89. Detoxification of bilirubin occurs in the membranes of the endoplasmic reticulum of hepatocytes. Hepatocytes secrete bilirubin into bile for the most part as:
A. Bilirubin diglucuronide
B. Unconjugated bilirubin
C. Bilirubin monoglucuronide
D. Indirect reacting bilirubin
E. –

90. A patient developed a tender red nodule in the lower jaw area. Histologically there is the accumulation of purulent exudate in several hair follicles. What clinicopathological type of inflammation is observed?
A. Carbuncle
B. Phlegmon
C. Furuncle
D. Abscess
E. Hypostaticabscess

91. Autopsy of a man, who died suddenly with signs of acutely disturbed cerebral circulation, revealed aneurysm rupture of the

medial cerebral artery and a round cavity 4 cm in diameter filled with blood in his frontal lobe. Name this type of hemorrhage:
A. Hematoma
B. Petechiae
C. Hemorrhagicinfiltration
D. Contusion
E. –

92. During the examination of a child's oral cavity, a dentist noted the appearance of the first permanent molars on the child's lower jaw. How old is the child?
A. 6-7
B. 4-5
C. 8-9
D. 10-11
E. 12-13

93. During the examination of the oral cavity at the vestibular surface of the lower right incisor, there was detected a rounded growth on the thin pedicle. Histologically: in the connective tissue, there are numerous thin-walled sinusoids, hemorrhage areas, hemosiderin foci, and giant cells resembling osteoclasts. Make the diagnosis:
A. Giant cell epulis
B. Granular cell ameloblastoma
C. Angiomatousepulis
D. Gingival fibromatosis
E. Cavernous hemangioma

94. During teeth examination on the lateral surface of the first upper molar, there was detected a cone-shaped carious cavity with base oriented towards the tooth surface and apex - towards the tooth center. Softened dentin is visible on the floor of the carious cavity. Make the diagnosis:
A. Dentin caries
B. Enamel caries
C. Commentaries
D. Tooth erosion
E. –

95. A patient on the 2nd day after cardiac infarction presents with an acute decrease of systolic blood pressure down to 60 mmHg with tachycardia 140/min., dyspnea, loss of consciousness. What mechanism is essential in the pathogenesis of shock developed in this case?
A. Decreased cardiac output
B. Increased myocardial excitability caused by products of necroticdisintegration
C. Decreased circulating blood volume
D. Development of paroxysmal tachycardia
E. Development of anaphylactic reaction to myocardial proteins

96. After the water supply system had been put into operation in a new residential area, the medical officers of sanitary and epidemiological stations measured total microbial number in the water. Name the maximum permissible value of this indicator for potable water:
A. 100
B. 10
C. 400
D. 500
E. 1000

97. A woman had been taking synthetic hormones during her pregnancy. Her newborn girl presents with excessive hairiness, which has a formal resemblance to adrenogenital syndrome. This sign of variability is called:
A. Phenocopy
B. Mutation
C. Recombination
D. Heterosis
E. Replication

98. The following enzyme catalyzes the breakdown of cyclic adenosine monophosphate (cAMP) and cyclic guanosine monophosphate (cGMP) into simple, non-cyclic nucleoside monophosphates:
A. Phosphodiesterase
B. Glycogen phosphorylase

C. Glucose6-phosphatase
D. Protein kinase
E. Adenylate cyclase

99. In the course of the experiment, the vagus nerve of the test animal was severed, which resulted in the animal developing constant tachycardia. What effect of the parasympathetic nervous system on cardiac performance is demonstrated by this experiment?
A. Inhibition
B. Stimulation
C. Stimulussummation
D. Paradoxical response
E. Mixed effect

100. A 42-year-old woman, who has been keeping to a vegetarian diet for a long period of time, consulted a doctor. The examination revealed a negative nitrogen balance in the patient. What factor is the most likely cause of such a condition?
A. Insufficient amount of proteins in the diet
B. Insufficient amount of dietary fiber
C. Excessive amount of fats in the diet
D. Insufficient amount of fats in the diet
E. Decreased rate of metabolic processes

101. A patient came to the traumatologist with complaints of developing difficulties during the active extension of the elbow. What muscle is the most likely to be damaged?
A. M. tricepsbrachii
B. M. pectoralisminor
C. M. deltoideus
D. M. coracobrachialis
E. M. latissimus dorsi

102. A patient complains of acute spastic abdominal pain, frequent urge to defecate, bloody liquid feces with mucus. Laboratory analysis of fecal smear revealed in constant in shape organisms with erythrocytes. What is the most likely diagnosis?
A. Amebiasis
B. Schistosomiasis
C. Intestinaltrichomoniasis
D. Balantidiasis
E. Lambliasis

103. A patient presents with dysfunction of the cerebral cortex accompanied by epileptic seizures. He has been administered a biogenic amine synthesized from glutamate and responsible for central inhibition. What substance is it?
A. γ-aminobutyric acid
B. Serotonin
C. Dopamine
D. Acetylcholine
E. Histamine

104. In hot weather, the bus passengers asked to open the roof hatches. What way of heat transfer is activated in this situation?
A. Convection
B. Conduction
C. Radiation
D. Conduction and radiation
E. Sweat evaporation

105. At the end of winter, a student, who had been lately in the state of nervous tension, developed a case of URTI after overexposure to cold. What is the case of this disease?
A. Pathogenicagent
B. Nervous stress
C. Overexposure to cold
D. Improper diet
E. Hypovitaminosis

106. A 38-year-old woman developed an attack of bronchial asthma. What bronchial spasmolytic for emergency medical aid is a beta-2-adrenergic agonist?
A. Salbutamol
B. Adrenaline
C. Ipratropium bromide
D. Platyphyllin

E. Atropine

107. During the examination, the doctor performs auscultation to assess the functioning of the patient's mitral valve. Where can the sound of this valve be auscultated?
A. At the apex of the heart
B. At the edge of the sternum over the 5th costal cartilage on the right
C. At the edge of the sternum in the 2nd intercostal space on the right
D. At the edge of the sternum in the 2nd intercostal space on the left
E. At the edge of the sternum over the 5th costal cartilage on the left

108. A patient was diagnosed with Klinefelter's syndrome. The patient with this disease will have the karyotype (47, XXY). How many sex chromosomes are in this complement?
A. Three
B. Zero
C. One
D. Two
E. Fortyfour

109. Oral examination reveals marked reddening of mucosa at the root of the tongue. What structure is involved in the inflammatory process?
A. Lingual tonsil
B. Palatine tonsil
C. Tonsil of torustubaris
D. Veil of palate
E. Pharyngeal tonsil

110. A trauma patient has a wound in the temporal region, with the trickle of bright-red blood streaming from it. What blood vessel is damaged?
A.A.temporalis superficialis
B.A.facialis
C.A.occipitalis
D.A.auricularisposterior
E.A.maxillaries

111. On histological examination of biopsy material taken from the liver of a woman, who for a long time had been suffering from viral hepatitis type B, the pathologist detected diffuse hepatic fibrosis with the formation of porto-portal and porto-central fibrotic septa and disturbance of the liver lobular structure (development of pseudolobules). What process can be characterized by the given morphological changes?
A. Hepatic cirrhosis
B. Chronic hepatitis
C. Hepatocellular carcinoma
D. Acute hepatitis
E. Cholestasis

112. Examination of the histological specimen of oral mucosa reveals non-keratinized stratified squamous epithelium with lymphocyte infiltrations. What structure of the oral cavity is the most likely to be represented by this mucosa specimen?
A. Tonsil
B. Lip
C. Cheek
D. Hard palate
E. Gums

113. A victim of a traffic accident has lost thoracic respiration but retaines diaphragmal. The spinal cord is most likely to be damaged at:
A. VI-VII cervical segments
B. I-II cervical segments
C. XI-XII cervical segments
D. I-II lumbar segments
E. I-II sacral segments

114. During the examination, a neurologist taps the tendon under the patient's kneecap with a reflex hammer to evaluate the reflex extension of the knee. This response is provoked by stimulation of the following receptors:
A. Muscle spindles
B. Golgi tendon organ
C. Articularreceptors

D. Tactile receptors
E. Nociceptors

115. An experiment was conducted to study major indicators of hemodynamics. What hemodynamics indicator would be the same for both systemic and pulmonary circulation?
A. Volumetric blood flowrate
B. Mean arterial pressure
C. Vascular resistance
D. Linear blood flow velocity
E. Dyastolic blood pressure

116. A 50-year-old man declined anesthesia during dental manipulations. Due to severe pain, he developed anuria caused by an acute increase in production of:
A. Adrenaline
B. Renin
C. Thymosin
D. Thyroxin
E. Glucagon

117. Thirty minutes after dental treatment, the patient developed red itching spots on the face and oral mucosa. The patient was diagnosed with urticaria. What bioactive substance with vasodilating and the pruriginous effect is produced during this type of allergic reaction?
A. Histamine
B. ProstaglandinE2
C. LeukotrieneB4
D. Interleukin-1
E. Bradykinin

118. A patient has been administered conduction anesthesia with novocaine in preparation for tooth extraction. After the anesthesia administration, the patient developed swelling and hyperemia around the injection site, skin itch, general fatigue, motor agitation. Name the developed complication:
A. Allergy
B. Idiosyncrasy
C. Tachyphylaxis
D. Drug dependence
E. Inflammation

119. A 26-year-old woman presents with skin rashes and itching after eating citrus fruits. Prescribe her a drug that is an H1-histamine receptor antagonist:
A. Dimedrol (Diphenhydramine)
B. Acetylsalicylic acid
C. Menadione (Vicasolum)
D. Analgin (Metamizole)
E. Paracetamol

120. A patient with acne is prescribed doxycycline hydrochloride. What should the patient be warned against regarding the administration of this drug?
A. Avoidprolongedexposuretothesun
B. Take with a large amount of liquid, preferably milk
C. Take before eating
D. Courseoftreatmentshouldnotexceed1 day
E. Donottakewithvitaminpreparations

121. A patient with megaloblastic anemia was taking a water-soluble vitamin. Name this substance:
A. Cyanocobalamin
B. Thiaminechloride
C. Tocopherol acetate
D.
E. Pyridoxine

122. Biological material taken from a patient contains several species of microorganisms (staphylococci and streptococci) that are causative agents of the patient's disease. Name this type of infection:
A. Mixed infection
B. Superinfection
C. Reinfection
D. Consecutiveinfection
E. Coinfection

123. After spinal trauma, the patient presents with the absence of voluntary move-

ments and tendon reflexes; sensitivity is retained only in the lower extremities. What is the mechanism of these disturbances, and what part of the spine was injured?
A. Spinal shock, thoracic spine
B. Spinal shock, cervical spine
C. Peripheral paralysis, cervical spine
D. Central paralysis, coccyx
E. –

124. A man has developed down turning mouth and smoothed out nasolabial fold due to influenza complications. What nerve is damaged?
A. Facial nerve
B. Maxillary nerve
C. Mandibular nerve
D. Trochlear nerve
E. Oculomotor nerve

125. A patient with an electrical injury to the neck area developed pathologic fixed sideways flexion of the head towards the injured area, while the face is fixed away from the injury. What neck muscle sustained scarring?
A. Sternocleidomastoid muscle
B. Anterior scalene muscle
C. Trapezius muscle
D. Omohyoid muscle
E. Digastric muscle

126. Chronic inflammation of gingiva resulted in excessive growth of connective tissue fibers. What cell elements are leading in the development of this condition?
A. Fibroblasts
B. Osteoblasts
C. Fibrocytes
D. Macrophages
E. Osteoclasts

127. A worker of a cattle farm consulted a surgeon about fever up to 40oC, headache, weakness. An objective examination of his back revealed hyperemia and a dark red infiltration up to 5 cm in diameter with a black bottom in its center, which was surrounded with pustules. What disease are these presentations typical of?
A. Anthrax
B. Plague
C. Tularemia
D. Furuncle
E. Abscess

128. A 20-year-old woman came to the doctor with complaints of general weight loss, loss of appetite, weakness, skin discoloration resembling bronze tan. In addition to hyperpigmentation, examination in the hospital revealed bilateral adrenal tuberculosis. What substance leads to skin hyperpigmentation, when accumulated excessively?
A. Melanin
B. Bilirubin
C. Hemozoin
D. Lipofuscin
E. Adrenochrome

129. During cell analysis, their cytoplasm was determined to have high content of aminoacyl tRNA synthetase. This enzyme ensures the following process:
A. Amino acid activation
B. Repair
C. Elongation
D. Transcription
E. Replication

130. What enzyme has demineralization effect, i.e. intensifies decomposition of mineral components of the tooth tissues?
A. Acid phosphatase
B. Alkaline phosphatase
C. Glucose 6-phosphatase
D. Glycogen phosphorylase
E. Phosphotransferase

131. Histologic specimen of renal cortex shows renal corpuscle and renal tubules. It is known that reabsorption of substances occurs in the renal tubules. What nephron

tissue takes part in this process?
A. Epithelial tissue
B. Connective tissue proper
C. Reticular tissue
D. Mucous tissue
E. Cartilaginous tissue

132. A 45-year-old man with a history of left-sided croupous pneumonia died of multiple traumas received as the result of a car accident. On autopsy in the lower lobe of his left lung, its posterolateral wall is attached to the chest wall with fibrous adhesions. The lobe is diminished, dense, fleshy on section, grayish-pink in color; its pieces sink when placed in water. Histological-analysisrevealsdiffuseexcessive growth of fibrous connective tissue in these areas. Name this complication of croupous pneumonia:
A. Carneous degeneration
B. Emphysema
C. Gangrene
D. Atelectasis
E. Abscess

133. A 16-year-old girl, who has been starving herself for a long time to lose weight, developed edema. This phenomenon is mainly caused by:
A. Hypoproteinemiaduetoprotein synthesis disturbance
B. Hypoglycemiaduetoglycogensynthesis disturbance
C. Venous congestion and increased venous pressure
D.Deceleration of glomerular filtration rate
E. Decreased production of vasopressin in the hypothalamus

134. A patient with a knife wound of the neck presents with hemorrhage. Initial wound management revealed damage to the vessel that is located along the lateral edge of the sternocleidomastoid muscle. Name this vessel:
A. V. jugularisexterna
B. V.jugularisanterior
C.A.carotisexterna
D.A.carotisinterna
E. V.jugularisinterna

135. Erythrocytes of the patient with hemolytic anemia present with a significant decrease in pyruvate kinase activity. What metabolic process is disturbed in this case?
A. Glycolysis
B. Glycogenolysis
C. Gluconeogenesis
D. Pentose-phosphate pathway of glucose oxidation
E. Glycogen synthesis

136. To determine functional state of the patient's liver, the analysis of animal indican excreted with urine was conducted. This substance is produced in the process of detoxification of putrefaction products of a certain amino acid, which takes place in the large intestine. Name this amino acid:
A. Tryptophan
B. Valine
C. Glycine
D. Serine
E. Cysteine

137. When determining comparative tissue radiosensitivity, it was revealed that different tissues have a different level of sensitivity toward ionizing radiation. What tissue of those listed below is the most radiosensitive?
A. Hematopoietic
B. Cartilaginous
C. Bone
D. Muscular
E. Nerve

138. Oral examination revealed dark yellow and brown spots and stripes on the labial and lingual surfaces of the patent's teeth; more than half of the dental surface is affected; enamel and dentin are destroyed. What diagnosis is the most likely?

A. Fluorosis
B. Metastatic calcification
C. Dental calculus
D. Cuneiform defect
E. Dystrophic calcification

139. A 28-year-old patient complains of frequent gingival hemorrhages. The blood test revealed the clotting factor II (prothrombin) deficiency. What phase of blood coagulation is impaired in this patient?
A. Thrombin generation
B. Vascular-platelet hemostasis
C. Clot retraction
D. Fibrinolysis
E. –

140. Longitudinal tooth section shoes a tissue that makes up the tooth basis and consists of collagen fibers, mineralized matrix, and tubules that hold dentinal fibers. This tissue develops from:
A. Peripheral part of dental papilla
B. External cells of the enamel organ
C. Internal cells of the enamel organ
D. Dentalsaccule
E. Intermediate cells of the enamel organ

141. In the course of the experiment, it is necessary to detect muscle excitation. For this purpose, the following measurement should be made:
A. Electromyogram
B. Mechanomyogram
C. Contractionstrength
D. Contractionduration
E. Ion concentration

142. Increased stimulation rate of isolated heart of a rabbit leads to incomplete relaxation of the heart ventricles due to:
A. Calciumaccumulationincardiomyocytes
B. Increased sodium content in cardiomyocytes
C. Inhibition of K Napump
D. Increased potassium content in cardiomyocytes
E. Increased potassium content in the interstitial tissue

143. Several hours after the dental trauma, the tooth pulp presents with hyperemic vessels, marked tissue edema with isolated neutrophils, lymphocytes, and minor dystrophic changes of nerve fibers. Make the diagnosis:
A. Serouspulpitis
B. Suppurativepulpitis
C. Gangrenouspulpitis
D. Granulating pulpitis
E. Fibrouspulpitis

144. Fetal malformations can be caused by such maternal diseases as rubella, syphilis, toxoplasmosis, cytomegaly, herpes, and chlamydiosis. These malformations belong to the following type of variability:
A. Modification
B. Mutational
C. Combinative
D. Genomic imprinting
E. Epimutational

145. Beriberi is a classical example of thiamine deficiency. The active form of this vitamin is synthesized by an enzyme belonging to the following group:
A. Transferases
B. Oxidoreductases
C. Hydrolases
D. Lyases
E. Isomerase

146. A 25-year-old man has lost all sensitivity due to damage to his peripheral nerves. Name this disorder:
A. Anesthesia
B. Ataxia
C. Hypoesthesia
D. Hyperesthesia
E. –

147. A 60-year-old woman with hepatocir-

rhosis developed the hemorrhagic syndrome. What mechanism leads to the development of this condition?
A. Decreased synthesis of prothrombin and fibrinogen
B. Increased portal venous pressure
C. Deceased blood oncotic pressure
D. Reduction of hepatic glycogen stores
E. Emergence of neurotoxins in the blood

148. A woman is diagnosed with Turner's syndrome (karyotype 45, X0). How many autosomal pairs would her somatic cells contain?
A. 22
B. 24
C. 23
D. 44
E. 45

149. The blood serum of the patient has a milky appearance. Biochemical analysis revealed a high content of triacylglycerols and chylomicrons. This condition is caused by the hereditary defect of the following enzyme:
A. Lipoprotein lipase
B. Phospho lipase
C. Pancreatic lipase
D. Adipose tissue hormone-sensitive lipase
E. Phosphodiesterase

150. Dopamine precursor-dioxy phenylalanine (DOPA) - is used in the treatment of Parkinson's disease. This active substance is produced from the following amino acid:
A. Tyrosine
B. Alanine
C. Cysteine
D. Histidine
E. Tryptophan

151. An 84-year-old patient suffers from parkinsonism. One of the pathogenetic development elements of this disease is the deficiency of a certain mediator in some of the brain structures. Name this mediator:
A. Dopamine
B. Adrenaline
C. Noradrenaline
D. Histamine
E. Acetylcholine

152. A patient has suffered a head injury. On examination, there is a subcutaneous hematoma in the temporal area. What vessel was damaged, thus resulting in the hematoma development?
A. A. temporalis superficialis
B. A.maxillaris
C. A. auricularisposterior
D. A.buccalis
E. A.Occipitalis

153. Due to severe pain syndrome a patient has been prescribed a narcotic analgesic. Specify the prescribed drug:
A. Morphine
B. Analgin(Metamizole)
C. Nimesulid
D. Dimexid
E. Indometacin

154. A tumor is detected in one of the regions of the patient's brain, resulting in the patient's inability to maintain normal body temperature. What brain structure is damaged?
A. Hypothalamus
B. Thalamus
C. Cerebellum
D. Striatum
E. Substantianigra

155. An experiment was conducted to measure the threshold of tactile receptors stimulation with various stimuli. What stimulus will have the lowest threshold?
A. Mechanical stimulus
B. Chemical stimulus
C. Photic stimulus
D. Cold stimulus
E. Heat stimulus

156. A 50-year-old man came to a hospital with complaints of memory disorders, painful sensations along the nerve trunks, decreased mental ability, circulatory disorders, and dyspepsia. Anamnesis states excessive alcohol consumption. What vitamin deficiency can result in such symptoms?
A. Thiamine
B. Niacin
C. Retinol
D. Calciferol
E. Riboflavin

157. Auscultation reveals that in the patient's II intercostal space along the parasternal line on the right, the II heart sound is better heard than the I heart sound. What valve produces this sound when closing?
A. Semilunar aortic valve
B. Semilunar pulmonary valve
C. Bicuspid valve
D. Tricuspid valve
E. Bicuspid and tricuspid valves

158. Miners' work at the coal-face often leads to the development of anthracosis. What type of respiratory failure arises along with this disease?
A. Restrictive
B. Obstructive
C. Dysregulatory
D. Thoracic
E. Diaphragmatic

159. A lancelet embryo is at the developmental stage during which its cells multiply, while its general volume remains practically unchanged. What developmental stage is it?
A. Cleavage
B. Neurulation
C. Organogenesis
D. Histogenesis
E. Gastrulation

160. Histologic specimen of endometrium demonstrates isolated epithelial cells with chromosomes that form a "plate" located in the equatorial plane of the cell. What stage of the cell cycle is it?
A. Metaphase
B. Interphase
C. Prophase
D. Anaphase
E. Telophase

161. During ultrasound, a patient with atherosclerosis was diagnosed with bilateral stenosis of the renal arteries. Specify the bioactive substance that is the key pathogenetic link in the development of arterial hypertension in this case:
A. Renin
B. Adrenaline
C. Vasopressin
D. Cortisol
E. Thyroxin

162. A 72-year-old man with hepatocirrhosis developed a hepatic coma. Its development is caused by the substances that are being neutralized in the liver, entering into general circulation through portacaval shunts (portal hypertension syndrome) and necrosis of hepatic cells. Whattypeofhepaticcomaischaracterized by these presentations?
A. Mixed
B. Parenchymatous
C. Shunt
D. Hepatocellular
E. Ketoacidotic

163. After a traffic accident a man presents with severe blood loss, consciousness disturbance, low blood pressure, as well as compensatory activation of the renin-angiotensin system, which results in:
A. Hyperproduction of aldosterone
B. Increased blood coagulation
C. Intensification of erythropoiesis
D. Hyperproduction of vasopressin
E. Intensification of heart contractions

164. Laboratory analysis revealed UDP-glucuronyl transferase deficiency in the patient. What blood values can confirm this enzymopathy?
A. Hyperbilirubinemia
B. Indicanuria
C. Phenylketonuria
D. Ketoacidosis
E. Uremia

165. Examination revealed the patient to have decreased secretory function of the nasal cavity glands. What nerve provides parasympathetic innervation of these glands?
A. N. petrosusmajor
B. N. petrosusprofundus
C. N. petrosusminor
D. N.maxillaris
E. N. chordatympani

166. A 67-year-old man was delivered to a cardiology department with complaints of periodical pains in his heart, dyspnea caused by even slight exertion, cyanosis, and edemas. ECG shows additional excitations of heart ventricles. Name this type of rhythm disturbance:
A. Extrasystole
B. Bradycardia
C. Tachycardia
D. Flutter
E. Fibrillation

167. A 40-year-old woman is being treated at the therapeutics department. Her temperature chart shows cyclic fevers alternating with periods of temperature normalization that last for several days. What type of temperature profile is it?
A. Febrisrecurrens
B. Febris intermittent
C. Febrisremittens
D. Febriscontinua
E. –

168. A patient with heatstroke was delivered to the admission room. What compensatory reactions develop in the patient's body in such case?
A. Peripherialvasodilatation
B. Peripheral vasoconstriction
C. Increased heart rate
D. Coronary vasospasm
E. Persistent hyperglycemia

169. During brain surgery, stimulation of the cerebral cortex resulted in tactile and thermal sensations in the patient. What gyrus was stimulated?
A. Postcentral gyrus
B. Cingulateconvolution
C. Parahippocampal gyrus
D. Superior temporal gyrus
E. Precentralgyrus

170. Cells of sensory spinal ganglions area part of reflex arches. What type of neurons are these cells?
A. Pseudounipolar
B. Multipolar
C. Bipolar
D. Unipolar
E. –

171. A patient with damaged muscles of the lower limbs has been delivered to a first-aid center. What cells enable reparative regeneration of muscle fibers and restoration of muscle function?
A. Myosatellitocytes
B. Adipocytes
C. Fibroblasts
D. Endotheliocytes
E. Plasmocytes

172. 2 days after a hunter cut a ground squirrel's body, he developed fever up to 39oC, his lymph nodes enlarged. Later he developed pneumonia with sero hemorrhagic exudate that contained egg-shaped microorganisms with bipolar staining. What provisional diagnosis can be made in this case?

A. Plague
B. Tetanus
C. Pseudotuberculosis
D. Brucellosis
E. Anthrax

173. Various types of muscle contractions occurring in the alimentary canal of a test animal were studied, and their different functional purposes were determined. It was noted that only one type of motor activity occurred in the circular and longitudinal muscles. Name this motor activity:
A. Peristalsis
B. Mastication
C. Nonpropulsive segmental activity
D. Pendular movements of intestine
E. Tonic contraction of sphincters

174. A child presents with a wound behind the mastoid bone. Bright red bloodstreams from the wound. The damage was sustained to the branches of the following artery:
A.A.occipitalis
B.A.temporalis superior
C.A.maxillaris
D.A.carotisexterna
E.A.carotisinterna

175. A man presents with a suppurative wound in the area of the mastoid bone, which resulted in the development of cerebral meningitis in the patient. Specify the way of infection penetration into the patient's cranial cavity:
A. V. emissaria emastoidea
B. V.auricularis
C. V.v.tympanicae
D. V. facialis
E. V.v.labirinthi

176. Rotenone is known to inhibit the respiratory chain. What complex of the mitochondrial respiratory chain is inhibited by this substance?
A. NADH-coenzyme Qreductase
B. Cytochrome oxidase
C. Coenzyme Q - cytochrome creductase
D. Succinate-coenzyme Qreductase
E. Adenosine triphosphate synthetase

177. 8 days after surgery, the patient developed tetanus. The surgeon suspects this condition to be caused by suture material contaminated by the tetanus agent. The material is delivered to a bacteriological laboratory. What nutrient medium is required for the primary inoculation of the suture material?
A. Kitt-Tarozzimedium
B. Endoagar
C. Sabouraudagar
D. Egg-yolk saltagar
E. Hissmedium

178. A patient is diagnosed with the deformed posterior portion of the nasal septum. What bone is deformed?
A. Vomer
B. Medial pterygoid plate
C. Lateralpterygoidplate
D. Perpendicular plate of ethmoid bone
E. Vertical plate of palatine bone

179. A patient suffers from disturbed blood supply of the superior lateral surface of the cerebral hemispheres. What blood vessel is damaged?
A. Medial cerebral artery
B. Anterior cerebral artery
C. Posterior cerebral artery
D. Anterior communicating artery
E. Posterior communicating artery

180. X-ray detected pus accumulation in the sphenoidal sinus. The pus is being excreted into the following nasal meatus:
A. Right and left superior nasal meatus
B. Left middle nasal meatus
C. Right inferior nasal meatus
D. Left inferior nasal meatus
E. Right middle nasal meatus

181. Dentists have a high risk of contract-

ing viral hepatitis type B in the course of their duties and therefore are subject to mandatory vaccination. What vaccine is used in such cases?
A. Recombinant vaccine
B. Chemicalvaccine
C. Inactivated vaccine
D. Anatoxin
E. Live vaccine

182. Differentiation of B-lymphocytes into plasma cells leads to the synthesis of immunoglobulins that ensure specific immune response of the body. Differentiation of B-lymphocytes takes place in the following organ of the immune system:
A. Tonsils
B. Redbone marrow
C. Liver
D. Thymus
E. Thyroid gland

183. On the tooth section in the area of the root apex, there is a tissue consisting of cells with processes surrounded by the mineralized intercellular substance. Name this tissue:
A. Cellularcement
B. Reticulofibrous bone tissue
C. Mantledentin
D. Enamel
E. Periodontium

184. During the oral cavity examination, a dentist noticed the eruption of the permanent canines in a child. The child grows and develops normally. Determine the child's age:
A. 11-13years
B. 13-16years
C. 6-7years
D. 8-9years
E. 9-10years

185. A surgeon accidentally damaged a nerve that innervates the mylohyoid muscle. Name this nerve:
A. N.trigeminus
B. N.facialis
C. N.glossopharyngeus
D. N.hypoglossus
E. N.accessories

186. At the crown apex of the second molar, on the surface that comes into contact with the cheek, the doctor detected a carious cavity. Name the affected crown surface:
A. Faciesvestibularis
B. Facieslingualis
C. Faciesmesialis
D. Faciesdistalis
E. Faciesocclusalis

187. Autopsy of a 46-year-old man, who had an untreated enteric infection and died of sepsis, revealed the following: perirectal phlegmon, multiple ulcers of the rectum and sigmoid colon, some of which are perforated; mucosa of these intestinal segments is thickened and covered with firmly attached grayish films. What is the most likely disease in this case?
A. Dysentery
B. Typhoid fever
C. Amebiasis
D. Cholera
E. Tuberculosis

188. Autopsy of a 52-year-old man revealed changes in his lungs: there is a segmented area of caseous necrosis in the upper right lung; the segments merge with each other. The lung is enlarged, dense, yellowish- colored on section; there are fibrinous films on the pleura. Name the type of tuberculosis:
A. Caseouspneumonia
B. Tuberculoma
C. Infiltrativetuberculosis
D. Cirrhotictuberculosis
E. Acute cavernous tuberculosis

189. A 3-year-old child presents with facial

deformation that was gradually developing over the course of 6 months and manifests as symmetrical enlargement of both mandibular angles. Microscopy shows the space between the bone trabeculae to be filled with connective tissue that contains numerous blood vessels and smaller primitive bone trabeculae. What disease is the most likely in this case?
A. Cherubism
B. Giant-cell tumor of the bone
C. Fibroma
D. Eosinophilicgranuloma
E. Osteosarcoma

190. Autopsy of a 72-year-old man with recurrent transmural myocardial infarction revealed his epicardium and pericardium membranes to be swollen, thickened, coarce as if covered in hair. Name the type of inflammation that occurred in the cardiac membranes:
A. Croupous
B. Diphtheritic
C. Serous
D. Suppurative
E. Catarrhal

191. During the autopsy of the patient, who died of cardiovascular insufficiency, the patient's right foot is darkly colored. Grayish-red clots partially obstruct the vessels of the patient's thigh. On the vessel walls, there are yellowish-gray spots and fibrous plaques, some of which are of stony density. What clinicopathological type of atherosclerosis was complicated in the patient?
A. Atherosclerosis of lower extremities
B. Cerebral atherosclerosis
C. Atherosclerosis of aorta
D. Vascular intestinal atherosclerosis
E. Renal atherosclerosis

192. During the examination of the patient's oral cavity, a dentist noticed the deformation of the teeth and a crescent indentation on the upper right inscisor. The teeth are undersized, barrel-shaped - tooth cervix is wider than its edge. The patient uses a hearing aid, suffers from visual impairment. What type of syphilis affects teeth in such a way?
A. Late congenital
B. Primary
C. Early congenital
D. Secondary
E. Neurosyphilis

193. Autopsy of a 7-year-old child, who died of uncompensated congenital heart disease, revealed an increase in mass and volume of the thymus. On microscopy thymus structure is normal. What pathologic process had occurred in the thymus?
A. Congenitalthymomegaly
B. Thymoma
C. Thymicagenesis
D. Accidentalinvolution
E. Thymicdysplasia

194. A patient came to the doctor with complaints of general weakness and sleep disturbances. Objectively the patient's skin is yellow. In blood, there is an increased concentration of direct bilirubin and bile acids. The acholic stool is observed. What condition can be characterized by these changes?
A. Mechanicaljaundice
B. Hemolytic jaundice
C. Parenchymatousjaundice
D. Familial nonhemolytic (Gilbert's) syndrome
E. Chronic cholecystitis

195. A diver that submerged to the depth of 75 meters detected signs of CNS functional disturbance: excitation, the lapse of concentration, euphoria leading to professional errors. What substance has a toxic effect on the neurons, thus leading to the development of these signs?
A. Nitrogen
B. Ammonia

C. Carbon dioxide
D. Oxygen
E. Lactate

196. A doctor gave a patient with a dislocated jaw a short-acting muscle relaxant. Name this drug:
A. Dithylinum (Suxamethoniumchloride)
B. Procaine
C. Cytitonum (Cytisine)
D. Papaverine hydrochloride
E. Pyridostigminehydrobromide

197. A doctor has made a diagnosis of gingivitis and recommended the patient to rinse the oral cavity with an oxidizing agent. Specify this agent:
A. Hydrogen peroxide
B. Boric acid
C. Salicylic acid
D. Phenol
E. Brilliant green

198. To treat osteomyelitis, a patient was prescribed an antibiotic that easily penetrates bone tissue. Name this drug:
A. Lincomycin hydrochloride
B. Streptomycin sulfate
C. Cefazolin
D. PolymyxinB
E. Amphotericin B

199. A person in the state of nervous tension develops transverse wrinkles on the forehead. What muscle contracts to produce this result?
A. M. occipitofrontalis
B. M.procerus
C. M. corrugatorsupercilii
D. M.temporoparietalis
E. M. auricularisanterior

200. A girl presents with a high fever and a sore throat. Objectively the soft palate is swollen, the tonsils are covered with gray films that are firmly attached and leave deep bleeding lesions when removed. What is the most likely disease in this case?
Pharyngeal diphtheria
Pseudo membranous (Vincent's) tonsillitis
Lacunar tonsillitis
Infectious mononucleosis
Necrotic tonsillitis

1. An ophthalmologist has detected increased time of darkness adaptation in the patient's eye. What vitamin deficiency can cause this sign?
A.A
B.E
C.K
D.D
E.C

2. The patient exhausted by starvation presents with an intensification of the following process in the liver and kidneys:
A. Gluconeogenesis
B. Bilirubin synthesis
C. Uric acid synthesis
D. Hippuric acid synthesis
E. Urea synthesis

3. Various substances can be used as anticoagulants. Among them, there is a specific naturally derived polysaccharide. Name this polysaccharide:
A.Heparin
B.Dextran
C.Dermatan sulfate
D.Hyaluronic acid
E.Chondroitin sulfate

4. A patient presents with osteoporosis. Hypercalcemia and hypophosphatemia are observed in the patient's blood. What is the cause of this condition?
A.Increased parathormone secretion
B.Inhibited corticosteroid secretion
C.Inhibited parathormone secretion
D.Increased thyroxin secretion
E.Increased corticosteroid secretion

5. A patient with pulmonary tuberculosis is prescribed rifampicin that inhibits RNA polymerase enzyme at the stage of initiation of the following process:
A.Transcription
B.Replication
C.Elongation
D.Termination
E.Translation

6. The patient's saliva has been tested for antibacterial activity. What saliva component has antibacterial properties?
A.Lysozyme
B.Amylase
C.Parotin
D.Cholesterol
E.Ceruloplasmin

7. A 35-year-old man has come to a dentist with complaints of the decreased density of dental tissue and increased brittleness of his teeth during the consumption of solid food. Laboratory analysis measured Ca/P correlation in the enamel sample. What value of Ca/P indicates increased demineralization?
A.0.9
B.1.85
C.1.5
D.2.5
E.1.67

8. Lab rats were used to study the effect of a particular vitamin on the body. Deficiency of this vitamin has resulted in a disturbed reproductive function and skeletal muscle dystrophy. What vitamin is it?
A.E
B.A
C.D
D.K
E.B2

9. In the patient's blood, there is a C-reactive protein that chemically can be classified as a glycoprotein. It indicates the following pathology:
A.Rheumatism
B.Thrombocytopenia
C.Porphyria
D.Anaemia
E.Leucopenia

10. An 8-year-old child presents with frequent severe subcutaneous haemorrhages.

Prescription of Vicasol, a synthetic analogue of vitamin K, had a positive effect. This vitamin participates in gamma-carboxylation of glutamic acid in a particular blood-clotting protein. Name this protein:
A.Prothrombin
B.Proconvertin
C.Hageman factor
D.Fibrinogen
E.Rosenthal factor

11. A child presents with hepatomegaly, hypoglycemia, and convulsions that occur predominantly during fasting or in stress-inducing situations. The child is diagnosed with von Gierke disease (glycogen storage disease type I). What enzyme is affected by the genetic defect that is the cause of this disease?
A.Glucose 6-phosphatase
B.Phosphoglucomutase
C.Glycogen phosphorylase
D.Amylo-1,6-glycosidase
E.Glucokinase

12. Formation of a large number of immunoglobulins with various antigen specificity from a small number of genes occurs due to:
A.Recombination
B.Transcription
C.Replication
D.Deletion
E.Translocation

13. Glucose synthesis from non-carbohydrate components is an essential biochemical process. Gluconeogenesis from amino acids occurs most actively if a diet is rich in proteins. Which amino acid of those listed below is the most glucogenic?
A.Alanine
B.Isoleucine
C.Leucine
D.Valine
E.Lysine

14. A 6-year-old girl exhibits marked signs of hemolytic anaemia. Biochemical analysis of her erythrocytes shows the deficiency of glucose 6-phosphate dehydrogenase enzyme. What metabolic process is disturbed in this patient and has a leading role in the development of this pathology?
A.Pentose-phosphate pathway
B.Tissue respiration
C.Gluconeogenesis
D.Anaerobic glycolysis
E.Oxidative phosphorylation

15. A patient was diagnosed with a genetic disorder leading to lipoprotein lipase deficiency. What finding will be characteristic of biochemical blood analysis in this case?
A.Hypochylomicronemia
B.Hyperglycemia
C.Hypoglycemia
D.Hypertriacylglycerolemia
E.Hypotriacylglycerolemia

16. A patient with Cushing syndrome presents with persistent hyperglycemia and glucosuria. This patient is likely to have increased production and secretion of the following hormone:
A.Cortisol
B.Adrenaline
C.Thyroxine
D.Aldosterone
E.Glucagon

17. A 25-year-old young man complains of general weakness, rapid fatigability, irritability, reduced working ability, and bleeding gums. What vitamin deficiency is the most likely cause of this condition?
A.Ascorbic acid
B.Thiamine
C.Folic acid
D.Retinol
E.Riboflavin

18. A 37-year-old woman presents with fructosemia and fructosuria. Her blood glu-

cose is 2.1 mmol/L. She is diagnosed with fructose intolerance. What congenital enzyme deficiency is the molecular basis of this disease?
A. Fructose 1-phosphate aldolase
B. Hexokinase
C. Triose-phosphate isomerase
D. Phosphoglucomutase
E. Phosphofructokinase

19. According to the law of constancy of chromosome numbers, most animal species have definite and constant chromosome number. The mechanism that maintains this constancy during sexual reproduction of organisms is called:
A.Meiosis
B.Regeneration
C.-
D.Schizogony
E.Amitosis

20. In the human population some people throughout their life develop not two but three dentitions. It is the manifestation of the following law:
A.Biogenetic law (recapitulation theory)
B.Hardy-Weinberg principle
C.Independent assortment
D.Homologous series of genetic variation
E.Embryonic induction

21. Microscopy of a sputum sample obtained from a patient who has been suffering from pneumonia for a week detected helminth larvae. Eosinophilia is observed in the patient's blood. What diagnosis can be suspected in this case?
A.Ascariasis
B.Fascioliasis
C.Echinococcosis
D.Taeniasis
E.Paragonimiasis

22. During their expedition to the Middle East, the students found a 7-centimetre-long arthropod. Its body consists of cephalothorax with four pairs of ambulatory legs and segmented abdomen with two venom glands in its last segment. The gland openings are located on the tip of the hook-shaped sting. The animal was identified as a nocturnal predator; its venom is dangerous for humans. It belongs to the following order:
A.Scorpiones
B.Aranei
C.Solpugae
D.Aphaniptera
E.Acarina

23. Mother with a 12-year-old child came to the gastroenterologist. She complains of loss of appetite and meteorism in her child. Endoscopically the child was diagnosed with biliary dyskinesia, in the duodenal contents, there were pear-shaped protozoa with two nuclei and multiple flagella. What disease is the most likely in this child?
A.Lambliasis
B.Toxoplasmosis
C.Amebiasis
D.Balantidiasis
E.Trichomoniasis

24. Biochemical analysis of amino acid contents of freshly synthesized polypeptides shows that in the process of their translation, the first amino acid in each of these proteins will be the same. Name this amino acid:
A.Methionine
B.Phenylalanine
C.Isoleucine
D.Serine
E.Histidine

25. Several non-allelic dominant genes control the height of a person. If the number of these genes is increased, the height of a person increases as well. What type of interaction occurs between these genes?
A.Polymery
B.Epistasis

C. Pleiotropy
D. Codominance
E. Complementarity

26. Mother of a 2-year-old child with delayed physical and mental development has made an appointment with the genetic consultation. What method allows the doctor to rule out chromosomal abnormalities?
A.Cytogenetic
B.Genealogical
C.Population statistics
D.Cytological
E.Biochemical

27. During a class in molecular biology, the mutations resulting in the production of abnormal haemoglobin are being studied. What amino acid substitution occurs when S-hemoglobin is being produced, resulting in the development of sickle-cell anaemia?
A.Glutamic acid is substituted with valine
B.Glycine is substituted with asparagine
C.Lysine is substituted with glutamine
D.Threonine is substituted with lysine
E.Histidine is substituted with arginine

28. People of various nationalities, who live in the Arctic climate, develop several features to adapt to their environment. Representatives of the Arctic adaptive type compared to the natives of Central Africa have the following characteristic feature:
A.Increased layer of subcutaneous fat
B.Lower need for fat intake
C.Hyperhidrosis
D.Lean stature
E.Elongated legs and shorter arms

29. Fetal malformations can be caused by such maternal diseases as rubella, syphilis, toxoplasmosis, cytomegaly, herpes, and chlamydiosis. These malformations belong to the following type of variability:
A.Modification
B.Epimutational
C.Combinative
D.Mutational
E.Genomic imprinting

30. A tourist, who had been to one of the Far East countries, was hospitalized into the therapeutics unit with suspected pneumonia. Examination of his sputum and faeces detected there lung fluke eggs. What food products are the most likely cause of lung fluke infestation?
A.Insufficiently thermally processed freshwater crabs
B.Insufficiently thermally processed eggs
C.Insufficiently thermally processed beef
D.Insufficiently thermally processed pork
E.Raw fruits and vegetables

31. In the skin biopsy material in the epidermis, there are cells with processes and dark brown granules in their cytoplasm. Name these cells:
A.Melanocytes
B.Keratinocytes
C.Intraepidermal macrophages
D.Merkel cells
E.Lymphocytes

32. A smear specimen of human red bone marrow shows, among myeloid cells and adipocytes, specific stellate cells with oxyphilic cytoplasm that are connected with their cellular processes. Name these cells:
A.Reticular cells
B.Dendritic cells
C.Osteocytes
D.Fibroblasts
E.Macrophages

33. A micro slide shows a section of a bean-shaped organ with cortical and medullary substances. Its cortical substance contains separate spheric nodules 0.5-1 mm in diameter; its medullary substance consists of medullary cords. This histological section demonstrates the following organ:
A.Lymph node
B.Thymus

C.Kidney
D.Adrenal gland
E.Spleen

34. Micro slide of a cardiac tissue shows rectangular cells with the central location of the nucleus and well-developed myofibrils connected with Z-disks. These cells perform the following cardiac function:
A.Contraction
B.Impulse conduction
C.Protective
D.Regenerative
E.Endocrine

35. A woman presents with edemas. In her urine, there is a large amount of protein excreted. What nephron segment is functionally disturbed in this case?
A.Renal corpuscle
B.Proximal convoluted tubule
C.Descending limb of the loop of Henle
D.Ascending limb of the loop of Henle
E.Distal convoluted tubule

36. A urine sample was taken via a catheter from the urinary bladder of a 17-year-old young man. Microscopy of the urine precipitate, in this case, can detect cells of the epithelium that lines the urinary bladder. What epithelium is it?
A.Transitional epithelium
B.Non-stratified cuboidal epithelium
C.Keratinized stratified epithelium
D.Non-keratinized stratified epithelium
E.Non-stratified columnar epithelium

37. A connective tissue specimen stained with hematoxylin-eosin shows isogenous cell groups surrounded with basophilic intercellular substance. No fibrous structures are detected. What type of connective tissue is it?
A.Hyaline cartilage tissue
B.Dense fibrous tissue
C.Elastic cartilage tissue
D.Loose fibrous tissue
E.Splenial bone tissue

38. A sample obtained from the patient's thyroid gland was processed with silver salts, which revealed large argyrophilic cells in the follicular walls. What hormone is being secreted by these cells?
A.Calcitonin
B.Parathyrin
C.Thyroxine
D.Aldosterone
E.Adrenaline

39. A histological specimen shows three neurons: pseudounipolar, bipolar, and multipolar. How many axons will each of this cell have?
A.One
B.None
C.Three
D.Many
E.Two

40. A particular embryonic organ is being studied. In this organ, the first blood corpuscles that make up blood as tissue are being formed. Name this organ:
A.Yolk sac
B.Thymus
C.Liver
D.Spleen
E.Redbone marrow

41. The fibrocartilaginous layer of trachea consists of C-shaped hyaline cartilage rings, with their open ends facing posteriorly. What tissue connects these open ends?
A.Smooth muscular tissue
B.Loose fibrous connective tissue
C.Striated muscular tissue
D.Adipose connective tissue
E.Dense unformed connective tissue

42. A histological specimen shows cells that form isogenous groups. There are glycoproteins, proteoglycans, and collagen fibres in the intercellular substance. What tis-

sue is it?
A.Cartilaginous tissue
B.Brown adipose tissue
C.Mucous tissue
D.Bone tissue
E.White adipose tissue

43. A patient with chronic hepatitis undergoes blood test for serum protein fractions. Total protein levels are low, which indicates that in the hepatic cells, the following organelles are functionally disturbed:
A.Granular endoplasmic reticulum
B.Lysosomes
C.Cytoskeleton
D.Golgi apparatus
E.Mitochondria

44. A histological specimen of mucous tunic of a particular organ shows stratified epithelium consisting of 20-25 cellular layers with superficial squamous cells. Name the organ from which this sample was obtained:
A.Esophagus
B.Large intestine
C.Duodenum
D.Small intestine
E.Gastric fundus

45. Histologic specimen of a tooth slice shows a tissue consisting of intercellular substance permeated with tubules, in which cellular processes of odontoblasts are situated. What tissue is presented in this histologic specimen?
A.Dentin
B.Enamel
C.Cement
D.Periodontium
E.Pulp

46. According to the data collected by WHO researchers, every year, approximately 250 million malaria cases occur in the world. This disease can be encountered predominantly in tropical and subtropical areas. The spread of this disease matches the natural habitat of the following genus of mosquitoes:
A.Anopheles
B.Mansonia
C.Culiseta
D.Culex
E.Aedes

47. A child was hospitalized with a diagnosis of diphtheria. What should be given to this child for a specific therapy?
A.Diphtheria antitoxin serum, antibiotics
B.Diphtheria anatoxin, antibiotics
C.Diphtheria vaccines: DPT, DT, diphtheria vaccine
D.Diphtheria bacteriophage
E.Codivac vaccine, sulfanilamides

48. A man complaining of nausea, liquid stool with mucus and blood streaks, high temperature, and weakness was hospitalized into the infectious diseases department. The doctor suspects dysentery. What method of laboratory diagnostics would be the most effective for confirmation of this diagnosis?
A.Bacteriological analysis
B.Mycological analysis
C.Protozoan analysis
D.Microscopy
E.Serological analysis

49. A person bitten by a stray dog came to the surgeon's office. Wide lacerated wounds are localized on the patient's face. What rabies prevention aid should be provided to this person?
A.Begin immunization with antirabic vaccine
B.Immediately administer DPT vaccine
C.Prescribe combined vitamin therapy
D.Hospitalize the patient and continue to monitor his condition
E.Immediately administer normal gamma globulin

50. A bacteriological laboratory analyzes potable water quality. The microbial number of the water sample is approximately 100. What microorganisms were accounted for in this case?
A.All bacteria that have grown on a nutrient medium
B.Opportunistic pathogenic bacteria
C.Enteropathogenic bacteria and viruses
D.Colibacilli
E.Human and animal pathogenic bacteria

51. Often the cause of secondary immunodeficiency is organism exposure to an infection, agents of which reproduce directly in the cells of the immune system and destroy them. Specify the diseases, during which the described above occurs:
A.Infectious mononucleosis, AIDS
B.Dysentery, cholera
C.Q fever, typhus
D.Tuberculosis, mycobacteriosis
E.Poliomyelitis, viral hepatitis type A

52. A sick child is suspected of having tuberculosis and is referred for the Mantoux test. Twenty-four hours later, the place of allergen injection became swollen, hyperemic, and tender. What main components determine the development of this reaction?
A.Mononuclear cells, T-lymphocytes, and lymphokines
B.Plasma cells, T-lymphocytes, and lymphokines
C.Granulocytes, T-lymphocytes, and IgG
D.B-lymphocytes and IgM
E.Macrophages, B lymphocytes, and monocytes

53. A 3-year-old girl has rubella. Her 10-year-old sister was not infected, despite both girls constantly remaining in contact. The pediatrician determined that the elder girl had rubella five years ago. What type of immunity does the elder sister have?
A.Natural active
B.Natural passive
C.Artificial passive
D.Innate
E.Artificial active

54. During the identification of pure culture of microorganisms, the essential part is a serological identification that is conducted using agglutination reaction. What components are necessary to conduct this reaction?
A.Unknown bacterial culture, specific antibodies
B.Specific antigen, known antibody, bacteria
C.Unknown antibodies, nonspecific antigen
D.Thermoextract, specific serum
E.Specific antigen, serum sample obtained from the patient

55. During the laboratory diagnostics of hepatitis C, it is necessary to detect the presence of antibodies to hepatitis C virus in the patient's blood serum. What test should be conducted in this case?
A.Enzyme-linked immunosorbent assay (ELISA)
B.Ligase chain reaction
C.DNA probe method
D.Nucleic acid hybridization
E.Nucleic acid hybridization with signal amplification

56. A man complains of varicose veins on his left leg. Venous nodes are located on the posterior surface of the shin and the posterior and anterior surfaces of the thigh. What superficial leg veins are damaged in this patient?
A.Great saphenous vein, small saphenous vein
B.Femoral vein, great saphenous vein, small saphenous vein
C.Posterior tibial vein, great saphenous vein
D.Small saphenous vein, deep femoral vein
E.Popliteal vein, superficial saphenous vein

57. A patient presents with aspermia. What

organ is functionally disturbed?
A.Testicle
B.Seminal vesicles
C.Prostate
D.-
E.Epididymis

58. A 10-day-old child has undergone a surgery to repair cleft upper lip ("harelip"). Cleft upper lip has resulted from the following in this case:
A.Nonclosure of frontal and maxillary processes of the first pharyngeal arch
B.Nonclosure of the second pharyngeal arch
C.Nonclosure of maxillary and mandibular processes of the first pharyngeal arch
D.Nonclosure of the third pharyngeal arch
E.Nonclosure of palatine tori of maxillary processes of the first pharyngeal arch

59. After facial trauma, the patient developed a buccal hematoma. What salivatory gland has its outflow blocked by the hematoma?
A. Parotid
B. Submandibular
C. Buccal
D. Lingual
E. Sublingual

60. A patient complains of painful chewing, especially when his lower jaw moves forward and to the side. It indicates the functional disorder of the following muscles:
A.Lateral pterygoid muscles
B.Medial pterygoid muscles
C.Mylohyoid muscles
D.Temporal muscles
E.Masseter muscles

61. After a cold, the patient developed an impaired perception of pain and thermal stimuli in the front 2/3 of the tongue. What nerve was damaged in this case?
A.Trigeminal
B.Vagus
C.Chorda tympani
D.Hypoglossal
E.Phrenic

62. A 42-year-old man with an incised wound on the lower anterior surface of his shoulder came to the medical station. Objectively he presents with impaired forearm flexion. What muscles are likely to be damaged in this patient?
A.M. brachialis, m. biceps brachii
B.M. biceps brachii, m. anconeus
C.M. deltoideus, m. infraspinatus
D.M. deltoideus, m. biceps brachii
E.M. coracobrachialis, m. supraspinatus

63. During surgery on the stomach, the surgeon has cut the left gastric artery and ligated it. However, the opposite end of the cut artery continued to bleed. What artery anastomoses with the left gastric artery?
A.Right gastric artery
B.Superior pancreaticoduodenal artery
C.Right gastroepiploic artery
D.Splenic artery
E.Left gastroepiploic artery

64. A woman has undergone surgery for a femoral hernia. In this case, the hernial protrusion is projected into the:
A.Femoral triangle
B.Pubic region
C.-
D.Gluteal region
E.Inguinal region

65. A patient of tall stature with a drooping lower lip, big nose, and large extremities has made an appointment with the doctor. What gland is likely to present with excessive secretion in this patient?
A.The anterior lobe of the pituitary gland
B.Pineal gland
C.-
D.Thyroid gland
E.Parathyroid glands

66. During surgery on the right side of the neck, excursion of the right diaphragmatic dome was disturbed. This disturbance occurred because of the damage to the following nerve:
A.Right phrenic nerve
B.Supraclavicular nerve
C.Right transverse cervical nerve
D.Left phrenic nerve
E.Left transverse cervical nerve

67. A trauma patient has a wound in the temporal region, with the trickle of bright red blood streaming from it. What blood vessel is damaged?
A. temporalis superficialis
B. maxillaris
C. occipitalis
D. facialis
E. auricularis posterior

68. On examination, a woman was diagnosed with a retropharyngeal abscess. What cervical space should be accessed by the surgeon lancing this abscess?
A.Retrovisceral space
B.Interscalene space
C.Suprasternal space
D.Previsceral space
E.Prescalene space

69. Brain investigation using nuclear magnetic resonance revealed the patient to have a hematoma in the genu of the internal capsule. What pathway is damaged in this case?
A.Tr. cortico-nuclearis
B.Tr. cortico-thalamicus
C.Tr. thalamo-corticalis
D.Tr. cortico-spinalis
E.Tr. cortico-fronto-pontinus

70. A patient was diagnosed with a damaged intervertebral disk in the lumbar spine. What type of joint is it?
A.Synchondrosis
B.Symphysis
C.Syndesmosis
D.Synostosis
E.Diarthrosis

71. A patient complains of severe rhinitis and total loss of olfactory perception. Receptors of the olfactory analyzer are damaged in this patient. Where in the nasal cavity are these receptors located?
A.Superior nasal meatus
B.Common nasal meatus
C.Choanae
D.Middle nasal meatus
E.Inferior nasal meatus

72. A student uses percussion to determine the cardiac border that projects on the anterior thoracic wall at the level of the third costal cartilage. What cardiac border is being determined?
A.Upper
B.Apex
C.Left
D.Lower
E.Right

73. A trauma patient has a fracture in the petrous part of the temporal bone. The fracture line passes behind the internal auditory foramen. What canal of the temporal bone was damaged?
A.Facial canal
B.Tympanic canal
C.Musculotubal canal
D.Canaliculus of the chorda tympani
E.Carotid canal

74. A patient suffers from disturbed blood supply of the superior lateral surface of the cerebral hemispheres. What blood vessel is damaged?
A.Medial cerebral artery
B.Posterior communicating artery
C.Posterior cerebral artery
D.Anterior cerebral artery
E.Anterior communicating artery

75. Examination of a patient with the disturbed process of saliva production in the parotid gland shows that the otic ganglion is likely to be damaged. The following nerve forms this ganglion:
A.N. petrosus minor
B.N. auricularis magnus
C.N. petrosus major
D.N. vagus
E.N. hypoglossus

76. During the oral cavity examination, a dentist noticed eruption of the permanent canines in a child. The child grows and develops normally. Determine the child's age:
A.11-13 years
B.8-9 years
C.9-10 years
D.13-16 years
E.6-7 years

77. A tooth has been extracted. Its crown is chisel-shaped, wide, with a narrow edge. The root is cone-shaped and flattened from the sides. What tooth was extracted?
A.Upper incisor
B.Upper premolar
C.Lower canine
D.Lower premolar
E.Lower incisor

78. A man cannot lift his drooping lower jaw. What muscles of the head DO NOT function properly in this case?
A.Masseters
B.Zygomaticus minor
C.Superior auricular
D.Buccinators
E.Zygomaticus major

79. An experimental animal, a dog, received a weak solution of hydrochloric acid through a tube inserted into the duodenum. Primarily it will result in increased secretion of the following hormone:
A.Secretin
B.Neurotensin
C.Histamine
D.Gastrin
E.Cholecystokinin

80. An athlete before a sports contest presents with elevated blood pressure and heart rate. What part of the CNS induces these changes?
A.Cerebral cortex
B.Mesencephalon
C.Hypothalamus
D.Diencephalon
E.Medulla oblongata

81. A patient complains that even small traumas lead to persistent haemorrhages. Laboratory analysis shows disturbed blood composition, namely a low count of the following blood corpuscles:
A.Platelets
B.Neutrophils
C.Monocytes
D.Lymphocytes
E.Erythrocytes

82. A 19-year-old young man has been examined in a nephrological hospital. Increased potassium content was detected in the secondary urine of the patient. Such changes are the most likely to be caused by increased secretion of the following hormone:
A.Aldosterone
B.Oxytocin
C.Glucagon
D.Testosterone
E.Adrenaline

83. In an experiment, a peripheral segment of the sympathetic nerve that innervates the sublingual gland is being stimulated. In this case, this gland will produce:
A.A small amount of viscous saliva
B.A small amount of non-viscous saliva
C.A large amount of viscous saliva
D.A large amount of non-viscous saliva
E.No saliva

84. An athlete overexerted himself during training and developed a muscle contracture. In such cases, the muscle loses its flexibility and gradually becomes rigid due to its inability to relax. What is the likely cause of the contracture in this case?
A.ATP deficiency
B.Increased blood levels of K+
C.Increased blood levels of lactic acid
D.Decreased blood levels of Ca++
E.Tropomyosin structural changes

85. Condition of a patient with thoracic trauma deteriorates quickly: he develops increasing asphyxiation, facial pallor, tachycardia. What is the likely cause of these developments?
A.Pneumothorax
B.Fright
C.Rib fracture
D.Thoracic contusion
E.Response to pain stimulus

86. A man was submerged into the ice-cold water and soon died of abrupt exposure to cold. In such cases, an organism loses heat most intensively by way of:
A.Heat conduction
B.Convection
C.-
D.Heat conduction and radiation
E.Radiation

87. In hot weather, the bus passengers asked to open the roof hatches. What way of heat transfer is activated in this situation?
A.Convection
B.Radiation
C.Sweat evaporation
D.Conduction and radiation
E.Conduction

88. People with diseases of internal organs often assume forced positions (e.g. with lower limbs flexed and pressed to the abdomen) due to the following reflex response:
A.Visceromotor
B.Dermatovisceral
C.Viscero-visceral
D.Viscerodermal
E.Motor-visceral

89. A 30-year-old woman has developed signs of virilism (body hair growth, balding temples, disturbed menstrual cycle). This condition can be caused by hyperproduction of the following hormone:
A.Testosterone
B.Relaxin
C.Prolactin
D.Oxytocin
E.Estriol

90. A dentist has to spend much of his time on his feet when working, which can result in venous congestion in the legs and varicose veins. Leading mechanism of congestion, in this case, is the decrease of:
A.Skeletal muscle contraction in the lower limbs
B.Blood pressure gradient in the veins
C.Cardiac residual pumping force
D.Diaphragmatic piston effect on the abdominal organs
E.Thoracic pump effect

91. A car accident victim presents with a spinal hematoma accompanied by retrosternal pain, tachycardia, and elevated blood pressure. The patient's condition results from the damage to the following segments of the spinal cord:
A.Th1-Th5
B.L1- L3
C.C6-C8
D.S1-S3
E.-

92. In an experiment, the vagus is being stimulated, which results in increased acetylcholine entry to the synaptic cleft, and that in turn results in the decreased heart rate due to the following mechanism:

A.Hyperpolarization of cardiomyocyte membrane
B.Increase of action potential duration
C.Decrease of action potential duration
D.Depolarization of cardiomyocyte membrane
E.Increase in AV nodal conduction velocity

93. A person in hot weather for a long time had no water, which resulted in a severe thirst. What indicator of blood homeostasis was affected, leading to the development of this sensation?
A. Plasma osmotic pressure
B. pH
C. Hematocrit
D. Plasma oncotic pressure
E. Glucose level

94. During a brain surgery stimulation of the cerebral cortex resulted in tactile and thermal sensations in the patient. What gyrus was stimulated?
A.Postcentral gyrus
B.Superior temporal gyrus
C.Precentral gyrus
D.Cingulate convolution
E.Parahippocampal gyrus

95. Curariform drugs are used to immobilize the patient during surgery. Their mechanism of action is based on the blockade of:
A. Nicotinic acetylcholine receptors of skeletal muscles
B. Noradrenaline release into the synaptic cleft
C. Muscarinic acetylcholine receptors of smooth muscles
D. Conduction of excitation in the nerve fibres
E. Acetylcholine release into the synaptic cleft

96. After a collision of two cars, one of the drivers presents with a deformity in the middle third of the left shin. The driver feels extreme pain that exacerbates on attempts to move it. The ends of a broken bone protrude from the open wound, the bone is triangular on section, movements cause the bleeding to intensify. What bone was damaged?
A. Tibia
B. Femur
C. Talus
D. Patella
E. Fibula

97. A particular disease of infection-allergic or unknown origin leads to bilateral diffuse or focal non-suppurative inflammation of renal glomerular apparatus with characteristic renal and extrarenal signs. Name this disease:
A. Glomerulonephritis
B. Pyelonephritis
C. Polycystic renal disease
D. Nephrosclerosis
E. Nephrolithiasis

98. A patient presents with acute onset of the disease: high fever and enlarged painful spleen. On the 10th day since the onset, the patient developed a maculopapular rash on the abdomen. On the 21st day, the patient died of peritonitis. Postmortem study of the body shows deep ulcers in the area of necrotic aggregated lymphoid follicles (Peyer's patches) in the ileum of the deceased. One of the ulcers is perforated and diffuse fibrinopurulent peritonitis is observed. What disease can be suspected in this case?
A. Typhoid fever
B. Intestinal amebiasis
C. Dysentery
D. Cholera
E. Salmonellosis

99. Autopsy of an 86-year-old woman, who had cerebral atherosclerosis, shows atrophy of her cerebral cortex. Name this type of atrophy based on its cause:
A.Insufficient blood supply

B. Caused by physico-chemical factors
C. Dysfunctional
D. Neurogenic
E. Pressure-induced

100. An autopsy of a 42-year-old man, who suffered from chronic diffuse bronchitis and died of cardiopulmonary failure, shows large hyperinflated lungs that cover mediastinum with their edges. The lungs do not deflate, are coloured pale grey, crunch on section; lung surface does not straighten out when pressed with a finger, resulting in a permanent depression. Mucopurulent exudate is produced from the bronchial lumen. What is the most likely diagnosis?
A. Chronic diffuse obstructive emphysema
B. Interstitial emphysema
C. Chronic focal emphysema
D. Primary idiopathic emphysema
E. Vicarious compensatory emphysema

101. Autopsy of a man with tuberculosis has revealed a 3x2 cm large cavity in the superior lobe of the right lung. The cavity was communicating with a bronchus, its wall was dense and consisted of three layers: the internal layer was pyogenic, the middle layer was made of tuberculous granulation tissue, and the external one was made of connective tissue. What is the most likely diagnosis?
A. Fibrous cavernous tuberculosis
B. Fibrous focal tuberculosis
C. Acute focal tuberculosis
D. Acute cavernous tuberculosis
E. Tuberculoma

102. The dentist examines a pregnant woman. There are 3 round lesions up to 1 cm in diameter on her oral mucosa. The lesions appeared three days ago; they have a white-grey surface and a red margin. The dentist can make the following diagnosis:
A. Aphthous stomatitis
B. Leukoplakia
C. Necrotizing ulcerative stomatitis
D. Gangrenous stomatitis
E. Catarrhal stomatitis

103. A 28-year-old patient presented with elevated blood pressure, hematuria, and facial edemas. Despite the treatment, the signs of renal failure were exacerbating. Six months later, the patient died of uremia. Microscopy of the kidneys shows proliferation of nephrothelium in the glomerular capsules and proliferation of podocytes that contributes to the crescent formation. Sclerosis and hyalinosis of the glomeruli are observed. Make the diagnosis:
A. Subacute glomerulonephritis
B. Acute pyelonephritis
C. Chronic glomerulonephritis
D. Acute glomerulonephritis
E. Nephrotic syndrome

104. Autopsy of a man, who died suddenly with signs of acutely disturbed cerebral circulation, revealed aneurysm rupture of the medial cerebral artery and a round cavity 4 cm in diameter filled with blood in his frontal lobe. Name this type of haemorrhage:
A. Hematoma
B. Hemorrhagic infiltration
C. -
D. Contusion
E. Petechiae

105. During teeth examination on the lateral surface of the first upper molar, there was detected a cone-shaped carious cavity with the base oriented toward the tooth surface and the apex - toward the tooth centre. Softened dentin is visible in the floor of the carious cavity. Make the diagnosis:
A. Dentin caries
B. Tooth erosion
C. -
D. Enamel caries
E. Cement caries

106. A 23-year-old man developed a perforation in his hard palate, a dense formation with clear margins was detected in this area. After a surgery, microscopy of the excised formation shows there a large focus of caseous necrosis surrounded with granulation tissue with endovasculitis and a cellular infiltration consisting of lymphocytes and epithelioid cells with a predominance of plasma cells. What is the most likely disease in this case?
A. Syphilis
B. Leprosy
C. Sarcoma
D. Scleroma
E. Tuberculosis

107. A 53-year-old woman complains of painful swelling in her left parotid area. The swelling appeared five days ago. Objectively the skin in this area is slightly hyperemic and tender. The excretory duct of the salivary gland produces a small amount of viscous turbid yellow-green liquid. Microscopy detects a diffuse infiltration of the gland with segmented neutrophils. Make the diagnosis:
A. Acute suppurative parotitis
B. Glandular adenoma
C. Acute serous parotitis
D. Epidemic parotitis
E. Sjogren syndrome

108. A 65-year-old man presents with acute mandibular osteomyelitis. Three days after the disease onset, he developed marked edema of the skin and soft submandibular cervical tissues. Microscopically there is a diffuse infiltration with neutrophils. What complication of the main disease occurred in the patient's skin tissues?
A. Phlegmon
B. Carbuncle
C. Actinomycosis
D. Furuncle
E. Abscess

109. Oral examination revealed dark yellow and brown spots and stripes on the labial and lingual surfaces of the patent's teeth; more than the half of the dental surface is affected; enamel and dentin are destroyed. What diagnosis is the most likely?
A. Fluorosis
B. Metastatic calcification
C. Cuneiform defect
D. Dystrophic calcification
E. Dental calculus

110. Mother of a 4-year-old child complains that the child developed elevated body temperature, tenesmus, diarrhoea, and abdominal pain attacks. The child attends a preschool facility. Laboratory analysis detected mucus and blood admixtures in the child's faeces. Name the changes that occur in the gastrointestinal tract during dysentery:
A. Colitis
B. Gastroenteritis
C. Enterocolitis
D. Gastritis
E. Enteritis

111. During the autopsy of the patient, who died of cardiovascular failure, the patient's right foot is darkly coloured. Greyish-red clots partially obstruct the vessels of the patient's thigh. On the vessel walls, there are yellowish-grey spots and fibrous plaques, some of which are of stony density. What clinicopathological type of atherosclerosis was complicated in the patient?
A. Atherosclerosis of lower extremities
B. Vascular intestinal atherosclerosis
C. Renal atherosclerosis
D. Cerebral atherosclerosis
E. Atherosclerosis of aorta

112. A 35-year-old man had had bronchial asthma for a long time. Eventually, he developed a status asthmaticus that became lethal. Examination of section materials shows a bronchiolar spasm in the lungs.

The bronchiolar walls show signs of cellular infiltration with the predominance of eosinophilic leukocytes and lymphocytes, labrocytes with signs of degranulation are observed. What mechanism of hypersensitivity is the cause of these changes?
A.Reaginic reaction
B.Immune complex
C.-
D.Cell-mediated cytotoxicity
E.Antibody-dependent

113. Examination of a tooth shows that there is a large cavity in its crown. The floor of the cavity consists of a thin layer of softened dentin that separates the cavity from the pulp. What is the most likely diagnosis?
A. Deep caries
B. Pulpitis
C. Periodontitis
D. Median caries
E. Superficial caries

114. A pregnant woman developed severe toxemia with exhausting recurrent vomiting throughout a day. By the end of the day, she developed tetanic convulsions and dehydration. The following type of acid-base imbalance caused the described changes:
A. Nongaseous excretory alkalosis
B. Nongaseous metabolic acidosis
C. Nongaseous excretory acidosis
D. Gaseous alkalosis
E. Gaseous acidosis

115. A 50-year-old man has been undergoing treatment for peptic ulcer disease of the stomach. His digestion normalized, pain disappeared, and general mood improved. However, several weeks later, he again developed epigastric pain, heartburn, and sour eructation. How can this clinical course be characterized?
A. Relapse
B. Prodromal stage
C. Latent period
D. Remission
E. Terminal state

116. After a total gastric resection, the patient developed severe B12-deficient anaemia with disturbed hematopoiesis. Changed erythrocytes appeared in the patient's blood. One of the signs of this anaemia is the presence of the following in blood:
A. Megalocytes
B. Anulocytes
C. Elliptocytes
D. Microcytes
E. Normocytes

117. A patient with essential hypertension presents with circadian fluctuations in total peripheral vascular resistance to blood flow. What vessels will be the most affected in this case?
A. Arterioles
B. Aorta
C. Arteriolovenular anastomoses
D. Veins
E. Capillaries

118. On clinical examination, a woman presents with excessive sweating, tachycardia, loss of weight, and tremor. What endocrine pathology can cause these signs?
A. Hyperthyroidism
B. Hypogonadism
C. Hypoaldosteronism
D. Hypothyroidism
E. Hypergonadism

119. A 49-year-old man presents with facial edema, significant proteinuria, hypoproteinemia, dysproteinemia, and hyperlipidemia. What provisional diagnosis can be made?
A. Nephrotic syndrome
B. Pyelonephritis
C. Cystitis
D. Urolithiasis
E. Prostatitis

120. A patient on the 2nd day after a cardiac infarction presents with an acute decrease of systolic blood pressure down to 60 mm Hg with tachycardia 140/min., dyspnea, loss of consciousness. What mechanism is essential in the pathogenesis of shock developed in this case?
A. Decreased cardiac output
B. Development of anaphylactic reaction to myocardial proteins
C. Decreased circulating blood volume
D. Increased myocardial excitability caused by products of necrotic disintegration
E. Development of paroxysmal tachycardia

121. Lower limbs of a patient with varicose veins were examined. The patient's legs are cyanotic and pastose, and skin temperature is low, single petechiae are observed. What disturbance of hemodynamics is it?
A. Venous hyperemia
B. Thromboembolism
C. Arterial hyperemia
D. Compression ischemia
E. Obstruction ischemia

122. After a mechanical injury, a tourniquet was applied to the patient's arm to stop the bleeding. Below the tourniquet, the arm became pale and numb. This condition is caused by:
A. Compression ischemia
B. Thrombosis
C. Obstruction ischemia
D. Venous congestion
E. Angiospastic ischemia

123. A 36-year-old man travelled to the mountains for a vacation (altitude of 2000 meters above sea level). He developed an increased respiration rate, tachycardia, and slight dizziness. Two days later, these signs disappeared. This process is called:
A. Adaptation
B. Inhibition
C. Proliferation
D. Compensation
E. Regeneration

124. Thirty minutes after the dental treatment, the patient developed red itching spots on the face and oral mucosa. The patient was diagnosed with urticaria. What bioactive substance with vasodilating and the pruriginous effect is produced during this type of allergic reaction?
A. Histamine
B. Leukotriene B4
C. Bradykinin
D. Interleukin-1
E. Prostaglandin E2

125. A 16-year-old girl, who has been starving herself for a long time to lose weight, developed edema. This phenomenon is mainly caused by:
A. Hypoproteinemia due to protein synthesis disturbance
B. Venous congestion and increased venous pressure
C. Decreased production of vasopressin in the hypothalamus
D. Deceleration of glomerular filtration rate
E. Hypoglycemia due to glycogen synthesis disturbance

126. The doctor stated the absence of respiration and cardiac activity in a traffic accident victim. This condition lasts for 1 minute already. This clinical presentation corresponds with the following terminal state:
A. Clinical death
B. Traumatic shock, torpid phase
C. Agony
D. Preagony
E. Traumatic shock, erectile phase

127. A 50-year-old man, who has been suffering from chronic hepatic failure for years, developed ascites. What is the main mechanism of the development of this new disorder in the patient?
A. Increased pressure in the portal venous system

B.Increased oncotic blood pressure
C.Increased blood levels of low density and very-low-density lipoproteins
D.Decreased hepatic synthesis of albumins and globulins
E.The appearance of neurotoxic substances in the blood

128. A 56-year-old man with a valvular defect complains of lower limb edemas that lately increased in frequency. Name the local pathogenetic factor of edema development in this case:
A.Increase of hydrodynamic blood pressure
B.Decrease of vessel wall permeability
C.Increase of interstitial pressure
D.Decrease of hydrodynamic blood pressure
E.Increase of oncotic blood pressure

129. A woman was diagnosed with peptic ulcer of the stomach. She has a long history of rheumatoid arthritis. What drugs are the likely cause of this disease in the patient?
A. Glucocorticoids
B. Antihistamines
C. Antihypertensive drugs
D. Antibiotics
E. H2 blockers

130. Due to an accident onboard a nuclear submarine, a soldier received a radiation dose of 5 Gy. He complains of headache, nausea, and vertigo. What changes in leukocyte number can be observed in this soldier after the irradiation?
A. Neutrophilic leukocytosis
B. Eosinophilia
C. Leukopenia
D. Lymphocytosis
E. Agranulocytosis

131. A patient was brought to the hospital with a lacerated wound of the maxillofacial area. Profuse bleeding from the wound could not be stopped for a long time. What disturbance of total blood volume will be observed within the first hour after the blood loss occurred?
A. Normocythemic hypovolemia
B. Polycythemic hypovolemia
C. No disturbances in blood volume
D. Hypervolemia
E. Oligocythemic hypovolemia

132. After tooth extraction, the patient developed acute heart failure. What drug should be prescribed in this case?
A. Strophanthin
B. Cordigitum
C. Adonisid
D. Convallaria majalis tincture
E. Digitoxin

133. To treat ischemic heart disease, a patient was prescribed a beta-adrenergic blocking agent. After a time he developed a cough and bronchospasm. What drug can cause these side effects?
A. Anaprilin (Propranolol)
B. Phenihidine (Nifedipine)
C. Metoprolol
D. Talinolol
E. Atenolol

134. A child with signs of rickets has been prescribed a particular liposoluble vitamin drug by the paediatrician and dentist. This drug affects the metabolism of phosphorus and calcium in the body and facilitates calcium accumulation in bone tissue and dentin. If its content in the body is insufficient, a person develops disorders of ossification process, dental structure, and occlusion. Name this drug:
A. Ergocalciferol
B. Tocopherol acetate
C. Retinol acetate
D. Menadione (Vicasolum)
E. Thyroidin

135. A patient with signs of anxiety, fear, uncertainty, and mental strain was prescribed diazepam. What mechanism of

tranquillizing action can be observed in this case?
A. Interaction with benzodiazepine receptors
B. Interaction with serotonin receptors
C. Interaction with dopamine receptors
D. Interaction with adrenergic receptors
E. Interaction with cholinergic receptors

136. A patient with hypochromic anaemia was prescribed an iron-containing drug for intravenous administration only. Name this drug:
A. Fercoven
B. Furosemide
C. Mannitol
D. Etacrynic acid
E. Dichlothiazide (Hydrochlorothiazide)

137. A child presents with dry cough. What non-narcotic antitussive drug can relieve the patient's condition?
A. Glaucine hydrochloride
B. Potassium iodide
C. Althaea officinalis roots
D. Codeine phosphate
E. Morphine hydrochloride

138. A patient with peptic ulcer disease of the stomach is prescribed a drug that blocks histamine H2 receptors. Select this drug from the list:
A. Famotidine
B. Bisacodyl
C. Atropine sulfate
D. Dithylin (Suxamethonium)
E. Omeprazole

139. The patient is in the state of cardiogenic shock; he needs to be given a non-glycoside cardiotonic drug. What will be the drug of choice in this case?
A. Cordiamin (Nikethamide)
B. Ethimizol
C. Caffeine
D. Amrinone
E. Dobutamine

140. A particular drug with potent natriuretic action is usually prescribed for dehydration therapy of cerebral and pulmonary edemas. Name this drug:
A. Furosemide
B. Etacrynic acid
C. Theophylline
D. Mannitol
E. Spironolactone

141. A patient with a malignant tumour was prescribed a narcotic analgesic to relieve the unbearable pain. What is the mechanism of analgesic action of such drugs?
A. Activation of opiate receptors
B. Inhibition of histamine receptors
C. Activation of D2 dopamine receptors
D. Inhibition of cholinergic receptors
E. Inhibition of serotonin receptors

142. A patient with streptococcal pneumonia was prescribed an antimicrobial agent that disrupts microbial membranes. Name this drug:
A. Benzylpenicillin sodium salt
B. Doxycycline hydrochloride
C. Gentamicin sulfate
D. Erythromycin
E. Azithromycin

143. A 26-year-old woman presents with skin rashes and itching after eating citrus fruits. Prescribe her a drug that is an H1-histamine receptor antagonist:
A. Dimedrol (Diphenhydramine)
B. Paracetamol
C. Menadione (Vicasolum)
D. Acetylsalicylic acid
E. Analgin (Metamizole)

144. A 30-year-old patient after a case of viral hepatitis type B has developed complaints of continuous nasal haemorrhages. What drug would be the most advisable for the treatment of this condition?
A. Menadione (Vicasolum)
B. Folic acid

C.Nadroparin calcium (Fraxiparine)
D.Dipiridamol
E.Asparcam

145. A patient with megaloblastic anaemia was taking a water-soluble vitamin. Name this substance:
A.Cyanocobalamin
B.Tocopherol acetate
C.Thiamine chloride
D.Ascorbic acid
E.Pyridoxine

146. Complex therapy of a patient with bronchopneumonia accompanied by exhausting dry cough includes a particular mucolytic agent that depolymerizes mucoproteins. Name this drug:
A.Acetylcysteine
B.Codeine
C.Neodicoumarin
D.Atenolol
E.Strophanthin

147. Before tooth extraction under local anaesthesia, the patient was tested for novocaine allergy. The test result was positive. What substance can be used to administer anaesthesia in this case?
A.Lidocaine
B.Procainamide
C.Analgin (Metamizole)
D.Sodium valproate
E.Acetylsalicylic acid

148. To terminate a bronchial asthma attack that developed in the patient during the tooth extraction, the patient was given salbutamol. This drug belongs to the following pharmacological group:
A.Beta-2-adrenergic agonists
B.Narcotic analgesics
C.Analeptics
D.Adaptogens
E.Muscarinic agonists

149. A doctor has made a diagnosis of gingivitis and recommended the patient to rinse the oral cavity with an oxidizing agent. Specify this agent:
A.Hydrogen peroxide
B.Phenol
C.Brilliant green
D.Boric acid
E.Salicylic acid

150. The patient is in the state of cardiogenic shock; he needs to be given a non-glycoside cardiotonic drug. What will be the drug of choice in this case?
A.Dobutamine
B.Cordiamin (Nikethamide)
C.Amrinone
D.Ethimizol
E.Caffeine

1. A pregnant woman developed severe toxemia with exhausting recurrent vomiting throughout a day. By the end of the day she developed tetanic convulsions and dehydration. The described changes were caused by the following type of acid-base imbalance:
A. Nongaseous excretory alkalosis
B. Nongaseous metabolic acidosis
C. Nongaseous excretory acidosis
D. Gaseous acidosis
E. Gaseous alkalosis

2. A man came to the virology laboratory of an infectious diseases hospital. He needs to be examined for HIV infection. What methods of laboratory diagnostics for HIV infection and AIDS are currently used in Ukraine?
A. Serological
B. B. Allergological
C. Virological
D. Biological
E. Bacteriological

3. In some hereditary diseases (e.g., Kearns -Sayre syndrome), mitochondrial destruction can be observed. What cellular processes can be disturbed in the result?
A. ATP synthesis
B. Lipid synthesis
C. Crossingover
D. Nuclear division
E. Protein synthesis

4. It is known that calcium ions, along with other factors, enable contraction of the muscle tissue. In the process of muscle contraction, calcium interacts with the following structures:
A. Troponin protein of thin fibrils
B. Actomyosin complex of sarcolemma
C. Calsequestrin protein
D. Myosin protein of thick fibrils
E. Actin protein of thin fibrils

5. A deletion of the short arm of the 5th chromosome was detected in the somatic cells of an abortive human fetus. Specify the number of autosomes in the karyotype of this organism:
A. 44
B. 46
C. 48
D. 47
E. 45

6. A patient suffers from disturbed blood supply of superior lateral surface of the cerebral hemispheres. What blood vessel is damaged?
A. Medial cerebral artery
B. Posterior communicating artery
C. Anterior communicating artery
D. Anterior cerebral artery
E. Posterior cerebral artery

7. A 16-year-old girl, who has been starving herself for a long time to lose weight, developed an edema. This phenomenon is mainly caused by:
A. Hypoproteinemia due to protein synthesis disturbance
B. Hypoglycemia due to glycogen synthesis disturbance
C. Venous congestion and increased venous pressure
D. Deceleration of glomerular filtration to glycogen rate
E. Decreased production of vasopressin in the hypothalamus

8. A postmortem examination of the body of a 59-year-old woman, who died of acute heart failure, detected in the left ventricular wall an irregularly-shaped yellow area, 2.5x2 cm in size, with a doughy consistency. In the corresponding place on the endocardium a thrombus was formed, while on the epicardium there were fibrinous deposits. What was the localization of the infarction in relation to the cardiac wall in this case?
A. Transmural
B. Intramural

C. Subepicardial
D. Subendocardial
E. –

9. During examination of the patients, a dentist noted that many of them have dull, non-glossy enamel with porcelain-like and pigmented spots. Some patients have single or multiple enamel defects that manifest as colorless or pigmented erosions. These changes in the teeth developed in the result of the excessive intake of a certain substance by the organism. Name this substance:
A. Fluorine
B. Magnesium
C. Potassium
D. Calcium
E. Sodium

10. An examination of the oral cavity of a 50-year-old man, who is a long-term smoker, detected on the lingual mucosa an irregularly-shaped whitish plaque. Histologically, there are thickening of thestratifiedsquamous epithelium, parakeratosis, hyperkeratosis and acanthosis. Specify the type of the pathological process:
A. Leukoplakia
B. Hypertrophic glossitis
C. Keratoacanthoma
D. Avitaminosis A
E. Chronic stomatitis

11. For a surgery in the maxillofacial area, cholinergic agents are used to decrease salivation. What drug of those listed below would you recommend for this purpose?
A. Atropine sulfate
B. Lobeline hydrochloride
C. Proserin
D. Adrenaline hydrochloride
E. Dithylinum (Suxamethonium chloride)

12. A patient is diagnosed with stomatitis caused by herpes simplex virus, type 1 and 2. What medicine that is an analogue of nucleosides and is converted by thymidine kinase can provide highly effective selective antiviral therapy?
A. Acyclovir
B. Acetylcysteine
C. Rimantadine
D. Laferon (recombinant human interferon alpha-2b)
E. Oxolin (Dioxotetrahydrooxytetrahydronaphthaline)

13. A certain drug withpotent natriuretic action is usually prescribed for dehydration therapy of cerebral and pulmonary edemas. Name this drug:
A. Furosemide
B. Etacrynic acid
C. Spironolactone
D. Mannitol
E. Theophylline

14. A patient delivered to the neurological department presents with increased inhibition processes in the central nervous system. What neurotransmitter can cause this condition, when in excess?
A. GABA
B. Noradrenaline
C. Dopamine
D. Acetylcholine
E. Adrenaline

15. A structural gene - a segment of a DNA molecule - was damaged. However, it did not result in an amino acid replacement in the protein, because after a time the damage was corrected. It indicates such DNA ability as:
A. Repair
B. Replication
C. Mutation
D. Reverse transcription
E. Transcription

16. A 43-year-old woman against the background of septic shock presents with thrombocytopenia, decreased fibrinogen levels,

fibrin degradation products appearing in the blood, and petechial hemorrhages. Specify the cause of these changes:
A.Disseminated intravascular coagulation
B. Disturbed platelet production
C. Exogenous intoxication
D. Hemorrhagic diathesis
E. Autoimmune thrombocytopenia

17. An acute blood loss has caused a decrease in the systemic blood pressure. This situation can be stabilized with the intensified secretion of a certain hormone. Name this hormone:
A. Renin
B. Glucagon
C. Testosterone
D. Insulin
E. Gastrin

18. A teenager with impaired visual acuity came to an ophthalmologist. The doctor explained that this condition was caused by a spasm of accommodation. What component of an eyeball is a part of accommodation apparatus?
A. Ciliary muscle
B. Cornea
C. Retina
D. Vitreous body
E. Sclera

19. A 25-year-old patient has marked muscle weakness. What electrolytes in the blood plasma should be measured first?
A. Calcium ions
B. Potassium ions
C. Chlorine ions
D. Sodium ions
E. Magnesium ions

20. A patient suffers from meningitis. He is prescribed a subarachnoid space puncture. Where is this space located?
A. Between arachnoid mater and pia mater
B. Between dura mater and arachnoid mater
C. Between periosteum and dura mater
D. –
E. Between periosteum and arachnoid mater

21. A patient died of a cardiopulmonary insufficiency. His heart is enlarged, the wall of his right ventricle is thickened on section, and the cavity is dilated. Characterize the pathological process:
A. Hypertrophy
B. Hyperplasia
C. Metaplasia
D. Atrophy
E. Sclerosis

22. An AIDS patient presents with revertase enzyme activity in the cells affected by HÌV infection. This enzyme takes part in the synthesis of the following nucleic acid:
A. DNA
B. mRNA
C. tRNA
D. rRNA
E. Pre-mRNA

23. A patient with signs of anxiety, fear, uncertainty, and mental strain was prescribed diazepam. What mechanism of tranquilizing action can be observed in this case?
A. Interaction with benzodiazepine receptors
B. Interaction with cholinergic receptors
C. Interaction with adrenergic receptors
D. Interaction with serotonin receptors
E. Interaction with dopamine receptors

24. Mucus is known to always cover the epithelium of the nasal cavity proper. What cells of the mucosal epithelium in the nasal cavity synthesize mucus?
A. Goblet
B. Ciliated
C. –
D. Microvillous
E. Basal

25. In the course of a surgery, the fibers of the 12th pair of cranial nerves were damaged. This damage manifested as:
A. Disturbed function of the lingual muscles
B. Disturbed contraction of the muscles that elevate the hyoid bone
C. Disturbed contraction of the pharyngeal muscles
D. Disturbed contraction of the muscles of the soft palate
E. Disturbed contraction of the laryngeal muscles

26. A 4-year-old child has numerous carious cavities and yellow-colored teeth. It is known that during her pregnancy the child's mother was undergoing an antibiotic treatment. What medicine was likely being taken by the child's mother?
A. Doxycycline
B. Cefazolin
C. Streptomycin sulfate
D. Ampicillin
E. Erythromycin

27. A man is being examined in the maxillofacial surgery department and the doctor studies his mandibular buttresses. How many buttresses are there on the lower jaw?
A. 2
B. 1
C. 3
D. 5
E. 4

28. A patient present with osteoporosis. Hypercalcemia and hypophosphatemia are observed in the patient's blood. What is the cause of this condition?
A. Increased parathormone secretion
B. Increased corticosteroid secretion
C. Increased thyroxin secretion
D. Inhibited corticosteroid secretion
E. Inhibited parathormone secretion

29. In the blood plasma of a healthy person there are several dozens of proteins. Illnes leads to production of proteins, in particular ”acute-phase proteins”. Name one such protein:
A. C-reactive protein
B. Protrombin
C. Immunoglobulin A
D. Fibrinogen
E. Immunoglobulin G

30. A patient with diabetes mellitus developed a pain in the right leg. The tissues of the big toe became black and edematous, desquamation of the epidermis is observed and a foul-smelling discharge is produced. Specify the pathological process:
A. Wet gangrene
B. Infarction
C. Coagulative necrosis
D. Dry gangrene
E. Sequestrum

31. Examination shows that tooth 47 touches a deep defect in the patient’s buccal mucosa. The margins of the defect are dense and clear, the floor of the defect is gray. Microscopy of the biopsy material obtained from the wall of the defect detect. Under the exudates there is an area of necrotized tissue with underlying granulation tissue that transforms into mature fibrous tissue. What pathology has developed in the patient’s cheek?
A. Chronic ulcer
B. Cancer
C. Chronic erosion
D. Acute ulcer
E. Acute ersion

32. Ultrasound of a 1.5-year-old child showed a non-union of the *foramen ovale.* Where in the heart is this anatomic structure located?
A. Interatrial septum
B. Right ventricular wall
C. Left ventricular wall
D. Interventricular septum

E.-

33. Fluorination is one of the main methods for improvement of enamel resistance. The mechanism of fluorine anti-caries action is based on:
A. Fluorapatite synthesis
B. -
C. Chlorapatite synthesis
D. Tooth demineralization
E. Hydroxyapatite synthesis

34. An autopsy of a person with malaria shows markedly icteric skin, sclera, and mucosal tunics. The spleen is enlarged and colored slate-gray. Such color of the spleen is caused by the presence of:
A. Hemomelanin (hemozoin)
B. Hematoporphyrin
C. Lipofuscin
D. Hemosiderin
E. Melanin

35. Rentgenologically confirmed obstruction of common bile duct resulted obstruction of common bile duct resulted in prevening bile from inflowing to the duodenum. What process is likely to be disturbed?
A. Fat emulgation
B. Carbohydrate hydrolisis
C. Salivation inhibition
D. Prorein absorption
E. Hydrochloric acidsecretion in stomach

36. A patient with peptic ulcer disease of the stomach is prescribed a drug that blocks histamine H_2 receptors. Select this drug from the list:
A. Famotidine
B. Bisacodyl
C. Dithylin (Suxamethonium)
D. Atropine sulfate
E. Omeprazole

37. A patient with streptococcal pneumonia was prescribed an antimicrobial agent that disrupts the formation of microbial membrane? Name this drug:
A Benzyl pepenicillin sodium salt
B. Erythromycin
C. Doxycycline hydrochloride
D. Gentamicin sulfate
E. Azitromycin

38. To improve tooth mineralization, dentists prescribe Ca^{2+}preparation. This substance HAS NO EFFECT on the following processes in an organism:
A. Oncotic pressure generation
B. Synaptic transmission of excitation
C. Development of myocardial depolarization
D. Muscle contraction
E. Hemostasis

39. A histological specimen shows three neurons: pseudounipolar, bipolar, and multipolar. How many axons will each of these cell have?
A. One
B. Two
C. Many
D. None
E. Three

40. An inoculation of pus, obtained from a furuncle, revealad spheric microorganisms arranged in “grape clusters”. What microbes were detected?
A. Staphylococci
B. Tetracocci
C. Micrococci
D. Streptococci
E. Diplococci

41. A patient has a parotid gland inflammation. What nerve is involved in the inflammatory process in this case?
A. *N. facialis*
B. *N. lingualis*
C. *N. maxillaris*
D. *N. tympanicus*
E. *N. mandibularis*

42. A patient is diagnosed with a displaced fracture of the coronoid process of the mandible. What muscle will displace the coronoid process?
A. Temporal
B. Masseter
C. Lateral pterygoid muscle
D. Medial pterygoid muscle
E. –

43. Tirosine is used as a substrate in thyroxine synthesis. What chemical element takes part in this process?
A. Iodine
B. Copper
C. Calcium
D. Zinc
E. Iron

44. A patient with chronic caries of tooth 36 did not visit a dentist for a long time. The patient developed a sharp pain in the lower jaw and chef swelling. His body temperature increased up to 38^0C. what changes in the blood test findings should be expected in this case?
A. Neutrophilia
B. Eosinophilia
C. Anemia
D. Monocytosis
E. Leukopenia

45. Some mRNA triplets (UAA, UAG, UGA) code no amino acids and terminate the information readout instead, i.e., they can stop the process of transcription translation. These triplets are called:
A. Stop codons
B. Introns
C. Exons
D. Anticodons
E. Operators

46. A child is diagnosed with a helminthic invasion. What changes in the leukogram should be expected in this case?
A. Increased number of eosinophils
B. Increased number of lymphocytes
C. Increased number of neutrocytes
D. Increased number of monocytes
E. Increased number of erytrocytes

47. A patient has arrhythmia. What medicine needs to be prescribed in this case?
A. Amiodarone
B. Imizine (Imipramine)
C. Cavinton (Vinpocetine)
D. Nitroglycerine
E. EUphyllin (Aminophylline)

48. A patient developed a keloid scar in the area of purulent skin inflammation (carbuncle). At what stage of inflammation it occur?
A. Secondary alteration
B. Exudation
C. Primary alteration
D. Proliferation
E. –

49. A dentist used a solution of potassium permanganate as an antiseptic. This preparation has a bactericidal effect because of:
A. Manganese oxide
B. Potassium
C. Atomic oxygen
D. Potassium hydroxide
E. Potassium oxide

50. A deciduous second molar was extracted in a 13-year-old child. What permanent tooth will replace the extracted one?
A. Second premolar
B. First premolar
C. First molar
D. Third molar
E. Second molar

51. An ophthalmologist suspects blennorrhea (gonococcal conjunctivitis) in a child with signs of suppurative keratoconjunctivitis. What laboratory diagnostics should be conducted to confirm the diagnosis?
A. Microscopy and bacteriological analysis

B. Microscopy and serum diagnostics
C. Biological analysis and allergy test
D. Serum diagnostics and allergy test
E.Biological analysis and phagodiagnostics

52. The patient's joints are enlarged and painful. The patient's blood urate levels are high. Name this pathology:
A. Gout
B. Rickets
C. Scurvy
D. Pellagra
E. Caries

53. A patient with Cushing syndrome presents with persistent hyperglycemia and glucosuria. This patient is likely to have increased synthesis and secretion of the following hormone:
A. Cortisol
B. Adrenaline
C. Aldosterone
D. Glucagon
E. Thyroxine

54. A histopathological analysis of the tissues of an extracted tooth shows that a larger part of the dental cavity is filled with the collagen fiber-rich connective tissue and cellular infiltrations that are made up of lymphocytes and plasma cells. What type of pulpitis can be characterized by the described changes?
A. Granulating pulpitis
B. Fibrous pulpitis
C. -
D. Purulent pulpitis
E. Gangrenous pulpitis

55. A patient complains that even small traumas lead to persistent hemorrhages. Laboratory analysis shows disturbed blood composition, namely a low count of the following blood corpuscles.
A. Platelets
B. Lymphocytes
C. Neutrophils
D. Erythrocytes
E. Monocytes

56. What nitrate drug would you recommend to a patient with ischemic heart disease for prevention of angina pectoris attacks?
A. Isosorbide mononitrate
B. Nitroglycerine
C. Lisinopril
D. Lovastatin
E. Menthol

57. A patient has chronic multiple bronchiectasis complicated with severe nephropathy with massive edematous syndrome. Laboratory tests detect marked proteinuria, cylindruria, significant decrease of the serum protein levels, hyperlipidemia, hypokalemia, and other abnormalities. Name the primary and the most significant pathogenetic link of edema development in this patient:
A. Decrease of oncotic blood pressure
B. Blocked lymphatic efflux
C. Increase of hydrostatic blood pressure
D. Increased microvascular permeability
E. Increase of extracellular fluid pressure

58. I.M. Sechenov determined that a tired limb restores its working ability faster at rest, if the other limb is exerted at the same time. This discovery became the foundation of the doctrine of:
A. Active rest
B. Parabiosis
C. Optimum
D. Pessimum
E. Fatigue

59. Premature newborns have impaired surfactant synthesis. What is the function of a surfactant in the lungs?
A. Reduces alveolar surface tension
B. Increases airway resistance
C. Increases alveolar surface tension
D. Inhibits O_2 diffusion through the blood-air barrier

E. Facilitates diaphragmatic excursion

60. A patient has a deep incised wound on the back of his neck. What muscle is damaged in this case?
A. *M. trapezius*
B. *M. mylohyoideus*
C. *M. levator scapulae*
D. *M. stemocleidomastoideus*
E. *M. digastricus*

61. Specify the concentration of ethyl alcohol that has the most active antimicrobial action in a protein- containing medium:
A. 70%
B. 40%
C. 60%
D. 96%
E. 15%

62. An inoculation of intestinal microorganisms on the Endo medium results in the growth of colonies that can be either colored or colorless. This process is based on the fermentation of a certain carbohydrate. Name this carbohydrate:
A. Lactose
B. Sucrose
C. Maltose
D. Arabinose
E. Glucose

63. A woman is diagnosed with a hemorrage into the posterior horns of the spinal cord. What is their function?
A. Sensory
B. Parasympathetic
C. Motor
D. -
E. Sympathetic

64. A cessation of morphine administration after its long-term use leads to the development of severe mental, neurological, and somatic disorders. Name this condition:
A. Withdrawal
B. Sensitization
C. Idiosyncrasy
D. Cumulation
E. Tolerance

65. After an exposure to radiation, the patient is recommended to include more vegetable oils in his diet as they are a source of polyene fatty acids. Name the acid that has three double bonds:
A. Linolenic acid
B. Palmitic acid
C. Arachidonic acid
D. Stearic acid
E. Oleic acid

66. A patient loses his equilibrium, when in an upright position with his eyes closed. What brain structures are the most likely to be damaged in this patient?
A. Cerebellum
B. Basal ganglia
C. Precentral gyrus of the cerebral cortex
D. Limbic system
E. Thalamus

67. When divers quickly rise from the depths to the surface, they risk developing decompression sickness that can result in death caused by gas embolism. What gas is produced in this case?
A. N_2
B. O_2
C. CO_2
D .CO
E. $N0_2$

68. Microslide of a cardiac tissue shows rectangular cells with central location of the nucleus and well-developed myofibrils that are connected with Z- disks. These cells perform the following cardiac function:
A. Contraction
B. Impulse conduction
C. Protective '
D. D. Endocrine
E. Regenerative

69. On an electronic microphotograph of epithelial tissue a certain structure can be identified. The structure is located under the epithelial cells and shaped like a three-dimensional reticulum. Name this structure:
A. Basement membrane
B. Cytolemma
C. Lamina propria
D. Hemidesmosome
E. Desmosome

70. A doctor has made a diagnosis of gingivitis and recommended the patient to rinse the oral cavity with an oxidizing agent. Specify this agent:
A. Hydrogen peroxide
B. Salicylic acid
C. Brilliant green
D. Boric acid
E. Phenol

71. A patient with a hemorrhage into the anterior hypothalamus developed polyuria. What hormone is in this case insufficient, leading to the decreased water reabsorption in the renal tubules?
A. Vasopressin
B. Adrenaline
C. Aldosterone
D. Calcitonin
E. Oxytocin

72. A patient has suffered a head injury. On examination there is a subcutaneous hematoma in the temporal area. What vessel was damaged, resulting in hematoma development?
A. *A. temporalis superficialis*
B. *A. auricularis posterior*
C. *A. occipitalis*
D. *A. maxillaris*
E. *A. buccalis*

73. A patient needs his tongue to be amputated due to a malignant tumor located there. Where can one easily find the lingual artery and ligate it?
A. Pirogov triangle
B. Omoclavicular triangle
C. Carotid triangle
D. Omotrapezoid triangle
E. Omotracheal triangle

74. An excessive bone tissue loss is often observed in older people, which indicates osteoporosis development. What bone tissue cells are activated, resulting in the development of this disease?
A. Osteoclasts
B. Macrophages
C. Osteocytes
D. Osteoblasts
E. Tissue basophils

75. The autposy of the body of a 4-year-old girl, who was ill for a long time and died of confluent pneumonia, showed that the weight of her thymus was 2 grams. Thymus histology revealed sharp decrease in lymphocyte levels, collapse of the thymic stroma, and a small number of calcified, cystically dilated Hassall's corpuscles. What patological process developed in the thymus?
A. Thymic atrophy
B. Thymic hyperplasia
C. Thymomegaly
D. Thymic dysplasia
E.-

76. A skin neoplasm was removed from a patient. The neoplasm is a dense node with a papillary surface that resembles a cauliflower. Microscopically the tumor consists of numerous papillae. Its parenchyma is formed from the covering epithelium with increased number of layers. The epithelium retains the cell polarity, as well as its stratification and intactness of the proper membrane. The tumor stroma is located within the center of the papillae. Make the diagnosis:
A. Papilloma
B. Fibroma

C. Cystadenoma
D. Adenoma
E. Fibroadenoma

77. A 42-year-old woman, who has been keeping to a vegetarian diet for a long period of time, consulted a doctor. Examination revealed negative nitrogen balance in the patient. What factor is the most likely cause of such a condition?
A. Insufficient amount of proteins in the diet
B. Excessive amount of fats in the diet
C. Insufficient amount of dietary fiber
D. Decreased rate of metabolic processes
E. Insufficient amount of fats in the diet

78. The dentist examines a pregnant woman. There are 2 round lesions up to 1 cm in diameter on her oral mucosa. The lesions appeared 3 days ago, they have white-gray surface and red margin. The dentist can make the following diagnosis:
A. Aphthous stomatitis
B. Leukoplakia
C. Necrotizing ulcerative stomatitis
D. Catarrhal stomatitis
E. Gangrenous stomatitis

79. Mucin aggregates retain water, which results in their viscosity and protective action. It is possible because mucin structure contains:
A. Oligosaccharides
B. Homopolysaccharides
C. Disaccharides
D. Glucose
E. Glycosaminoglycans

80. The workers of a nuclear power plant undergo regular medical check-ups, during which primarily the system that is the most sensitive to ionizing radiation is examined. Name this system:
A. Hematopoietic system
B. Nervous system
C. Skeletal system
D. Muscular system
E. Epithelial tissues

81. After a glucose-lowering therapy, a patient with diabetes mellitus developed hypoglycemia. What hormone, taken in excess, could have caused this hypoglycemic condition?
A. Insulin
B. Adrenaline
C. Thyroxine
D. Glucagon
E. Cortisol

82. A newborn has well-developed jaws with tooth buds for both deciduous and permanent teeth in the each one. How many tooth buds are there in one jaw of the newborn?
A. 10 deciduous teeth and 8 permanent teeth
B. 10 deciduous teeth and 10 permanent teeth
C. 20 deciduous teeth
D. 10 deciduous teeth and 16 permanent teeth
E. 20 deciduous teeth and 10 permanent teeth

83. Name the state of the biosphere, where the human mental activity is the key developmental factor:
A. Noosphere
B. Atmosphere
C. Lithosphere
D. Hydrosphere
E. Troposphere

84. A 23-year-old man developed a perforation in his hard palate. A dense formation with clear margins was detected in this area. After a surgery, microscopy of the excised formation showed there a large focus of caseous necrosis surrounded with a granulation tissue with endovasculitis and a cellular infiltration consisting of lymphocytes and epithelioid cells with predominance of

plasma cells. What is the most likely disease in this case?
A. Syphilis
B. Scleroma
C. Sarcoma
D. Tuberculosis
E. Leprosy

85. Disturbed endoderm differentiation was detected in an embryo material. This process can lead to developmental changes in the following organs:
A. Stomach
B. Heart
C. Aorta
D. Salivary glands
E. Kidneys

86. A student, who unexpectedly met his girlfriend, developed an increase in systemic arterial pressure. This pressure change was caused by the intensified realization of the following reflexes:
A. Conditioned sympathetic
B. Unconditioned parasympathetic
C. Unconditioned sympathetic
D. Conditioned sympathetic and parasympathetic
E. Conditioned parasympathetic

87. Autopsy of a man, who died suddenly with signs of acutely disturbed cerebral circulation, revealed aneurysm rupture of the medial cerebral artery and a round cavity 4 cm in diameter filled with blood in his frontal lobe. Name this type of hemorrhage:
A. Hematoma
B. -
C. Hemorrhagic infiltration
D. Petechiae
E. Contusion

88. Ketone bodies were detected in the urine of a patient. Ketone bodies appear in the urine during the following disease:
A.Diabetes mellitus
B.Urolithiasis
C.Renal tuberculosis
D.Renal infarction
E.Acute glomerulonephritis

89. During a dental manipulation, the patient developed an angina pectoris attack. What group of drugs needs to be prescribed for the emergency aid in this case?
A. Antianginal drugs
B. Cardiotonics
C. Respiratory stimulants
D. Antiarrhythmic drugs
E. Antihypertensive drugs

90. A urine sample was taken via a catheter from the urinary bladder of a 17-year-old young man. Microscopy of the urine precipitate in this case can detect cells of the epithelium that lines the urinary bladder. What epithelium is it?
A. Transitional epithelium
B. Non-stratified columnar epithelium
C. Non-stratified cuboidal epithelium
D. Keratinized stratified epithelium
E. Non-keratinized stratified epithelium

91. A 38-year-old man with chronic alcoholism died of progressve heart failure. An autopsy shows lobar pleuropneumonia in the lower lobe of the right lung. Histology shows a fibrinous exudate and segmented leukocytes in the alveoli. Determine the stage of croupous pneumonia:
A. Gray hepatization
B. Red hepatization
C. Influx
D. Resolution
E. –

92. A certain disease of infection- allergic or unknown origin leads to bilateral diffuse or focal non-suppurative inflammation of renal glomerular apparatus with characteristic renal and extrarenal signs. Name this disease:
A. Glomerulonephritis
B. Nephrolithiasis
C. Pyelonephritis

D. Polycystic renal disease
E. Nephrosclerosis

93. A patient with a severe toothache that lasted for several days made no appointment with a doctor and engaged in self-treatment instead. As a result, his tooth needs to be extracted. What analgesic increases the probability of a hemorrhage developing after the tooth is extracted?
A.Acetylsalicylic acid
B.Codeine phosphate
C.Dimedrol (Diphenhydramine)
D.Paracetamol
E.Analgin (Metamizole)

94. A man came to a dentist with complaints of pain during chewing and moving the jaw forward. What masticatory muscles are inflamed in this case?
A. M.m. pterigoidei laterals
B. *M.m. buccalis*
C. *M.m. pterigoidei mediales*
D. -
E. M.m. temporales

95. The investigation of the imprints obtained from the epidermal ridges on the fingers (dactyloscopy) is used by criminologists to identify people, as well as for diagnostics of a number of genetic anomalies, e.g., Down syndrome. What skin layer determines the uniqueness of the imprints?
A. Papillary layer
B. Basal layer
C. Translucent layer
D. Cornified layer
E. Reticular layer

96. During a car accident, a person received a strong blow to the epigastric region, hich caused a cardiac arrest. What was the likely cause of such changes in the cardiac activity?
A. Increased vagal tone
B. Aldosterone production
C. Cortisol production
D. Adrenaline production
E. Increased tone of the sympathetic nervous system

97. A patient was diagnosed with Klinefelter's syndrome. The patient with this disease will have the karyotype (47, XXY). How many sex chromosomes are in this complement?
A. Three
B. Zero
C. Two
D. Forty four
E. One

98. A 1.5-year-old child on examination has deformed legs and foci of thickening in the area of the ribs and wrists. A dentist pointed out the late eruption of teeth, disturbed order of tooth eruption, uneven mineralization of the enamel and dentin, and horizontal configuration of the upper jaw that forms a high-arched palate. What disease developed in this child?
A. Rickets
B. Osteoporosis
C. Fluorosis
D. Gout
E. Sialolithiasis

99. A topical anesthetic was applied to the tongue apex of an experiment participant. The resulting gustatory loss will make this person unable to feel the following taste:
A.Sweet
B.Sour and salty
C.Salty
D.Sour
E.Bitter

100. A sputum sample obtained from tuberculosis patient was sent to a bacteriological laboratory. Bacterioscopy of smear microslides for detection of the tubercle bacillus requires the following staining method:
A. Ziehl-Neelsen
B. Romanovskyi
C. Burri-Gins
D. Zdrodovskyi

E. Gram

101. During a surgery on the oral diaphragm, a surgeon needs to locate an area that is called a "submandibular triangle". What muscle bounds this area?
A. M. digastricus
B. *M. stylohyoideus*
C. -
D. *M.hyoglossus*
E. M. geniohyoideus

102. In the microslide of a human embryo obtained from a spontaneous miscarriage, an embryonic shield is visible and has two cellular layers: endoderm and ectoderm. This embryo was at the following developmental stage:
A. Gastrulation
B. Histogenesis
C. Organogenesis
D. Progenesis
E. Neurulation

103. During an appointment with the dentist, a patient developed a bronchial asthma attack. What does this patient need to be prescribed to terminate the bronchospasm?
A. Salbutamol
B. Droperidol
C. Methacin (Metocinium iodide)
D. Anaprilin (Propranolol)
E. Benzohexonium (Hexamethonium bromide)

104. Autopsy of an 86-year-old woman, who suffered from cerebral atherosclerosis, shows atrophy of her cerebral cortex. Name this type of atrophy based on its cause:
A. Insufficient blood supply
B. Caused by physico-chemical factors
C. Dysfunctional
D. Pressure-induced
E. Neurogenic

105. The process of aging in humans is a associated with decreased synthesis and secretion of pancreatic juice and its lower of trypsin content. It results in disturbed breakdown of:
A. Proteins
B. Lipids
C. Polysaccharides
D. Phospholipids
E. Nucleic acids

106. The patient's ECG shows a shortened R-R interval. How will the cardiac activity change as the result?
A. Frequency of cardiac contractions will increase
B. Force of cardiac contractions will decrease
C. Frequency of cardiac contractions will increase
D. Force of cardiac contractions will decrease
E. Frequency and force of cardiac contractions will decrease

107. Lower limbs of a patient with varicose veins were examined. The patient's legs are cyanotic and pastose, skin temperature is low, single petechiae are observed. What disturbance of hemodynamics is it?
A. Venous hyperemia
B. Compression ischemia
C. Arterial hyperemia
D. Thromboembolism
E. Obstruction ischemia

108. A patient was delivered into a hospital with the provisional diagnosis of botulism. What serological reaction should be used for detection of botulinum toxin in the material being analyzed?
A. Neutralization reaction
B. Agglutination reaction
C. Precipitation reaction
D. Complement fixation reaction
E. Immunofluorescence reaction

109. The examination reveals signs of acromegaly in the patient. Which endocrine gland is involved in this pathological process?

A. Adenohypophysis
B. Pineal gland
C. Neurohypophysis
D. Thyroid gland
E. Adrenal glands

110. A patient is diagnosed with pneumonia of mycoplasmal etiology. What antibiotics, based on their mechanism of action, SHOULD NOT be used in the course of the treatment?
A. Antibiotics that inhibit the synthesis of cell wall components
B. Antibiotics that disturb the synthesis of nucleic acids.
C. Antibiotics that disturb the protein synthesis
D. Antibiotics that disturb oxidative phosphorylation processes
E. Antibiotics that disturb the permeability of cytoplasmic membrane

111. An examination of tooth 16 revealed a cavity on its masticatory surface. The cavity has a narrow opening and is filled with softened dentin. Microscopically, there are bacteria in the dilated dentinal canaliculi, some canaliculi are destroyed, the cavities merge together into caverns, decalcification of enamel and dentin occurs without formation of the replacement dentin. Make the diagnosis:
A. Chronic deep dental caries
B. Acute deep dental caries
C. Chronic superficial dental caries
D. Acute superficial dental caries
E. Dental caries at the stage of white spot lesions

112. A patient was delivered into the admission room. He has the signs of acute heart failure: pallor, acrocyanosis, frequent and shallow respirations. What medicine of those listed below is indicated in this case?
A. Corglycon (Convallatoxin)
B. Digitoxin
C. Adrenaline hydrochloride
D. Nitroglycerine
E. Cordiamin (Nikethamide)

113. A man bitten by a stray dog came to the surgeon's office. A patient had lacerated wounds to his face. What aid should be given to this person to prevent rabies?
A. Begin immunization with antirabic vaccine
B. Prescribe combined vitamin therapy
C. Hospitalize the patient and continue to monitor his condition
D. Immediately administer normal gamma globulin
E. Immediately administer DPT vaccine

114. In hot weather the bus passengers asked to open the roof hatches. What way of heat transfer is activated in this situation?
A. Convection
B. Radiation
C. Sweat evaporation
D. Conduction and radiation
E. –

115.A patient complains of severe rhinitis and total loss of olfactory perception. Reception of the olfactory analyzer are damaged in this patient. Where in the nasal cavity are this receptors located?
A. Superior nasal meatus
B. Interior nasal meatus
C. Middle nasal meatus
D. Choanae
E. Common nasal meatus

116.Replication is one of the reactions of matrix synthesis. What new molecule forms on the DNA molecule on the result of replication?
A. DNA
B. mRNA
C. tRNA
D. pro-mRNA
E. rRNA

117.When preparing are dental plaque

smear and staining it according to the Gram method, a student during microscopy detected there various violet and pink microorganisms. What structural component of microorganisms causes different response to stains?
A. Cell wall
B. Outer membrane
C. Internal periplasmic space
D. Cytoplasm
E. Cytoplasmic membrane

118.A 60-year old man with diabetes mellitus was prescribed insulin. What type of pharmacological therapy is it?
A. Replacement
B. Pathogenetic
C. Etiotropic
D. Symptomatic
E. Preventive

119.Various substances can be used as anticoagulants. Among them the is are certain naturally the rived polysaccharide. Name this polysaccharide.
A. Heparin
B. Dermatan sulfate
C. Dextran
D. Chondroitin sulfate
E. Hyaluronic acid

120. 56-year old man with heart defect complains of leg edemas that lightly started to occur more often. Name the local pathogenetic factor of edema development in this case.
A. Increase of hydrodynamic blood pressure
B-
C. Increase of oncotic blood pressure
D. Increase of interstitial pressure
E. Decrease of vessel wall permeability

121. A child with a foreign body in the lungs has been hospitalized. What bronchus is the most likely to contain this foreign body if its diameter approximates to 1,5sm?
A. Right primary bronchus
B. Right segmental bronchus
C. Left segmental bronchus
D. Left primary bronchus
E. Loba bronchus

122.The patient's saliva has been tested for antibacterial activity. What property of saliva exert antibacterial activity?
A. Lysozyme
B. Amylase
C. Cholesterol
D. Ceruloplasmin
E. Parotin

123. A patient being treated for viral B hepatitis developed since of hepatic failure. What changes in the blood test that indicate are protein metabolism disorder will most likely be observed in this case?
A. Absolute hypoalbuminemia
B. Blood protein composition is unchanged
C. Absolute hyperfibrinogenemia
D. Absolute hyperalbuminemia
E. Absolute hyperglobulinemia

124. A patient was diagnosed with peptic ulcer disease of the stomach and prescribed antibacterial treatment. This treatment will be aimed against the following causative agent;
A. H. pylori
B. St. aureus
C. Cl. perfringens
D. Cl. trachomatis
E. E. coli

125. A woman gave birth to a child with toxoplasmosis. The woman thinks that she contracted toxoplasma from her friend, who recently gave birth to a child with the same disease. A human **CANNOT** be infected with toxoplasma through the following route:
A. Contact with a sick person
B. Drinking water, contaminated with oo-

cytes
C. Eating under cooked meat of an infected domesticated animal
D. Contact with a cat
E. Eating unwashed vegetables

126. An older person presents with changes in the force of cardiac contractions and in the physical properties of the vasculature, which is clearly visible in the graphic recording of the pulse waves over the carotid artery. What examination method was used?
A. Sphygmography
B. Phlebography
C. Plethysmography
D. Rheography
E. Myography

127. A blood sample is taken from the patient for analysis for the presence of heparin. By its chemical structure, this anticoagulant belongs to: :
A. Glycosaminoglycans
B. Phospholipids
C. Triacylglycerols
D. Hemeproteins
E. Simpleproteins

128. Afte ran insulin injection, a patient with diabetes mellitus developed unconsciousness and convulsions. What result would be shown by the biochemical test for blood sugar in this case?
A. 1.5 mmol/L
B. 3.3 mmol/L
C. 10.0 mmol/L
D.5.5 mmol/L
E. 8.0 mmol/L

129. A patient has a general sensitivity loss in separate are as of his body on the right. What cerebral gyrus is affected in this case?
A. Postcentral gyrus
B. Middle temporal gyrus
C. Inferior temporal gyrus
D. Superior temporal gyrus
E. Precentral gyrus

130. 2 months after kidney transplantation, the patient's condition deteriorated. Based on laboratory analysis, it was determined that transplant rejection started. What factor of the immune system played a key role in the reaction of transplant rejection?
A. T killer cells
B. B. Interleukin-1
C. T helper 2 cell
D. B lymphocytes
E. Natural killer cells

131. The specimen of histological tooth section shows a tissue consisting of intercellular substance permeated with tubules, in which cellular processes of odontoblasts are situated. What tissue is present in this histologic specimen?
A. Dentin
B. Cement
C. Periodontium
D. Pulp
E. Enamel

132. During physical and emotional exertion a persons les ssensitive to pain. This phenomen on occurs due to activation of the:
A. Antinociceptive system
B. Thyroid function
C. Parasympathetic system
D. Nociceptive system
E. Adrenal function

133. How does pH of venous blood differ from pH of arterial blood, and why?
A. Lower, due to higher bloodCO_2levels
B. Higher, due to O_2 release from the organism
C. Higher, due to higher blood CO_2 levels
D. Lower, due to O_2 release from the organism

E. No difference

134. A patient with essential hypertension has increased blood vasopressin levels. This hormone has an effect on the functioning of the following organ:
A. Kidneys
B. Adrenal glands
C. Liver
D. Heart
E. Lungs

135. On the day before a surgery, the patient was stressed out. This condition is associated with high blood levels of the following hormone
A. Adrenaline
B. Glucagon
C. Insulin
D. Progesterone
E. Prolactin

136. During dental manipulation in the oral cavity a woman felt unwell she developed headache and palpitations. Blood pressure measurement revealed a systolic pressure of 170 mm Hg. What is normal value (mm Hg) of human systolic blood pressure?
A. 100-120
B. 140-160
C. 90-100
D. 160-180
E. 60-80

137. During the examination by a neurologist, a patient complained of sensory loss on the back surface of the left hand. Name this phenomenon:
A. Anesthesia
B. Atony
C. Asthenia
D. Ataxia
E. Alexia

138. A patient has markedly dilated subcutaneous veins in the area of the anterior abdominal wall around the umbilical region. In what vessel would there be elevated blood pressure, contributing to these symptoms?
A. V. portae hepatis
B. V. mesenterica inferior
C. V. mesenterica superior
D. V. cava superior
E. V. cava inferior

139. Microscopy with an immersion system was used to study a smear microslide with Streptobacillus culture stained according to the Aujeszky method. What structural feature of the bacteria was analyzed?
A. Spores
B. Inclusions
C. Capsule
D. Cell wall structure
E. Flagella

140. A 58-year-old man has a clinical presentation of acute pancreatitis. This diagnosis can be confirmed if urine levels of a certain substance are elevated. Name this substance:
A. Amylase
B. Albumin
C. Urea
D. Uric acid
E. Residual nitrogen

141. A sick child has signs of achondroplasia (dwarfism). It is known that this disease is monogenic, and the gene that causes the development of this anomaly is dominant. The brother (sibling) of this child has normal development. Genotypically, the healthy child is:
A. aa
B. AaBb
C. AABB
D. Aa
E. AA
F.

142. To clarify the diagnosis of a 15-year-

old patient needs to undergo sialography of the parotid gland. Where, in this case, is the opening through which a radiocontrast agent will be introduced?
A. On the cheek, opposite of the second upper premolar
B. On the cheek, opposite of the second lower molar
C. On the cheek, opposite of the second upper molar
D. On the cheek, opposite of the second lower premolar
E.

143. A mother with a 12-year-old child came to the gastroenterologist. She complained of loss of appetite and meteorism in her child. Endoscopically the child was diagnosed with biliary dyskinesia. In the duodenal contents, there were pear-shaped protozoa with two nuclei and multiple flagella. What disease was the most likely in this child?
A. Lambliasis
B. Amebiasis
C. Trichomoniasis
D. Balantidiasis
E. Toxoplasmosis

144. Mother of a 2-year-old child with delayed physical and mental development has made an appointment with the genetic consultation. What method allows the doctor to rule out chromosomal abnormalities?
A. Cytogenetic
B. Cytological
C. Population statistics
D. Genealogical
E. Biochemical

145. During a preventive examination, microbial cysts with four nuclei were detected in the feces of a cafeteria worker. This cysts belong to the following protozoa:
A. *Entamoeba histolytica*
B. *Pentatrichomonas hominis*
C. *Balantidium*
D. *Lamblia*
E. *Toxoplasma*

146. At the sixth month of pregnancy a woman developed marked iron-deficiency anemia. The diagnostic character of this disease is the appearance of the following in the blood
A. Annulocytes
B. Normocytes
C. Reticulocytes
D. Poikilocytes
E. Macrocytes

147. Brain investigation by means of nuclear magnetic resonance revealed the patient to have a hematoma in the genu of the internal capsule. What pathway is damaged in this case?
A. *Tr. Cortico-nuclearis*
B. *Tr. Cortico-spinalis*
C. *Tr. Cortico-thalamicus*
D. *Tr. Cortico-fronto-pontinus*
E. *Tr. Thalam-corticalis*

148. After anaesthetic application during tooth extraction the patient developed marked soft tissue edema of the upper and lower jaw, skin rash on the face, reddening, and itching, what pathological process results in such reaction to the anaesthetic?
A. Allergy
B. Circulatory deficiency
C. Inflammation
D. Disturbed lymph drainage
E. Toxic action of a drug

149. A patient underwent surgery for trauma to the temporomandibular joint. An incision revealed a structure improving the joint congruence. Name this structure:
A. Disk
B. Lip
C. Meniscus
D. Fold
E. Ligament

150. After a cold the patient developed impaired perception of pain and thermal stimuli in the front 2/3 of tongue. What nerve was damaged in this case?
A. Trigeminal
B. Hypoglossal
C. Phrenic
D. Vagus
E. Chorda tympani

151. During a head and neck examination, the dental professional should evaluate all oral and surrounding structures for the evidence of pathology. Which of the following structures is NOT included in the intraoral examination?
A. Temporomandibular joint
B. Palate
C. Fauces
D. Buccal mucosa
E. Alveolar process

152. A 43-year-old cattle farmworker was admitted to the surgeon with fever, malaise, and inflamed lesions on his hands and arms. He reported that about 2 weeks before his visit to the hospital, he noticed small, painless, pruritic papules that quickly enlarged and developed a central vesicle. The vesicles developed into erosions and left painless necrotic ulcers with black, depressed eschar. Gram's staining of the ulcers revealed gram-positive spore-forming bacilli. Which of the following diseases was the most likely cause of these findings?
A. Anthrax
B. Chickenpox
C. Syphilis
D. Tularemia
E. Plague

153. A 10-year-old boy was brought to the physician by his parents because of fever, cough, and fatigue. He had been admitted to the hospital five times because of pneumonia. Attempts to induce immunity using the pneumococcal vaccine failed. The first hospitalization was at the age of 12 months. Laboratory findings showed marked reduction in all classes and subclasses of serum immunoglobulins. Which of the following immune cells was most likely to have reduced functional activity in the peripheral blood of this patient?
A. B-cells
B. Neutrophils
C. Macrophages
D. T-cells
E. NK-cells

154. It is a branch of dentistry that deals with the cause, diagnosis, prevention, and treatment of diseases of the dental pulp, usually by removal of the nerve and other tissues of the pulp cavity and their replacement with a suitable filling material. It encompasses the study and practice of the basic and clinical sciences. Which of the following matches this description?
A. Endodontics
B.-
C. Periodontics
D. Prosthodontics
E. Orthodontics

155. Mycoplasmas are a special group of the microorganisms that belong to the Mycoplasmataceae family and exhibit bacterial and viral properties at the same time. Also they have one special difference that allows distinguishing these microorganisms from bacteria and viruses. Name this feature:
A. Absence of cell structures
B. Intracellular parasitism
C. Way of reproduction
D. High enzymatic activity
E. Absence of cell membrane

156. A patient with mechanical jaundice and disturbed intestinal absorption under-

goes a surgery that was complicated by a hemorrhage. It is caused by the deficiency of the following vitamin:
A. Vitamin *K*
B. Vitamin B_6
C. Vitamin *C*
D. Folic acid
E. Vitamin B_{12}

157. A 23-year-old woman came to a physician with a complaint that her 1-month-old baby is poorly gaining body mass despite a good appetite. The doctor suggested that the main cause is a low milk supply. Further examination confirmed the doctor's suggestion and revealed the deficiency of a hormone that stimulates milk secretion. Which hormone deficiency is the most likely cause of this condition?
A. Prolactin
B. Insulin
C. Adrenocorticotropic hormone
D. Glucagon
E. Somatostatin

158. A patient suffers from pain in the small joints and joint enlargement. He has high urate levels in his blood serum. What metabolism is disturbed in this case?
A. Purines
B. Aminoacids
C. Pyrimidines
D. Glycerine
E. Disaccharides

159. While waiting in line for a dental appointment, a 22-year-old girl developed the following symptoms: dilated pupils, increased sweating, nausea, increased heart rate, and blood pressure. All these manifestations were provided by the system, the primary function of which is to stimulate the body's "fight-or-flight" response. What system is it?
A. Autonomic sympathetic nervous system
B. Central nervous system
C. Protective system
D. Autonomic parasympathetic nervous system
E. Digestive system

160. A 40-year-old man comes to the physician because of recurrent painful flares and swelling of the metatarsal-phalangeal join to the great toe. Laboratory study of a urine sample show extremely low pH andpink discoloration. Which of the following metabolic intermediates is the most likely cause of the changes in this patient's urine?
A. Uric acid
B. Calcium phosphate
C. Ammonia
D. Magnesium sulfate
E. Chlorides

161. The participation of muscles, teeth, jaws, and joints is required to ensure the mechanical grinding of nutrients. In the chewing process, the muscles that are the primary elevators of the mandible must be involved. Which of the following muscles does NOT perform this function?
A. Orbicularis oris
B. Medial pterygoid
C. Temporalis
D. Lateral pterygoid
E. Masseter

162. During an experiment, students were asked to hold their breath as long as possible. At the end of the test, they developed changes in the partial pressure of blood gases and an increase in the breathing rate (hyperventilation). All these processes were required for the maintenance of proper oxygenation and normal homeostasis. Which of the following changes was most likely to stimulate the action of the respiratory center and cause hyperventilation in these students?

A. Increase of pCO_2
B. Decreaseof pO_2
C. Increase of pO_2
D. -
E. Decrease of pCO_2

163. Which type of dentin is formed by replacement odontoblasts in response to moderate level irritants such as attrition, abrasion, erosion, trauma, moderate dental caries, and some operative procedures?
A. Tertiary dentin
B. Primary dentin
C. -
D. Artificial dentin
E. Transitional dentin

164. While studying biochemical reactions on the molecular level, the researcher confirmed that hormones could regulate and provide normal metabolism of biologically active substances maintaining normal functioning of the whole organism. His experiment showed that under the action of a certain hormone glucose was actively taken up by cells (except brain cells), gluconeogenesis in liver was inhibited glycogen synthesis in liver and muscles was increased. Name the hormone that performed the described functions:
A. Insulin
B. Glucagon
C. Triiodothyronine (T3)
D. Somatostatin
E. Aldosterone

165. A previously healthy 8-year-old boy presents to the emergency department by his parents because of fever and progressively worsening sore throat and dysphagia. Physical examination shows pharyngeal erythema with painful left and right cervical lymphadenopathy. Contrast-enhanced computed tomography (CT) reveals fluid accumulation in the retropharyngeal space. A diagnosis of retropharyngeal abscess is suspected. Which of the following fasciae is most likely involved in this process?
A. Buccopharyngeal fascia
B. –
C. Parotid fascia
D. Masseteric fascia
E. Temporal fascia

166. A 28-year-old woman died of progressive respiratory failure after being diagnosed with a comminuted fracture of the right hip. Before her death, she had developed severe hypoxemia, neurologic abnormalities, and a petechial rash. At autopsy, the examination of pulmonary microvasculature showed intraluminal orange sudanophilic droplets. Which of the following complications was the most likely cause of this patient's death?
A. Fat embolism
B. Tumor embolism
C. Air embolism
D. Amniotic fluid embolism
E. Thromboembolism

167. A 25-year-old woman was admitted to the emergency department because of her altered mental status. She had been complaining of a headache, anxiety, nausea, and a metallic taste in her mouth. These complaints started after using an unknown insecticide in her garden, so her doctor suspected a hydrogen cyanide exposure. What is the mechanism of this poisoning?
A. Interferes with the electron transport chain
B. Promotes fermentation
C. –
D. Prevents the hydrolysis of the third phosphate bond on ATP
E. Interferes with the deamination of the amino group on lysine

168. A 23-year-old patient came to the doc-

tor's office because of a major complaint that he has a disturbed function of the palpebral fissure closure. Examination revealed that the problem is caused by the impaired function of the muscle that enables this movement. What muscle is most likely to be damaged in this case?
A. M. orbicularis oculi
B. M. corrugator supercilii
C. M. procerus
D. M. depressor supercilii
E. M. orbicularis oris

169. A 28-year-old female patient presented to the emergency department because of premature birth at 5 weeks of hesitation. Two previous pregnancies had ended the same way. Her anamnesis showed that she had been living for a long time in a household with a cat. What unicellular parasite causing the miscarriages was this woman most likely infected with?
A. Toxoplasma
B. Balantidium
C. Plasmodium
D. Lamblia
E. Amoeba

170. A 58-year-old man visited his dentist with the chief complaint of itching and burning sensation in his mouth. On intraoral examination, diffuse white patches were detected on his tongue, right and left buccal mucosa, as well as in the region of his hard and soft palate. The potassium hydroxide (KOH) preparation of the specimen revealed non-pigmented septate hyphae. Administration of which of the following is the most appropriate initial step in the treatment of this patient?
A. Nystatin
B. Piperacillin
C. Gentamicin
D. Penicillin
E. Tetracycline

171. Primary and permanent dentition normally differs in the number of teeth. What is the number of molars for primary dentition?
A. 4
B. 10
C. 6
D. 8
E. 2

172. A histological specimen shows an oral structure represented by a mucous tunic with a loose part and an attached part. The attached part is tightly affixed to the periosteum. The epithelium is stratified squamous keratinized. The lamina propria forms long papillae that are deeply embedded into the epithelium. Name this structure:
A. Gingiva
B. Lip
C. Cheek
D. Hard palate
E. Tongue

173. There is a mucous membrane, consisting of a multilayer flat epithelium and lamina propria, covering the alveolar jaw processes and densely adhered to the periosteum. Which of the following structure is described?
A. The gums
B. The buccal mucosa
C. The lips
D. The tongue
E. The palate

174. All teeth have surfaces that are named according to their usual alignment within the dental arch. Depending on whether the tooth surface faces toward the arch midline between the central incisors or away from the midline, it has a certain nomenclature. Which of the following surfaces is father from the midline?
A. Distal

B. Mesial
C. Occlusal
D. Posterior
E. Incisal

175. A patient has developed the symptoms of an anaphylactic shock after he was administrated the local anesthetic for the anesthesia. What medicine is preferable as a primary drug in this case?
A. Adrenaline
B. Phenylephrine
C. Mebhydrolin
D. Promethazine
E. Diphenhydramine

176. A 36-year-old man came to the dental office for tooth extraction. Two weeks after procedure, stratified squamous epithelium regenerated at the site of extraction. Which of the following organelles were most likely involved in the mucosa regeneration?
A. Ribosomes
B. Centrosomes
C. Mitochondria
D. Smooth endoplasmic reticulum
E. Lysosomes

177. A 46-year-old male patient suffering from bronchial asthma caused by infectious -allergic agents is undergoing a routine checkup. One of the points is a complete blood count with leukogram. Which population of leukocytes is typically abnormal in the leukogram of such patients?
A. Eosinophils
B. Monocytes
C. Neutrophils
D. Lymphocytes
E. Basocytes

178. A 32-year-old patient is examined by the doctor. The examination reveals a tubercular tumor formation on the patient's lower jaw on the left side in molar area. This formation has clear margins, dense structure and significantly deforms the jaw. Microscopic study: stroma consists of embryonic connective tissue, including follicles (foci) of epithelial cells. At the edges of the follicles there are odontogenic epithelium cells; in the center of the follicles there are stellate cells resembling the pulp of the enamel organ. Name the tumor that matches the description:
A. Adamantinoma
B. Adenomatoid tumor
C. Giant-cell tumor of bone
D. Primary intraosseous carcinoma
E. Adenocarcinoma

179. All teeth have surfaces that are named according to their usual alignment within the dental arch. In dental anatomy, there are terms that differentiate biting surfaces of anterior versus posterior teeth. Which of the following terms is the chewing surface of an anterior tooth?
A. Incisal
B. Distal
C. Mesial
D. Occlusal
E. –

180. Histologic examination of an eye specimen shows a multilayer structure. The outermost layer is represented by a special pigment epithelium, which is composed of hexagonal melanin-containing cells that absorb light. The photoreceptor layer contains photosensitive outer segments of rods and cones. Which of the following eye structures is described?
A. Retina
B. Choroid
C. Ciliary body
D. Iris
E. Sclera

1. Rectal microscopy shows large necrotic foci on the mucosa. Necrotic masses are saturated with fibrin, forming a film. Mucosa and submucosa on the periphery of the necrotic foci are hyperemic, swollen, and have hemorrhages and leukocyte infiltrations. What disease can be suspected?
A. Dysentery
B. Typhoid fever
C. Cholera
D. Amebiasis
E. Salmonellosis

2. Acid resistance of human teeth depends on the ratio of calcium to phosphorus in the enamel. What is the normal calcium to phosphorus ratio?
A. 1.67
B. 1.1
C. 0.8
D. 0.9
E. 0.5

3. A histology slide of the heading end of an embryo at 5 weeks of gestation shows pharyngeal arches. What develops from the first pair of these structures?
A. Mandibular and maxillary processes
B. Mandibular processes
C. Thyroid cartilage
D. Maxillary processes
E. External auditory meatus

4. Autopsy of the body of a 62-year-old man, who died with progressing signs of heart failure, revealed enlarged heart. The heart is flaccid and its chambers are distended. The myocardium is dull and clay-yellow on section. The endocardium has yellow-white stripes that is especially marked in the papillary muscles. What pathological process is the most likely?
A. Cardiosclerosis
B. Myomalacia
C. Fatly degeneration of the myocardium
D. Dilated cardiomyopathy
E. Fatty heart

5. Trying to lose weight, a woman has limited the amount of products in her diet. Three months later she developed edema and increased urine output, which indicates that her diet is low on the following type of nutrients:
A. Proteins
B. Vitamins
C. Minerals
D. Lipids
E. Carbohydrates

6. Formation of dental bone tissue requires calcium. The active form of vitamin D plays a large role in calcium metabolism and is produced in:
A. Kidneys and liver
B. Intestine and liver
C. Kidneys and heart
D. Liver and muscles
E. Stomach and heart

7. A sick child has signs of achondroplasia (dwarfism). It is known that this disease is monogenic and the gene that causes the development of this anomaly is dominant. The natural brother of this child has normal development. Genotypically, the healthy child is:
A. aa
B. AA
C. AaBb
D. AABB
E. Aa

8. During a class in molecular biology, the mutations resulting in production of abnormal hemoglobin are being studied. What amino acid substitution occurs when S-hemoglobin is being produced, resulting in the development of sickle-cell anemia?
A. Glutamic acid is substituted with valine
B. Histidine is substituted with arginine
C. Glycine is substituted with asparagine
D. Threonine is substituted with lysine
E. Lysine is substituted with glutamine

9. A 34-year-old woman has a gastric ulcer. To describe the location of the ulcer, the doctor must know, into what parts the stomach can be divided:
A. Body and fundus of the stomach, pyloric stomach and cardiac stomach
B. B. Fundus and fornix of the stomach, pyloric stomach, pyloric antrum, cardiac stomach
C. Body and fundus of the stomach, greater and lesser curvatures of stomach
D. Fundus of the stomach, greater and lesser curvatures of stomach, cardiac stomach
E. Anterior and posterior stomach walls, pyloric stomach and cardiac stomach

10. Examination of a 32-year-old man shows disproportional skeletal structure and enlargement of the supraorbital ridge, nose, lips, tongue, jawbones, and feet. What is the likely cause of these disturbances?
A. Increased levels of somatotropin
B. Increased levels of catecholamines
C. Increased levels of thyroxine
D. Decreased concentration of insulin
E. Increased concentration of glucagon

11. A shepherd tended to the sheep with the help of his dogs. Gradually he developed pain in his chest and started coughing blood. X-ray shows a spherical structure in his lungs. Immunology testing confirmed the provisional diagnosis. What helminth is the likely cause of this condition?
A. Echinococcus
B. Liver fluke
C. Taenia solium
D. Diphyllobothrium latum
E. Hymenolepis nana

12. Autopsy of the body of a man, who died during an abdominal surgery, revealed numerous thrombi in the veins of the lesser pelvis. Clinically, thromboembolic syndrome was detected. Where should the doctor search for the embolus?
A. Pulmonary arteries
B. Left ventricle of heart
C. Veins of the lower extremities
D. Portal vein
E. Brain

13. A patient came to the dentist for tooth extraction. After the tooth had been extracted, the bleeding from the socket persisted for 15 minutes. The patient has a history of active chronic hepatitis. What is the likely cause of the prolonged bleeding time?
A. Decreased blood level of fibrinogen
B. Decreased albumin blood count
C. Hypocalcemia
D. Increased activity of anticoagulation system
E. Thrombocytopenia

14. A lab rat received a subcutaneous injection of mercury (II) chloride in the dosage of 5 mg per 1 kg of body mass. 24 hours later, the creatinine levels in the animal's blood plasma increased several times. What mechanism of retention azotemia is observed in this case?
A. Decreased glomerular filtration
B. Increased glomerular filtration
C. Increased creatinine reabsorption
D. Increased creatinine secretion in the renal tubules
E. Increased creatinine production in the muscles

15. A patient needs to be prescribed a broad-spectrum fluoroquinolone. Select such drug from the list below:
A. Azlocillin
B. Carbenicillin
C. Ciprofloxacin
D. Chinoxydin
E. Amoxicillin

16. A 43-year-old woman against the background of septic shock presents with thrombocytopenia, decreased fibrinogen levels, fibrin degradation products appearing in the blood, and petechial hemorrhages. Specify

the cause of these changes:
A. Disseminated intravascular coagulation
B. Autoimmune thrombocytopenia
C. Hemorrhagic diathesis
D. Exogenous intoxication
E. Disturbed platelet production

17. A man uses dentures. The dentist has noticed mucosal lesions with a white coating in his oral cavity. Microscopy of the coating detected large oval Gram-positive cells. What microorganisms have caused stomatitis in the patient?
A. Yeast-like fungi of Candida genus
B. Actinomycetes
C. Streptococci
D. Oral spirochetes
E. Oral trichomonas

18. Autopsy of the body of a 43-year-old man, who died of cardiopulmonary failure, shows a cavity 3 cm in diameter, filled with viscous green-gray content, in the lower lobe of the right lung. Histology shows that the wall of this structure is made of connective tissue and immature granulation tissue, while the lumen contains neutrophilic leukocytes and products of their breakdown. What type of inflammation is it?
A. Acute abscess
B. Empyema
C. Carbuncle
D. Furuncle
E. Chronic abscess

19. During tooth extraction, novocaine (procaine) is administered to the area of a sensitive nerve, which results in an anesthetic effect because of disturbed:
A. Conduction of pain impulses
B. Excitability of pain receptors
C. Formation of pain mediators
D. Axonal transport
E. Tissue pH

20. A man developed a malignant neoplasm in his tongue. What characteristics of this tumor allow identifying it as malignant?
A. Infiltrating growth
B. Positive Pasteur effect
C. Increased number of mitotic cells
D. Expansive growth
E. Anaplasia

21. Appendicitis can be mistaken for a liver or gallbladder disorder if the vermiform appendix is in the following position:
A. Ascending
B. Lateral
C. Medial
D. Descending
E. Retrocecal

22. After acute blood loss, the patient with rhesus-negative blood was mistakenly transfused with rhesus-positive blood. What changes will occur in blood in this case?
A. Hemolysis of donor's erythrocytes
B. Erythrocytosis
C. Platelet aggregation
D. Aggregation of donor's erythrocytes
E. Hemolysis of recipient's erythrocytes

23. A car accident victim presents with a spinal hematoma accompanied by retrosternal pain, tachycardia, and elevated blood pressure. The patient's condition results from the damage to the following segments of the spinal cord:
A. Thl-Th5
B. L1-L3
C. S1-S3
D. –
E. C6-C8

24. Some unicellular organisms, i.e. amoebae, feed via phagocytosis. What cells of the human body use this method not as a means of feeding, but as a defensive mechanism against foreign bodies (microorganisms, dust, etc.)?
A. Leucocytes
B. Erythrocytes

C. Myocytes
D. Platelets
E. Epithelial cells

25. During DNA sequencing and biochemical analysis of a polypeptide, it was determined that the linear sequence of nucleotide triplets corresponds with the amino acid sequence in the polypeptide chain. What characteristic of the genetic code was determined?
A. Collinearity
B. Universality
C. Degeneracy
D. Triplet nature
E. Nonoverlapping

26. After exposure to radiation, a rabbit presents with the III stage of acute radiation sickness that manifests in bone marrow syndrome. Damage to what tissue is the leading link in the pathogenesis of radiation sickness-related disorders in this case?
A. Hematopoietic tissue
B. Nerve tissue
C. Gonadal epithelium
D. Glandular epithelium
E. Bone tissue

27. A patient came to a dentist complaining of fever and characteristic small vesicles on the buccal, palatal, and lingual mucosa. The dentist suspects herpetic stomatitis. What additional test is necessary to confirm the diagnosis?
A. Inoculation of chick chorioallantoic membrane or brain tissue of white mice
B. Precipitation reaction
C. Inoculation on Rappaport medium
D. Inoculation on medium 199 with addition of bovine serum
E. Inoculation on Eagle medium

28. A man came to the dentist complaining of problems with chewing. Backward movement of his lower jaw is painful. The dentist determined inflammation of a masticatory muscle in this patient. Which muscle is inflamed in this case?
A. Temporal muscle (posterior fibers)
B. Masseter muscle
C. Temporal muscle (anterior fibers)
D. Medial pterygoid muscle
E. Lateral pterygoid muscle

29. Analgin (metamizole) effectively relieves pulpitis-induced pain not only after its resorptive administration, but after topical administration as well. What action of this drug results in anesthetic effect in the latter case?
A. Inhibition of P substance release
B. B. Local anesthetic effect of Analgin (Metamizole)
C. Cyclooxygenase-2 inhibition
D. Counter-attracting action
E. Inhibition of algogenic kinin formation

30. During experiment the processes of food and water hydrolysis products absorption were studied. It was determined that these processes mainly occur in the following gastrointestinal segment:
A. Small intestine
B. Stomach
D. Oral cavity
E. Large intestine
F. Rectum

31. A patient with alcoholism has hepatic cirrhosis. Within the last half a year he developed varicose abdominal veins, splenomegaly, and ascites (portal hypertension syndrome). What complication is the most likely cause of the patient's death?
A. Hemorrhage from the gastrointestinal varices
B. Hepatic encephalopathy
C. Hypoproteinemia
D. Hepatolienal syndrome
E. Accelerated hemolysis

32. Autopsy of the body of a man, who died after 3 weeks of pneumonia, shows

acutely enlarged lower lobe of his right lung. The lobe is dense, airless, gray, with fibrin deposits on the pleura. Microscopy shows fibrin and segmented leukocytes in all alveoles of this lobe. Make the diagnosis:
A. Croupous pneumonia
B. Focal bronchopneumonia
C. Interstitial pneumonia
D. Fibrinous pleurisy
E. Influenza virus pneumonia

33. A 78-year-old woman during physical exertion suddenly developed abdominal pain accompanied by pallor and a drop in blood pressure to as low as 70/40 mm Hg. Death occurred with signs of acute heart failure. Autopsy detected marked atherosclerosis and a sacculation of vessel wall in the abdominal aorta. The sacculation is 16 cm in diameter and filled with blood clots. In the wall of the sacculation there is a fissured perforation. What pathology occurred in the woman's aorta?
A. Aortic aneurysm with rupture
B. Dysplastic aortic wall
C. Syphilitic mesaortitis
D. Nonspecific aortitis
E. -

34. What diuretic will produce no effect in a patient with Addison disease?
A. Ethacrynic acid
B. Spironolactone
C. Hydrochlorothiazide
D. Furosemide
E. Triamterene

35. The patient's salivary porphyrin concentration allowed diagnosisng him with porphyria. This disease leads to disturbed synthesis of the following compound:
A. Heme
B. Creatine
C. Glycogen
D. Phospholipids
E. Uric acid

36. During microscopy of an embryo material, a yolk sac is visible in the microslide. What is the main function of this organ in the human body?
A. Hemopoietic
B. Protective
C. Amniotic fluid production
D. Excretory
E. Trophic

37. Examination of the oral cavity revealed dark yellow and brown spots on the labial and lingual surfaces of the teeth. The spots cover more than half of the dental surface. Dentin and enamel are destroyed. What is the most likely diagnosis?
A. Fluorosis
B. Caries of enamel
C. Deep caries
D. Cuneiform defects
E. Dental erosion

38. During an appointment with the dentist, a patient developed hypersalivation. What group of drugs can decrease this phenomenon?
A. Adrenergic agonist
B. Cholinergic antagonists
C. Adrenergic antagonist
D. Astringent agents
E. Cholinergic agonists

39. Tyrosine is used as a substrate in thyroxine synthesis. What chemical element takes part in this process?
A. Iodine
B. Calcium
C. Zinc
D. Copper
E. Iron

40. During removal of a carious tooth, the dental surgeon noticed a soft elastic gray-pink nodule 1.3 cm in diameter in the region of the dental root. Microscopically, the nodule consists of granulation tissue with lymphocytes, plasma cells, mast cells, mac-

lymphocytes, plasma cells, mast cells, macrophages, xanthome cells, and fibroblasts. Make the diagnosis:
A. Granulating periodontitis
B. Simple granuloma
C. Eosinophilic granuloma
D. Epithelial granuloma
E. Cystic granuloma

41. The costal margin is an important topographic landmark of the human body. It is formed by the cartilage of the following vertebrae:
A. From 7 to 10
B. From 11 to 12
C. Only 12
D. From 1 to 12
E. From 1 to 7

42. Most epithelial cells sampled from the oral mucosa of a man contained one X chromatin body. It is characteristic of:
A. Klinefelter syndrome
B. Triple X syndrome
C. Triple Y syndrome
D. Turner syndrome
E. Down syndrome

43. To improve tooth mineralization, dentists prescribe Ca^{2+} preparations. This substance has no effect on the following processes in an organism:
A. Oncotic pressure generation
B. Hemostasis
C. Synaptic transmission of excitation
D. Development of myocardial depolarization
E. Muscle contraction

44. Contractions of the respiratory muscles completely stop, if:
A. Spinal cord transection at the level of upper cervical segments
B. Separation of pons cerebclli from medulla oblongata
C. Spinal cord transection at the level of lower cervical segments
D. Bilateral vagal transection
E. -

45. Biopsy material of oral mucosa demonstrates morphological signs of gums. What structural characteristics of the gingival mucosa can normally be observed?
A. Tightly attached to the periosteum, lamina propria forms tall papillae, no muscular layer
B. Loosely attached to the periosteum, well-defined muscular layer
C. Contains numerous small salivary glands
D. No lamina propria or muscular layer
E. No muscular layer, well developed submucous layer

46. A 42-year-old man with an incised wound on the lower anterior surface of his shoulder came to the medical station. Objectively he presents with impaired forearm flexion. What muscles are likely to be damaged in this patient?
A. M. brachialis, m. biceps brachii
B. M. biceps brachii, m. anconeus
C. M. deltoideus, m. biceps brachii
D. M. deltoideus, m. infraspinatus
E. M. coracobrachialis, m. supraspinatus

47. During an outbreak of a hospital-acquired infection, pure cultures of S. aureus were grown after inoculation of the samples obtained from the nasopharynxes of the medical personnel and from wound drainage of the surgical patients. What tests are necessary to determine the likely source of infection?
A. Phage typing of the obtained cultures
B. Sero-identification
C. Antibiotic sensitivity testing
D. Repeated inoculations
E. Biochemical profiles

48. Normal cardiomiocytes have a specific phase of the action potential:
A. Slow repolarization (plateau)
B. Rapid dyastolic repolarization

C. Systolic repolarization
D. Rapid systolic repolarization
E. Slow dyastolic repolarization

49. A patient complains of toothache. Examination revealed a carious cavity that exposes the pulp. What stage of caries is it?
A. Deep caries
B. Median caries
C. Superficial caries
D. Circular caries
E. Chalky lesion

50. A patient has received a trauma to the calvaria. What sinuses are likely to be damaged?
A. Superior sagittal sinus
B. Sigmoid sinus
C. Inferior petrosal sinus
D. Inferior sagittal sinus
E. Superior petrosal sinus

51. An enzyme, connected to substrate, interacts with it only with a part of its molecule. Name this part:
A. Active center
B. Polypeptide chain portion
C. Coenzyme
D. Allosleric center
E. Cofactor

52. A man with mandibular sarcoma presents with metaplasia in his biopsy material. Describe this phenomenon:
A. Tumor progression
B. Tumor cells revert to their normal condition
C. Cells lose their ability to differentiate
D. Tumor tissue assumes the properties of other tissue
E. Intensified mitosis of tumor cells

53. A patient with a many-year-long history of mandibular osteomyelitis developed edema, massive proteinuria, and hyperlipidemia. What condition is the most likely in this patient?
A. Nephrotic syndrome B. Nephritis
C. Pyelonephritis
D. Urolithiasis
E. Chronic kidney disease

54. A man with a cardiovascular pathology presents with overproduction of angiotensin II. What enzyme takes part in angiotensin II synthesis?
A. Angiotensin converting enzyme B. Cyclooxygenase
C. Kallikrein
D. Urokinase
E. Kininase

55. Microscopy of an extracted tooth shows decreased count and size of odontoblasts and other cells of the dental pulp, with characteristically sclerotic connective tissue that makes up the pulp. What general pathology can be suspected in the dental pulp?
A. Reticular atrophy of the pulp
B. Fatty degeneration
C. Amyloidosis
D. Pulpal hyperplasia
E. Hyalinosis

56. In the surgical department, dressing material was being sterilized in an autoclave. Because of nurse's oversight, the sterilization regimen was disturbed and temperature in the autoclave chamber reached only 100° C instead of required 120°C. What microorganisms could remain viable under such conditions?
A. Bacilli and clostridia
B. Mold and yeast-like fungi
C. Corynebacteria and mycobacteria
D. Staphylococci and streptococci
E. Salmonellae and klebsiellae

57. A student uses percussion to determine the cardiac border that projects on the anterior thoracic wall at the level of the third costal cartilage. What cardiac border is being determined?

ing determined?
A. Upper
B. Left
C. Apex
D. Right
E. Lower

58. A patient suffering from ciliary arrhythmia with anamnesis of bronchial asthma should be prescribed an antiarrhythmic drug. What antiarrhythmic drug is contraindicated in this case?
A. Novocainamide (Procainamide)
B. Verapamil
C. Nifedipine
D. Anaprilin (Propranolol)
E. Salbutamol

59. A 57-ycar-old man with chronic pyelonephritis developed arterial hypertension. What is the main mechanism of arterial pressure increase in this case?
A. Increased renin secretion in the kidneys
B. Stimulation of the cerebral cortex
C. Stimulation of sinocarotid baroreceptors
D. Stimulation of hypothalamic vegetative centers
E. Increased blood levels of catecholamines

60. After a prolonged isoniazid treatment, the patient developed polyneuritis, paresthesia, memory disorders, and convulsions. What is the likely mechanism of the described isoniazid side-effects?
A. Inhibition of RNA synthesis B. Inhibition of protein synthesis
C. Inhibition of pyridoxal phosphate formation
D. Disruption of cell membrane synthesis
E. Para-aminobenzoic acid antagonism

61. A patient has torticollis. What muscle of the neck is damaged?
A. M. Sternocleidomastoideus
B. M. Mylohyoideus
C. M. Omohyoideus
D. M. Platisma
E. M. Sternohyoideus

62. Oxidative decarboxylation of pyruvic acid is catalyzed by a multienzyme complex with several functionally linked coenzymes. Name this complex:
A. Thymidine diphosphate (TDP), flavin adenine dinucleotide (FAD), coenzyme A (CoASH), nicotine amide adenine dinucleotide (NAD), lipoic acid
B. Nicotine amide adenine dinucleotide (NAD), pyridoxal-5-phosphate, thymidine diphosphate (TDP), methylcobalamin, biotin
C. Flavin adenine dinucleotide (FAD), tetrahydrofolic acid, pyridoxal-5- phosphate, thymidine diphosphate (TDP), choline
D. Lipoic acid, tetrahydrofolic acid, pyridoxal-5-phosphate, methylcobalamin
E. Coenzyme A (CoASH), flavin adenine dinucleotide (FAD), pyridoxal-5-phosphate, tetrahydrofolic acid, carnitine

63. A 9-year-old boy is hospitalized in the endocrinology department. He has already had several limb fractures because of fragile bones. What endocrine gland does not function properly in this patient?
A. Parathyroid gland
B. Thymus gland
C. Pineal glands
D. Thyroid gland
E. Adrenal glands

64. A patient presents with disturbed patency of the respiratory tracts at the level of small and medium bronchi. What acid-base imbalance is likely to be detected in the patient's blood in this case?
A. Respiratory acidosis
B. Metabolic acidosis
C. -
D. Respiratory alkalosis
E. Metabolic alkalosis

65. A patient with a severe toothache that lasted for several days made no appoint-

ment with a doctor and engaged in self-treatment instead. As a result, his tooth needs to be extracted. What analgesic increases the probability of a hemorrhage developing after the tooth is extracted?
A. Acetylsalicylic acid
B. Codeine phosphate
C. Dimedrol (Diphenhydramine)
D. Paracetamol
E. Analgin (Metamizole)

66. A 5-year-old boy complains of intense headache and vomiting. Objectively, he has nuchal rigidity, vomiting without nausea, herpes rash on his face, and fever. What pathologic material should be obtained for bacteriology, to confirm the diagnosis of cerebrospinal meningitis?
A. Spinal tap
B. Urine culture of N. Meningitidis
C. A sample of N. Meningitidis bacteria from urogenital mucosa
D. Vomit content analysis
E. Fecal culture of N. Meningitidis

67. Autopsy of a patient, who died of heart failure, shows yellow spots and streaks in the aortic and coronary intima, as well as gray-yellow plaque, protruding from the intima surface. The plaque is focally ulcerated and presents with hemorrhages, thrombi, and calcified foci. Such vascular alterations are characteristic of:
A. Atherosclerosis
B. Essential hypertension
C. Periarteritis nodosa
D. Syphilitic mesaortitis
E. -

68. During an appointment, a patient developed atrioventricular block. What medicinal substance can be used as an emergency aid in this case?
A. Platyphyllin
B. Atropine
C. Atenolol
D. Pirenzepine
E. Anaprilin (Propranolol)

69. X-ray detected pus accumulation in the sphenoidal sinus. The pus is being excreted into the following nasal meatus:
A. Right and left superior nasal meatus
B. Left middle nasal meatus
C. Right middle nasal meatus
D. Left inferior nasal meatus
E. Right inferior nasal meatus

70. During a car accident, a person received a strong blow to the epigastric region, which caused a cardiac arrest. What was the likely cause of such changes in the cardiac activity?
A. Increased vagal tone
B. Adrenaline production
C. Increased tone of the sympathetic nervous system
D. Aldosterone production
E. Cortisol production

71. Increased levels of high-density lipoproteins lead to decreased risk of atherosclerosis. What is the mechanism of anti-atherosclerotic effect of high-density lipoproteins?
A. They extract cholesterol from tissues
B. They activate cholesterol transformation into bile acids
C. They supply tissues with cholesterol
D. They facilitate cholesterol absorption in the intestine
E. They take part in cholesterol breakdown

72. The patient is in the state of cardiogenic shock, he needs to be given a non-glycoside cardiotonic drug. What will be the drug of choice in this case?
A. Amrinone
B. Cordiamin (Nikethamide)
C. Dobutamine
D. Ethimizol
E. Corglycon

73. A patient with trauma has an epidural hematoma in the temporal region. What artery was damaged?

A. Middle meningeal artery
B. Anterior cerebral artery
C. Posterior communicating artery
D. Medial cerebral artery
E. Anterior meningeal artery

74. A 32-year-old woman underwent removal of a brown fungiform gingival neoplasm. Microscopically, it consists of connective tissue with numerous sinusoidal vessels, large multinucleated cells, and small mononuclear cells. There are small hemorrhages and hemosiderin deposits, as well. What type of neoplasm is it?
A. Angiomatous epulis
B. Hypertrophic gingivitis
C. Gingival fibromatosis
D. Giant-cell epulis
E. Fibromatous epulis

75. A 16-year-old girl, who has been starving herself for a long time to lose weight, developed an edema. This phenomenon is mainly caused by:
A. Hypoproteinemia due to protein synthesis disturbance
B. Decreased production of vasopressin in the hypothalamus
C. Hypoglycemia due to glycogen synthesis disturbance
D. Venous congestion and increased venous pressure
E. Deceleration of glomerular filtration rate

76. Global warming is one of the most concerning ecological problems for the humanity. One of the causes of climate change is the greenhouse effect, which is associated with:
A. Increased carbon dioxide levels in the atmosphere
B. Decreased oxygen levels in the atmosphere
C. Development of ozone holes
D. Decreased carbon dioxide levels in the atmosphere
E. Increased levels of sulfur oxides in the atmosphere

77. A patient with acne is prescribed doxycycline hydrochloride. What should the patient be warned against, regarding administration of this drug?
A. Avoid prolonged exposure to the sun
B. Do not take with vitamin preparations
C. Course of treatment should not exceed 1 day
D. Take before eating
E. Take with large amount of liquid, preferably milk

78. To determine functional state of the patient's liver, the analysis of animal indican excreted with urine was conducted. This substance is produced in the process of detoxification of putrefaction products of a certain amino acid, which takes place in the large intestine. Name this amino acid:
A. Tryptophan
B. Serine
C. Glycine
D. Cystei
E. Valine

79. A patient complaining of polydipsia, polyphagia, and polyuria excretes glucose with urine. What disease can be suspected?
A. Diabetes mellitus
B. Insulinoma
C. Diabetes insipidus
D. Addison disease
E. Acromegalia

80. Broad-spectrum antibiotics can cause various complications, including intestinal candidiasis. What drug is used for treatment of this complication?
A. Undecync B. Griseofulvin
C. Nystatin
D. Amphotericin B
E. Gramicidin

81. After a cerebral hemorrhage, the patient developed a significant loss of gustatory sensitivity. What cerebral structure is likely to be damaged in this case?
A. Postccntral gyrus
B. Substantia nigra
C. Hypothalamus
D. Amygdala
E. Hippocampus

82. In some Ukrainian regions, local cases of malaria were detected. What insects take part in such outbreaks?
A. Mosquitoes of Anofeles genus
B. Gadflies of Tabanidae family
C. Flies of Ceratopogonidae family
D. Mosquitoes of Phlebotomus genus
E. Flics of Simulium genus

83. Influenza serology allows detecting the increase of antibody titer against the causative agent in the patient's blood serum. What antibody titer increase must be observed with paired serum samples, for the result to be considered valid?
A. Fourfold increase or more
B. By a half-titer
C. Triple increase
D. Double increase
E. By one titer

84. On tooth section in the area of the root apex there is a tissue consisting of cells with processes surrounded by mineralized intercellular substance. Name this tissue:
A. Cellular cement
B. Periodontium
C. Reticulofibrous bone tissue
D. Enamel
E. Mantle dentin

85. A woman presents with edemas. In her urine there is a large amount of protein excreted. What nephron segment is functionally disturbed in this case?
A. Renal corpuscle
B. Descending limb of loop of Henle
C. Ascending limb of loop of Henle
D. Proximal convoluted tubule
E. Distal convoluted tubule

86. A 3-year-old child was hospitalized with signs of stomatitis, gingivitis, and dermatitis on the bare areas of skin. Examination determined a hereditary disorder of neutral amino acid transport in the intestine. What vitamin is deficient in this patient, causing such signs?
A. Niacin
B. Biotin
C. Cobalamin
D. Vitamin A
E. Pantothenic acid

87. Histology of a tissue shows that it has no blood vessels and its cells tightly adhere to one another, forming layers. What tissue is it?
A. Epithelial tissue
B. Bone tissue
C. Nerve tissue
D. Cartilaginous tissue
E. Muscle tissue

88. What hormone of parotid glands intensifies teeth mineralization by stimulating calcium supply to the calcified tissues?
A. Parotin
B. Parathyrin
C. Glucagon
D. Cortisol
E. Calcitonin

89. When preparing a dental plaque smear and staining it according to the Gram method, a student during microscopy detected there various violet and pink microorganisms. What structural component of microorganisms causes different response to stains?
A. Cell wall
B. Cytoplasm
C. Cytoplasmic membrane
D. Internal periplasmic space

E. Outer membrane

90. It is known that saliva contains thromboplastins. What is their role in the oral cavity?
A. Increase coagulation properties of saliva
B. Increase fibrinolytic properties of saliva
C. Increase immunity-inducing properties of saliva
D. Increase bactericidal properties of saliva
E. Increase enzymatic properties of saliva

91. Autopsy of a 46-year-old man, who had untreated enteric infection and died of sepsis, revealed the following: perirectal phlegmon, multiple ulcers of the rectum and sigmoid colon, some of which are perforated; mucosa of these intestinal segments is thickened and covered with firmly attached grayish films. What is the most likely disease in this case?
A. Dysentery
B. Cholera
C. Typhoid fever
D. Tuberculosis
E. Amebiasis

92. A 43-year-old cattle farm worker is brought to the surgeon with fever, malaise, and inflamed lesions on his hands and arms. He reports that about 2 weeks before his presentation at the hospital he noticed small, painless, pruritic papules that quickly enlarged and developed a central vesicle. The vesicles developed into erosion and left painless necrotic ulcers with black, depressed eschar. Gram's staining of the ulcer reveals gram-positive spore-forming bacilli. Which of the following diseases is the most likely cause of these findings?
A. Anthrax
B. Chickenpox
C. Syphilis
D. Plague
E. Tularemia

93. During kidney microscopy, the pathologist noticed crescent-shaped epithelial formations in the outer layer of the Bowman's capsule in 80% of the glomeruli. He concluded that such clinical presentation corresponds with:
A. Rapidly progressive extracapillary proliferative glomerulonephritis
B. Intracapillary exudative glomerulonephritis
C. Intracapillary proliferative glomerulonephritis
D. Fibroplastic glomerulonephritis y
E. Extracapillary exudative glomerulonephritis

94. To take a sample of cerebrospinal fluid for analysis, a doctor makes a puncture into subarachnoid space. To prevent damage to the spinal cord, the needle must be inserted between the two following vertebrae:
A. L3 and L4
B. Thl2 and LI
C. Thll and Thl2
D. Th4 and Th5
E. –

95. Phenylketonuria has autosomal recessive pattern of inheritance. What parental genotypes result in the risk of phenylketonuria in their children?
A. Aa x Aa
B. AA x Aa
C. AA x aa
D. AA x AA
E. aa x aa

96. Dependence of blood pressure from vascular resistance was studied in an experiment on a test animal. In what vessel will the resistance be the highest?
A. Arterioles
B. Capillaries
C. Arteries
D. Aorta
E. Veins

97. Examination of the patient's oral cavi-

ty shows a contact between the cutting edges of the upper and lower incisors. This type of teeth placement is characteristic of:
A. Closed occlusion
B. Biprognathic occlusion
C. Orthogenic occlusion
D. Progenia
E. Orthognathia

98. A histology slide with a section of a dental crown shows a small number of radially positioned collagen fibers (Korff fibers) in the intercellular substance of dentin. What layer of dentin is it?
A. Mantle dentin
B. Parapulpar dentin
C. Predentin
D. Granular layer
E. Interglobular dentin

99. A child has a congenital immunodeficiency. The cell-mediated immunity is affected, causing frequent viral infections. It is likely to be caused by a disorder of the following organ:
A. Thymus gland
B. Spleen
C. Lymph nodes
D. Red bone marrow
E. Palatine tonsils

100. It is known that in metabolism of catecholamine mediators the special role belongs to monoamine oxidase (MAO). How does this enzyme activate these mediators (noradrenaline, adrenaline, dopamine)?
A. Oxidative deaminization
B. Amino group attachment
C. Hydrolysis
D. Carboxylation
E. Methyl group removal

101. During an exacerbation of rheumatoid arthritis, the patient with a history of concomitant chronic gastritis was prescribed celecoxib. What decreases the digestive tract side effects of this drug?
A. Predominant inhibition of cyclooxygenase-2
B. Predominant stimulation of adenylate cyclase
C. Predominant inhibition of cyclooxygenase-1
D. Phospholipase A2 inhibition
E. Phosphodiesterase inhibition

102. A man came to the dentofacial orthopedist to have dentures made for him. The doctor determined that all the teeth without second antagonists need dentures. Name these teeth:
A. Upper third molars
B. Lower first molars
C. Lower second molars
D. Upper second molars
E. Lower second premolars

103. A patient underwent a glucose tolerance test that confirmed the absence of diabetes mellitus in this person. When, after a sugar load, a healthy person will have the highest glucose levels?
A. 30-60 minutes
B. 10-20 minutes
C. 90 minutes
D. 150 minutes
E. 120 minutes

104. Histologic examination of a biopsy specimen shows a structure of the oral cavity composed of the bone tissue, which is covered by stratified squamous non-keratinizing epithelium and lamina propria. The specimen has also minor mucous salivary glands. In all parts of the lamina propria the collagenous fibers form thick bundles that bind the mucosa to the periosteum. Based on these findings, which of the following structures is the most likely presented?
A. Hard palate
B. Soft palate
C. Lip
D. Cheek

E. Tongue

105. Lately, the laboratory diagnostics of hepatitis B includes detecting the presence of viral DNA in the patient's blood. What reaction is used to determine it?
A. Polymerase chain reaction
B. Hemagglutination inhibition reaction
C. Indirect hemagglutination reaction
D. Enzyme-linked immunosorbent assay
E. Complement fixation reaction

106. A patient presents with acute onset of the disease: high fever and enlarged painful spleen. On the 10th day since the onset the patient developed a maculopapular rash on the abdomen. On the 21st day the patient died of peritonitis. Postmortem study of the body shows deep ulcers in the area of necrotic aggregate lymphoid follicles (Peyer's patches) in the ileum of the deceased. One of the ulcers is perforated and diffuse fibrinopurulent peritonitis is observed. What disease can be suspected in this case?
A. Typhoid fever
B. Cholera
C. Intestinal amebiasis
D. Salmonellosis
E. Dysentery

107. In the course of a surgery, the fibers of the 12th pair of cranial nerves were damaged. This damage manifested as:
A. Disturbed function of the lingual muscles
B. Disturbed contraction of the laryngeal muscles
C. Disturbed contraction of the muscles that elevate the hyoid bone
D. Disturbed contraction of the pharyngeal muscles
E. Disturbed contraction of the muscles of the soft palate

108. Auscultation reveals that. in the patient's II intercostal space along the parasternal line on the right the II heart sound is better heard than the I heart sound. Closure of which valve produces this sound?
A. Semilunar aortic valve
B. Right tricuspid valve
C. Scmilunar pulmonary valve
D. Left bicuspid valve
E. Bicuspid and tricuspid valves

109. A 38-year-old man with chronic alcoholism died of progressve heart failure. An autopsy shows lobar pleuropneumonia in the lower lobe of the right lung. Histology shows a fibrinous exudate and segmented leukocytes in the alveoli. Determine the stage of croupous pneumonia:
A. Gray hepatization
B. -
C. Influx
D. Resolution
E. Red hepatization

110. Urinalysis shows glucosuria in a patient with diabetes mellitus. What is the renal threshold for glucose?
A. 8.88 mmol/L
B. 15.5 mmol/L
C. 20.0 mmol/L
D. 5.55 mmol/L
E. 1.0 mmol/L

111. At autopsy, section of the right ovary shows a round lesion 2.5 cm in diameter with a clear serous fluid, surrounded by a smooth glistening membrane. Which of the following macroscopic lesions best represents the autopsy findings?
A. Cyst
B. Nodule with central necrosis
C. Nodule
D. Ulcer
E. Infiltrate

112. A child presents with delayed mental development, delayed growth and formation of the teeth, late development of ossification foci, and low basal metabolic rate. What endocrine gland is functionally

insufficient, causing this condition?
A. Thyroid gland
B. Gonads
C. Adrenal glands
D. Pancreas
E. Neurohypophysis

113. A patient developed anaphylactic shock after administration of novocaine (procaine) for conduction anesthesia. What is the drug of choice for shock relief in this case?
A. Prednisolone
B. Adrenalin hydrochloride
C. Dimedrol (Diphenhydramine)
D. Noradrenaline hydrotartrate
E. Suprastin (Chloropyramine)

114. On clinical examination a woman presents with excessive sweating, tachycardia, loss of weight, and tremor. What endocrine pathology can cause these signs?
A. Hyperthyroidism
B. Hypogonadism
C. Hypothyroidism
D. Hypoaldosteronism
E. Hypergonadism

115. A patient with dislocated jaw was given a short-acting muscle relaxant by a doctor. Name this drug:
A. Dithylinum (Suxamethonium chloride)
B. Rocuronium
C. Atracurium
D. Novocaine (Procaine)
E. Papaverine hydrochloride

116. In the wall of a blood vessel there is a large number of elastic fibers in all the layers. The middle layer contains elastic fenestrated membranes. Such characteristics of the vessel wall structure are caused by the following factors:
A. High blood pressure
B. Low blood pressure
C. High blood flow velocity
D. Low blood flow velocity
E. Osmotic pressur

117. A patient with heatstroke was delivered to the admission room. What compensatory reactions develop in the patient's body in such case?
A. Peripherial vasodilatation
B. Persistent hyperglycemia
C. Coronary vasospasm
D. Peripheral vasoconstriction
E. Increased heart rate

118. A centrifugate of urine sample obtained from a patient with suspected renal tuberculosis was used to make a slide mount for microscopy. What method should be used to stain the slide and detect the causative agent?
A. Ziehl-Neelsen stain
B. Burri stain
C. Loeffler stain
D. Gram stain
E. Aujcszky stain

119. A 59-year-old man has signs of parenchymal jaundice and portal hypertension. Histology of the puncture biopsy material, obtained from the patient's liver, shows the following: disturbed lobar and trabecular structure, signs of fatty degeneration in a portion of hepatocytes, formation of porto portal connective tissue septa with pseudolobules and periportal lymphomacrophageal infiltrations. Make the diagnosis:
A. Hepatic cirrhosis
B. Chronic hepatosis
C. Alcoholic hepatitis
D. Viral hepatitis
E. Toxic dystrophy

120. Dental implants were installed in a patient. Three weeks later, implant rejection occurred. What blood cells play the largest role in this pathological process?
A. T lymphocytes
B. Immunoglobulins M
C. Immunoglobulins E

D. B lymphocytes
E. Plasmacytes

121. A 58-year-old man with acute heart failure developed decreased daily diuresis - oliguria. What is the mechanism of this phenomenon?
A. Decreased glomerular filtration
B. Increased hydrostatic pressure on the capillary wall
C. Decreased permeability of membrane glomeruli
D. Decreased oncotic blood pressure
E. Decreased number of functional glomeruli

122. A 35-year-old woman is brought to the physician because of a 4-month history of progressive weakness of both lower limbs. She notes difficulty climbing stairs and complains of lethargy and loss of muscle bulk. Her diet consists primarily of "polished" rice. A diagnosis of dry beriberi is suspected. Deficiency of which of the following vitamins is most likely to be detected in her blood?
A. Vitamin B_1 (thiamine)
B. Vitamin B_3 (niacin)
C. Vitamin B_6 (pyridoxine)
D. Vitamin B_2 (riboflavin)
E. Vitamin *C* (ascorbic acid)

123. In an experiment, an excitatory cell was placed into a salt solution without sodium ions. How will it affect the process of excitation?
A. Action potential will be absent
B. Amplitude of action potential decreases
C. Duration of action potential decreases
D. Amplitude of action potential increases
E. Duration of action potential increases

124. During pregnancy, specific proteins that can destroy rhesus-positive erythrocytes of the fetus were detected in the blood of a rhesus-negative mother. Name this defensive component of the mother's body:
A. Antibody
B. Serum
C. Antigen
D. Hormone
E. Enzyme

125. Combined therapy of chronic heart failure with digitoxin and furosemide resulted in acute muscle weakness in the patient. What electrolyte imbalance can be detected in the patient's blood?
A. Hypokalemia
B. Hypocalcemia
C. –
D. Hypercalcemia
E. Hyperkalemia

126. Before a maxillofacial surgery, the patient received a drug that is a natural anticoagulant that directly affects blood coagulation factors. It is rapidly acting, if administered intravenously. In dental practice, it is used for prevention of thromboembolic complications during extensive maxillofacial surgery. Name this drug:
A. Heparin
B. Aminocapronic acid
C. Neodicoumarin
D. Phenylin (Phenindione)
E. Contrykal (Aprotinin)

127. A patient came to the doctor with complaints of general weakness and sleep disturbances. Objectively the patient's skin is yellow. In blood there is increased concentration of direct bilirubin and bile acids. Acholic stool is observed. What condition can be characterized by these changes?
A. Mechanical jaundice
B. Chronic cholecystitis
C. Hemolytic jaundice
D. Parenchymatous jaundice
E. Familial nonhemolytic (Gilbert's) syndrome

128. A 52-year-old man was diagnosed with systemic amebiasis that affects intestine, liver, and lungs. What drug should be

and lungs. What drug should be administered in this case?
A. Metronidazole
B. Enteroseptol
C. Chingamin (Chloroquine)
D. Chiniofon
E. E.Tetracycline

129. Heart auscultation detected a systolic murmur in the II intercostal space on the left parasternal line. In this case, the doctor was able to auscultate a pathology of the:
A. Valve of the pulmonary trunk
B. Bicuspid valve
C. Valve of the superior vena cava
D. Aortic valve
E. Tricuspid valve

130. Autopsy of a 7-year-old child, who died of uncompensated congenital heart disease, revealed increase in mass and volume of the thymus. On microscopy thymus structure is normal. What pathologic process had occurred in the thymus?
A. Congenital thymomegaly
B. Thymic dysplasia
C. Accidental thymic involution
D. Thymic agenesis
E. Thymoma

131. A patient suffers from disturbed ocular accommodation. What muscle is damaged?
A. *Musculus ciliaris*
B. Musculus sphincter papillae
C. *Musculus rectus inferior*
D. *Musculus rectus superior*
E. Musculus dilatator pupillae

132. A deciduous second molar was extracted in a 13-year-old child. Whai permanent tooth will replace the extracted one?
A. Second premolar
B. First molar
C. Third molar
D. Second molar
E. First prcmolar
F.

133. A patient presents with aspcrmia. What organ is functionally disturbed?
A. Testicle
B. Epididymis
C. Seminal vesicles
D. Prostate
E. -

134. A teenager with impaired visual acuity came to an ophthalmologist. The doctor explained that this condition was caused by a spasm of accommodation. What component of an eyeball is a part of accommodation apparatus?
A. Ciliary muscle
B. Vitreous body
C. Cornea
D. Sclera
E. Retina

135. A 67-year-old man was delivered to a cardiology department with complaints of periodical pains in his heart, dyspnea caused by even slight exertion, cyanosis and edemas. ECG shows additional excitations of heart ventricles. Name this type of rhythm disturbance:
A. Extrasystole
B. Tachycardia
C. Fibrillation
D. Flutter
E. Bradycardia

136. During a spinal surgery, the patient's vertebral arches and their connecting ligaments were removed. Name these ligaments:
A. Yellow ligaments
B. -
C. Interspinous ligaments
D. Anterior longitudinal ligament
E. Posterior longitudinal ligament

137. What process becomes disturbed, if salivary pH drops below 6.5?
A. Supply of hard dental tissues with mineral substances

B. Dental blood supply
C. -
D. Dentin formation
E. Intensity of metabolic processes in the pulp

138. An electronic microphotograph of a cell shows two different protein- destroying organelles. Name them:
A. Lysosomes and proteasomes
B. Peroxisomes and ribosomes
C. Endoplasmic reticulum and microfil-amcnt
D. Ribosomes
E. Golgi complex and microtubules

139. How docs pH of venous blood differ from pH of arterial blood and why?
A. Lower, due to higher blood CO_2 levels
B. Lower, due to O_2 release from the organism
C. No difference
D. Higher, due to higher blood CO_2 levels
E. Higher, due to O_2 release from the organism

140. After a trauma a man is unable to extend his arm in the elbow joint. It can be caused by disturbed function of the following muscle:
A. Musculus triceps brachii
B. Musculus teres major
C. Musculus subscapularis
D. Musculus infraspinatus
E. Musculus levator scapule

141. Phenylketonuria belongs to the following group of molecular metabolic diseases:
A. Amino acid metabolism disorders
B. Mineral metabolism disorders
C. Carbohydrate metabolism disorders
D. Hereditary disorders of connective tissue metabolism
E. Hereditary disorders of lipid metabolism

142. A 23-year-old man developed a perforation in his hard palate, a dense formation with clear margins was detected in this area. After a surgery, microscopy of the excised formation shows there a large focus of caseous necrosis surrounded with a granulation tissue with endovasculitis and a cellular infiltration consisting of lymphocytes and epithelioid cells with predominance of plasma cells. What is the most likely disease in this case?
A. Syphilis
B. Scleroma
C. Leprosy
D. Sarcoma
E. Tuberculosis

143. In the bone tissue there arc large multinucleatcd cells with processes that contain numerous lysosome. Name these cells:
A. Osteoclasts
B. Chondroblasts
C. Semi-stem osteogenic cells
D. Mesenchymal cells
E. Chondrocytes

144. A man has a malignant lingual tumor. The surgeon ligates his A. Lingualis in the area of the Pirogov triangle. I this case, special attention should be paid to the:
A. N. hypoglossus
B. N. sublingualis
C. N. glossopharynseus
D. Ansa cervicalis .
E. N. lingualis

145. Formation of a large amount of immunoglobulins with various antigen specificity from a small number of genes occurs due to:
A. Recombination
B. Translocation
C. Replication
D. Deletion
E. Transcription

146. With age a person develops wrinkled skin. This condition is predominantly

caused by changes in certain skin structures. Name these structures:
A. Collagen fibers
B. Elastic fiber
C. Subcutaneous fat
D. Epidermis
E. Amorphous substance

147. After a nose trauna, a boxer developed an impaired sense of smell. What cells can cause a loss of smell, when damaged?
A. Neurosensory epithelial cells
B. Supporting epithelial cells
C. Ciliary epithelial cells
D. Basement epithelial cells
E. Microvillous epithelial cells

148. A man, who accidentally rinsed his mouth with vinegar essence instead of chlorhexidine solution, was brought to a dental clinic. He complains of burning pain during eating. Examination revealed a dense whitish-gray film on his oral mucosa. What keratoplastic drug was prescribed by the dentist in the course of treatment in this case?
A. Diazolin (Mebhydrolin)
B. Vinylin (Polyvinox)
C. Sodium bicarbonate
D. Magnesia
E. Anaesthesin (Benzocaine)

149. Prolonged taking of large doses of aspirin (acetylsalicylic acid) leads to inhibition of prostaglandin synthesis because of decreased activity of the following enzyme:
A. Phospholipase A2
B. 5-Lipoxygcnase
C. Cyclooxygenase
D. Peroxidase
E. Phosphodiesterase

150. Several patients with similar complaints came to the doctor. They all present with weakness, pain in the intestines, indigestion. Feces analysis revealed the need for urgent hospitalization of the patient, who had microbial cysts with four nuclei detected in his samples. Such cysts are characteristic of the following protozoon:
A. Entamoeba histolytica
B. Trichomonad
C. Entamoeba coli
D. Lamblia
E. Balantidium

151. A patient with rheumatoid arthritis has been given hydrocortisone for a long time. He has developed hyperglycemia, polyuria, glycosuria, thirst. These complications of treatment result from the activation of the following process:
A. Gluconeogenesis
B. Glycogenesis
C. Glycolysis
D. Lipolysis
E. Glycogenolysis

152. Tooth extraction in a patient with chronic persistent hepatitis was complicated by a prolonged bleeding. What is the probable cause of hemorrhagic syndrome?
A. Decreased production of thrombin
B. Increased fibrinolysis
C. Increased synthesis of fibrinogen
D. Decreased production of fibrin
E. Increased production of thromboplastin

153. Following treatment with a highly- efficient anti-tuberculosis drug a 48- year-old female developed optic nerve neuritis, memory impairment, cramps. Which of these anti-TB drugs had the patient taken?
A. Kanamycin sulfate
B. Isoniazid
C. PASA
D. Rifampicin
E. Ethambutol

154. During allergic rhinitis (inflammation of the nasal mucosa) the number of basophils in the connective tissue of the mucosa increases, which is accompanied by a tissue edema. This phenomenon is associated with

the following function of tissue basophils:
A. Histamine synthesis
B. Production of intercellular substance
C. Antibody formation
D. Phagocytosis
E. Heat production

155. A child is 6 years old. The permanent teeth have started to take the place of the primary teeth. What teeth are the first to emerge?
A. Lower first molars
B. Upper first premolars
C. Lower first premolars
D. Upper medial incisors
E. Lower canines

156. A 65-year-old patient had been treated for 3 days in the resuscitation unit for a cardiac pathology. Suddenly he developed ventricular fibrillation which turned out to be the immediate cause of death. Microscopy of the left ventricular myocard revealed a large focus of cardiomyocyte karyolysis demarcated by the zone of hyperaemia. What cardiac pathology was the cause of death?
A. Acute myocardial infarction
B. Diffuse cardiosclerosis
C. Acute myocarditis
D. Ischemic myocardial degeneration
E. Postinfarction cardiosclerosis

157. Examination of a teenager revealed a congenital heart disease, namely the functioning of Botallo's duct. In the prenatal period of development this duct connects the following organs:
A. Pulmonary trunk and aorta
B. Right and left atrium
C. Pulmonary trunk and superior vena cava
D. Right and left ventricle
E. Aorta and inferior vena cava

158. A patient suffering from stenocardia takes 100 mg of acetylsalicylic acid daily. What is the effect of acetylsalicylic acid in this patient?
A. Dilatation of coronary vessels
B. Inhibition of blood coagulation
C. Inhibition of thrombocyte aggregation
D. Prothrombin rate reduction
E. Cholesterol rate reduction

159. Glucose content of blood stays at sufficient level after one week of starvation. Is it caused by activation of the following process:
A. Gluconeogenesis
B. Tricarboxylic acid cycle
C. Glycogenolysis
D. Glycogen phosphorolysis
E. Glycolysis

160. A female woman has been clinically diagnosed with gonorrhea. Which of the following studies can be used to confirm the diagnosis?
A. Microscopy of the pathological material
B. Hemagglutination reaction
C. Immobilization reaction
D. Bacteriophage test
E. Disinfection of laboratory animals

161. In the perianal folds of a 5-year-old girl mother found white worms causing itch and anxiety, and took them to the laboratory. The study revealed white filament-like helminths 0.5-1 cm long, with pointed, sometimes twisted, ends. What diagnosis can be made?
A. Enterobius vermiculari
B. Difilobotrioz
C. Teniasis
D. Opisthorchiasis
E. Diphyllobothriasis

162. In some areas of South Africa many people have sickle cell disease characterized by red blood cells that assume an abnormal sickle shape due to the substitution of glutamic acid for valine in the hemoglobin molecule. What is the cause of this disease?

A. Gene mutation
B. Crossing-over
C. Genomic mutation
D. Disturbances of the mechanisms of genetic information transmission
E. Transduction

163. A patient has enamel erosion. What vitamin should be administered for its treatment?
A. D3
B. C
C. PP
D. K
E. B1

164. A histological preparation shows organ, where lymphocytes form three types of lymphoid structures: lymph nodules, medullary cords and lymphatic sinuses. What organ is it?
A. Lymph node
B. Tonsil
C. Red bone marrow
D. Thymus
E. Spleen

165. A patient with pituitary tumor complains of increased daily diuresis (polyuria). Glucose concentration in blood plasma equals 4.8 mmol/1. What hormone can be the cause of this if its secretion is disturbed?
A. Vasopressin
B. Somatotropine
C. Aldosterone
D. Insulin
E. Natriuretic hormone

166. When examining a child the dentist found the deposit on both tonsils and suspected atypical form of diphtheria. A smear was taken, and after the nutrient media inoculation the toxicity of the isolated pure culture was determined. What reaction was used to determine the toxigenicity of the isolated strain of diphtheria bacillus?
A. Gel precipitation reaction
B. Hemolysis reaction__
C. Agglutination reaction on a glass slide
D. Complement binding reaction
E. Ring precipitation reaction

167. A 60-year-old man consulted a doctor about an onset of chest pain. In blood serum analysis showed a significant increase in the activity of the following enzymes: creatine kinase and its MB-isoform, aspartate aminotransferase. These changes indicate the development of the pathological process in the following tissues:
A. Cardiac muscle
B. Smooth muscles
C. Liver
D. Skeletal muscles
E. Lungs

168. A histological specimen represents a blood vessel. Its inner tunica is composed of endothelium, subendothelium and internal elastic lamina. The middle tunica is rich in smooth muscle cells. What vessel is characterized by these morphological features?
A. Muscular artery
B. Muscular vein
C. Amuscular vein
D. Elastic artery
E. Capillary

169. A patient is diagnosed with seborrheic dermatitis caused by vitamin H (biotin) deficiency. Observed is activity disruption of the following enzyme:
A. Acetyl-CoA carboxylase
B. Pyruvate decarboxylase
C. Carbamoyl phosphate synthetase
D. Alcohol dehydrogenase
E. Aminotranspherases

170. A student who unexpectedly met his girlfriend developed an increase in systemic arterial pressure. This pressure change was

following reflexes:
A. Conditional sympathetic
B. Unconditional sympathetic
C. Conditional parasympathetic
D. Conditional sympathetic and parasympathetic
E. Unconditional parasympathetic

171. During auscultation a 26-year- old patient was asked to breathe deep. After 10 breaths the patient lost consciousness, which is associated with the development of the following condition:
A. Respiratory alkalosis
B. Reduced oxygen capacity of blood
C. Polycythemia
D. Carbon dioxide acidosis
E. Erythropenia

172. A patient has a history of chronic heart failure. Which of the following hemodynamic parameters is a major symptom of cardiac decompensation development?
A. Increased peripheral vascular resistance
B. Tonogenic dilatation
C. Tachycardia development
D. Decreased stroke volume
E. Increased central venous pressure

173. There are several cases of children from boarding school suffering from sore throat. Microscopy of tonsil smears stained according to Neisser method has revealed thin yellow bacilli with dark brown grains on their ends placed in the shape of Roman numeral five. What infection can be suspected in this case?
A. Diphtheria
B. Scarlet fever
C. Listeriosis
D. Tonsillitis
E. Infectious mononucleosis

174. With the purpose of analgesia, to potentiate the narcotic analgesic, a benzodiazepine drug has been used. What drug has been used to potentiate analgesia?
A. Carbamazepine
B. Triftazin
C. Diazepam
D. Chlorprothixene
E. Imizinum

175. Autopsy of a young man revealed some lung cavities with inner walls made up of granulation tissue with varying degrees of maturity; pronounced pneumosclerosis and bronchiectasis. Some cavities had caseation areas. What is your presumptive diagnosis?
A. Fibrous cavernous tuberculosis
B. Acute cavernous tuberculosis
C. Infiltrative tuberculosis
D. Bronchiectasis
E. Caseous pneumonia

176. When examining a female patient a doctor observed the following: misshapen auricles, elevated palate, teeth growth disorder; mental retardation; no disruption of reproductive function. Provisional diagnosis is the “super woman” syndrome. Point out the karyotype of this disease:
A. (47, XXX)
B. (47, YYY)
C. (47, XXY)
D. (45, X0)
E. (47, XYY)

177. A female patient presents with the ovarian hyperaemia, increased permeability of the blood-follicle barrier with the development of edema, infiltration of the follicle wall with segmental leukocytes. The follicle is large in volume. Its wall is thickened. What period of the sex cycle is the described situation typical for?
A. Preovulatory stage
B. Ovulation
C. Postmenstrual period
D. Menstrual period
E. Period of relative rest

178. As a result of an injury a child developed an abscess of adipose tissue of cheek.

With time the process spread to the lateral surface of pharynx. The pus spread along the following fascia:
A. Bucco-pharyngeal
B. Parotid
C. -Temporal
D. Masticatory
E.

179. A female patient with toxemia of pregnancy has hypersalivation resulting in a daily loss of 3-4 liters of saliva. What disorder of water-salt metabolism occurs in such cases?
A. Hyperosmolar hypohydration
B. Hyponatremia
C. Isoosmolar hypohydration
D. Hypokalemia
E. Hypoosmolar hypohydration

180. A patient with a long history of chronic periodontitis underwent removal of a maxillary cyst located at the root of the affected tooth. Microscopy shows that the bone wall is made up of fibrous tissue infiltrated by lymphocytes and plasma cells. The inner surface of the cyst is covered with stratified squamous epithelium with no signs of keratinization. What is the most likely diagnosis?
A. Radicular cyst
B. Gingival fibromatosis
C. Eosinophilic granuloma
D. Follicular cyst
E. Primordial cyst

1. It is dangerous to eat plants and mushrooms harvested along the motorways due to high risk of lead poisoning. What is the main source of lead contamination in the environment?
A. Exhaust gases
B. Herbicides
C. Acid rains
D. Sewage
E. Chemical fertilizers

2. Histological microslide shows a section of a vessel that can be characterized by regular round shape. The vessel is gaping; its wall consists of 3 layers. The middle layer is fenestrated with 30-40 elastic membranes. What vessel is exhibited in the microslide?
A. Elastic artery
B. Blood capillary
C. Muscular artery
D. Muscular vein
E. Mixed type artery

3. A 65-year-old man came to the general physician. He complains of dyspnea during even slight physical exertion, cyanotic skin, and leg edemas. Prescribe him a cardiac glycoside for treatment of chronic heart failure:
A. Digoxin
B. Methyluracil
C. Panangin (potassium aspartate and magnesium aspartate)
D. Metoprolol
E. Heparin

4. In Western Europe nearly half of all congenital malformations occur in the children conceived in the period, when pesticides were used extensively in the region. These congenital conditions result from the following influence:
A. Teratogenic
B. Mutagenic
C. Carcinogenic
D. Malignization
E. Mechanical

5. X-ray scan shows a skull fracture. The line of the fracture passes through the supraorbital rim. What bone is damaged?
A. Frontal bone
B. Parietal bone
C. Maxilla
D. Temporal bone
E. Occipital bone

6. Light microscopy was used to study the morphology of human Y chromosome. Centromere is located close to one of the ends of the chromosome. Name the type of the chromosome:
A. Acrocentric
B. Polytene
C. Telocentric
D. Metacentric
E. Submetacentric

7. Blood sample was obtained for analysis. 30% of erythrocytes in the sample are abnormally shaped. Name this phenomenon:
A. Pathological poikilocytosis
B. Physiological poikilocytosis
C. Anisocytosis
D. Microcytosis
E. Macrocytosis

8. Microslide of a CNS organ impregnated with silver shows piriform cells. The cells are aligned in a row, 3-4 cellular processes branch off from the apices of the cells. These processes branch out further and form nearly two- dimensional layers. Name these cells:
A. Purkinje cells
B. Betz cells
C. Martinotti cells
D. Golgi cells
E. Dogiel cells

9. A man, who for a long time has been suffering from chronic mandibular osteo-

myelitis, died of renal failure. Autopsy shows enlarged yellow-white kidneys that are extremely dense and have a waxy sheen. Light microscopy detected deposits of homogeneous pink masses in the glomerular capillary loops, walls of arterioles and arteries, canalicular basement membrane, and stroma. These deposits color brick-red when stained with Congo red. What process developed in the kidneys?
A. Secondary amyloidosis
B. Fibrinoid necrosis
C. Primary amyloidosis
D. General hyalinosis
E. Local hyalinosis

10. Bacteria that enter the body are being phagocytized by macrophages. What is the role of macrophages in cooperation of immunocompetent cells during the first phase of immune response?
A. Ensure antigen processing and presentation to T helper cells
B. Activate T killer cells
C. Activate NK cells
D. Ensure antigen processing and presentation to T killer cells
E. Produce immunoglobulins

11. A woman complains of impaired gustatory sensitivity of her tongue. This disturbance can be caused by the damage to a certain nucleus of the medulla oblongata. Name this nucleus:
A. Solitary nucleus
B. Hypoglossal nucleus
C. Nucleus ambiguus
D. Inferior salivatory nucleus
E. Dorsal nucleus of vagus nerve

12. After a traumatic brain injury the patient developed a urinary system dysfunction — polyuria. What hormone secretion was disturbed, resulting in polyuria in this patient?
A. Vasopressin
B. Insulin
C. Adrenaline
D. Mineralocorticoids
E. ACTH

13. Secretory units of salivary glands are surrounded with specific contractile cells. Name these cells:
A. Myoepithelial cells
B. Adipocytes
C. Ciliated cells
D. Endotheliocytes
E. Pericytes

14. To prevent an increase in hepatitis B morbidity in the city hospitals, it is necessary to vaccinate the medical personnel. What should be used for immunization in this case?
A. Recombinant vaccine
B. Inactivated vaccine
C. Live attenuated vaccine
D. Arbidol (Umifenovir)
E. Interferon

15. In an experiment, the vagus nerve was severed in a test animal. As the result, the animal developed elevated blood glucose due to:
A. Decreased secretion of insulin
B. Increased secretion of insulin
C. Increased secretion of glucagon
D. Decreased secretion of glucagon
E. Increased secretion of somatostatin

16. Laboratory analysis confirmed the patient's diagnosis of gout. What analysis was conducted to make this diagnosis?
A. Measuring urea levels in the blood and urine
B. Measuring urine ammonia levels
C. Measuring residual nitrogen in the blood
D. Measuring uric acid levels in the blood and urine
E. Measuring urine creatinine levels

17. A patient suffers from angina pector-

is. What antianginal drug is this patient contraindicated if he is allergic to iodine?
A. Amiodarone
B. Nitroglycerine
C. Drotaverine
D. Verapamil
E. Nitrosorbide (Isosorbide dinitrate)

18. The patient's right palpebral fissure is markedly larger than the left. What mimic muscle is functionally disturbed in this case?
A. *M. orbicularis oculi*
B. *M. zygomaticus major*
C. *M. occipitofrontalis (venter frontalis)*
D. *M. corrugator supercilli*
E. *M. Procerus*

19. During a regular check-up with the dentist, a patient diagnosed with chronic gingivitis presents with no inflammatory changes in the gingival mucosa. This condition of the patient can be characterized as:
A. Remission
B. Complication
C. Pathologic reaction
D. Pathologic process
E. Recurrence

20. A patient has a history of chronic heart failure. Which of the following hemodynamic parameters is a major symptom of cardiac decompensation development?
A. Decreased stroke volume
B. Increased peripheral vascular resistance
C. Tachycardia development
D. Tonogenic dilatation
E. Increased central venous pressure

21. Deficiency of a certain vitamin can result in a group of symptoms called pellagra. Dermatitis, diarrhea, and dementia are the three main symptoms in such cases. Name the deficient vitamin:
A. Vitamin *PP*
B. Vitamin *C*
C. Vitamin *B2*
D. Vitamin B_1
E. Vitamin *A*

22. In a maternity hospital a newborn should receive vaccination against tuberculosis. What vaccine should be chosen?
A. BCG vaccine
B. Tuberculin
C. EV vaccine
D. DPT vaccine
E. STI vaccine

23. After administration of eyedrops, the patient developed mydriasis and paralysis of accommodation. What group of drugs can cause this effect?
A. Muscarinic antagonists
B. Anticholinesterase drugs
C. α-adrenergic blockers
D. Muscarinic agonists
E. β-adrenergic agonists

24. Before the surgery for realignment of the fractured bone of the upper jaw, the patient received neuroleptanalgesia. Neuroleptic droperidol was administered along with analgesic fentanyl. What type of drug interaction was used?
A. Potentiated synergism
B. Additive synergism
C. Synergo-antagonism
D. Non-competitive antagonism
E. Competitive antagonism

25. Cells of basal layer of epidermis were damaged due to exposure to radiation. What function of epidermis will be impaired or inhibited first?
A. Regenerative
B. Absorption
C. Barrier
D. Dielectric
E. Protective

26. A patient diagnosed with atherosclero-

sis, ischemic heart disease, and rest angina pectoris was hospitalized into the cardiology department. Laboratory analysis shows high lipid levels in his blood plasma. What class of plasma lipids plays the main role in pathogenesis of atherosclerosis?
A. Low-density lipoproteins
B. High-density lipoproteins
C. Fatty acid-albumin complexes
D. Chylomicrons
E. α-lipoproteins

27. A culture of coccal bacteria was obtained from the oropharynx of a boy with chronic tonsilltits. In the smears these bacteria are arranged in chains. What bacteria are likely in this case?
A. Streptococci
B. Vibrio
C. Clostridia
D. Escherichia
E. Staphylococci

28. Examination of a patient who came to the neurological department shows smoothed-out forehead wrinkles, inability to squint the eyes, drooping mouth corner. One cheek ''inflates" along with breathing. What nerve is damaged in this case?
A. Facial
B. Accessory
C. Trigeminal
D. Oculomotor
E. Vagus

29. Every diet includes products with dietary fiber. These fibers cannot be digested by gastrointestinal enzymes and cannot be absorbed by the body. What is the role of dietary fiber?
A. Stimulates motor function of alimentary tract
B. Inhibits motor function of alimentary tract
C. Inhibits absorptive function of alimentary tract
D. Inhibits secretion of enzymes in digestive juices
E. Inhibits secretory function of alimentary tract

30. A patient is diagnosed with parathyroid tumor. He presents with generalized fibrous osteodystrophy and periodical renal colic attacks. US detects small nephroliths in the kidneys. What is the most likely cause of nephrolithiasis in this case?
A. Hypercalcemia
B. Hypocalcemia
C. Hyperphosphatemia
D. Hyperuricemia
E. Hypercholesterolemia

31. A man has developed a drooping mouth corner and smoothed out nasolabial fold due to influenza complication. What nerve is damaged?
A. Facial nerve
B. Mandibular nerve
C. Maxillary nerve
D. Trochlear nerve
E. Oculomotor nerve

32. Examination of a person with an extremely short stature (dwarfism) detects childish facial features, normal body proportions, and underdeveloped secondary sexual characters. This person has low hormonal activity in the:
A. Anterior lobe of pituitary gland
B. Thymus
C. Middle lobe of pituitary gland
D. Posterior lobe of pituitary gland
E. Thyroid gland

33. When studying chemical composition of a tooth tissue, it is determined that 95-97% of this tissue consists of mineral substances (hydroxyapatite, carbonate apatite, fluorapatite), 1-2% consists of organic compounds, and 3% consists of water. What type of dental tissue is it?
A. Enamel
B. Pulp

C. Periodontium
D. Cement
E. Dentin

34. In the process of tooth extraction, the connection between the tooth cement and tooth socket is being destroyed. Name this connecting structure:
A. Periodontium
B. Cement
C. Gums
D. Dentin
E. Enamel

35. A patient suffering from ciliary arrhythmia with a history of bronchial asthma should be prescribed an antiarrhythmic drug. What antiarrhythmic drug is contraindicated in this case?
A. Anaprilin (Propranolol)
B. Ajmaline
C. Verapamil
D. Nifedipine
E. Novocainamide (Procainamide)

36. Fatigability of masticatory muscles can result in their abnormally slow relaxation, which impairs mechanical processing of food. Name this condition:
A. Contracture
B. Tetanus
C. Galvanization
D. Hypodynamia
E. Galvanism

37. Nitrogen (II) oxide is an unstable molecule that takes part in vasodilation, immune processes, and neurotransmission. What enzyme participates in formation of nitrogen (II) oxide from arginine?
A. *NO*-synthase
B. Argininosuccinate lyase
C. Ornithine carbamoyl transferase
D. Argininosuccinate synthetase
E. Arginase

38. A 26-year-old woman was found to have a tumor of the alveolar process. The tumor manifests as a dense node with clear margins. Histological examination shows homogeneous mononuclear small oval cells mixed with multinucleated giant cells; occasionally bone trabeculae form among the cells. Make the diagnosis:
A. Giant-cell tumor of the bone
B. Ameloblastoma
C. Eosinophilic granuloma
D. Fibromatous epulis
E. Primordial cyst

39. A traumatologist has diagnosed a patient with a fracture in the area of the canine fossa. This fossa is located on the:
A. Maxilla
B. Zygomatic bone
C. Mandible
D. Frontal bone
E. Palatine bone

40. Basement membrane consisting of three layers is an important component of renal filtration barrier. Its electron- dense middle layer has specialized reticular structure. This membrane is located in:
A. Renal corpuscle
B. Proximal tubule
C. Distal straight tubule
D. Thin tubule
E. Capillaries of peritubular capillary network

41. Microscopic examination of a surgical biopsy material (part of the lip with an ulcer) shows epithelial complexes composed of atypical stratified epithelium with pathological mitotic figures near the ulcer margins and under the ulcer floor in the connective tissue of mucosa. Within these complexes there are accumulations of bright pink concentric formations. What pathology is it?
A. Squamous cell keratinous carcinoma

B. Squamous cell nonkeratinous carcinoma
C. Transitional cell carcinoma
D. Papilloma
E. Basal cell carcinoma

42. A patient with bronchopneumonia was prescribed acetylcysteine. What are the indications for this drug?
A. Productive bronchitis
B. Convulsions
C. Heart failure
D. Asphyxia of newborn
E. Bronchial asthma

43. A child with a point mutation presents with absence of glucose 6-phosphatase, hypoglycemia, and hepatomegaly. These signs are characteristic of:
A. Von Gierke disease (glycogen storage disease type I)
B. Parkinson disease
C. Addison disease (primary adrenal insufficiency)
D. McArdle disease (glycogen storage disease type V)
E. Gaucher disease

44. Histological examination of the mandibular bone shows a tumor consisting of fibrous tissue that surrounds basophilic cement-like foci of varying size. Make the diagnosis, what kind of tumor it is:
A. Cemento-ossifying fibroma
B. Giant cementoma
C. Cementoma
D. Cementoblastoma
E. Odontogenic fibroma

45. Prior to tooth extraction the patient was given a local anesthetic, lidocaine. What is the mechanism of anesthetic action of this drug?
A. Sodium channels block
B. Stimulation of GABA receptors
C. Block of Hl-histamine receptors
D. Stimulation of muscarinic acetylcholine receptors
E. Block of β_2-adrenergic receptors

46. A patient is in a state of hypoglycemic coma. What hormone can cause this condition if overdosed?
A. Insulin
B. Progesterone
C. Cortisol
D. Somatotropin
E. Corticotropin

47. A 2-year-old child with a history of URTI, who died with signs of cardiopulmonary failure, has hyperemic right lung. In segments 2,6 and 10 on the surface and on section there are irregular-shaped yellow airless foci, with their size varying from several millimeters to 1 cm. Microscopy shows that in these portions of pulmonary tissue the alveoli, bronchioles, and small bronchi contain exudate with predominance of neutrophils. What is the most likely diagnosis?
A. Focal pneumonia
B. Acute bronchitis
C. Croupous pneumonia
D. Pulmonary abscess
E. Interstitial pneumonia

48. To facilitate teeth mineralization in the course of caries treatment, certain substances are used. These substances are the source from which minerals are supplied to the hard dental tissues. Name these substances:
A. Calcium glycerophosphate
B. Potassium sulfate
C. Sodium chloride
D. Magnesium sulfate
E. Copper sulfate

49. A 45-year-old man had a cyst removed from the region of his gonial angle. The cyst was 1.5 cm in diameter and contained numerous keratinous masses. Histology shows that the cyst wall is thin and formed from mature connective tissue, cyst interior

is lined with stratified squamous epithelium with marked parakeratosis and hyperkeratosis. Make the diagnosis:
A. Primordial cyst
B. Radicular cyst
C. Follicular cyst
D. Follicular ameloblastoma
E. Cherubism

50. A 40-year-old woman after installation of artificial crowns on her upper incisors eventually developed a brownish gingival enlargement on the vestibular surface. The enlargement covers the crowns and is 15 mm in diameter. Open biopsy results: under the stratified squamous epithelium of the gums there is a neoplasm consisting of connective tissue with numerous sinusoid vessels, oval mononuclear cells that form osteoid substance, and multinucleated giant cells that destroy the maxillary alveolar ridge. Make the diagnosis:
A. Giant-cell epulis
B. Fibromatous epulis
C. Angiomatous epulis
D. Eosinophilic granuloma
E. Gingival fibromatosis

51. A 30-year-old patient hospitalized with diagnosis of acute glomerulonephritis presents with proteinuria. What disturbance has caused this phenomenon?
A. Increased permeability of glomerular membrane
B. Delayed excretion of nitrogen metabolism products
C. Decreased oncotic blood pressure
D. Increased hydrostatic pressure on the capillary walls
E. Decreased number of functional nephrons

52. A patient has suffered a head injury. On examination there is a subcutaneous hematoma in the temporal area. What vessel was damaged, resulting in hematoma development?
A. *A. temporalis superficialis*
B. *A. occipitalis*
C. *A. maxillaris*
D. *A. auricularis posterior*
E. *A. buccalis*

53. During analysis of a blood sample, the laboratory assistant additionally noted that this sample belongs to a female patient. Such conclusion can be made based on the stuctural characteristics of certain blood corpuscles. Name this type of corpuscles:
A. Neutrophils
B. Basocytes
C. Lymphocytes
D. Monocytes
E. Erythrocytes

54. To improve digestion of fatty food, the patient was prescribed a bile-containing preparation. What components of this preparation take part in emulsification of fats?
A. Bile acids
B. Cholesterol and its ethers
C. Higher fatty acids
D. Bilirubin glucuronides
E. Diglycerides

55. During parodontosis, destruction of protein and polysaccharide components of connective tissue occurs. Which of the proteins listed below is a component of connective tissue?
A. Collagen
B. Ceruloplasmin
C. Transferrin
D. Albumin
E. Antitrypsin

56. Examination of the patient shows that the patient's tongue cannot be moved forward (the patient cannot stick his tongue out). What muscle is damaged?

A. Genioglossal muscle
B. Stylohyoid muscle
C. Transverse muscle of the tongue
D. Hyoglossal muscle
E. Longitudinal muscle of the tongue

57. Examination of a 15-year-old patient shows that after a maxillofacial trauma he is unable to move his lower jaw downward. This pathology is likely to be caused by a damaged muscle. What muscle is damaged?
A. Geniohyoid muscle
B. Medial pterygoid muscle
C. Temporal muscle
D. Lateral pterygoid muscle
E. Masseter

58. A patient presents to a hospital with complaints about quick fatigability and significant muscle weakness. Examination reveals an autoimmune disease that causes functional disorder of receptors in the neuromuscular synapses. This will result in the disturbed activity of the following mediator:
A. Acetylcholine
B. Noradrenaline
C. Dopamine
D. Serotonin
E. Glycine

59. A 32-year-old woman with asymptomatic progression of the disease for the second time gave birth to a stillborn baby with marked microcephaly. What disease can be suspected in this case?
A. Toxoplasmosis
B. Histoplasmosis
C. Brucellosis
D. Syphilis
E. Listeriosis

60. The third heart sound can be detected via phonocardiogram only in adult nonasthenic patients. It occurs during the following phase of a cardiac cycle:
A. Rapid filling
B. Isovolumetric relaxation
C. Reduced filling
D. Rapid ejection
E. Asynchronous contraction

61. Developed skin pallor, rapid heart rate and respiration rate, elevated blood pressure, and dry mouth. These signs appeared due to activation of:
A. Sympathetic nervous system
B. Somatic nervous system
C. Metasympathetic nervous system
D. Parasympathetic nervous system
E. –

62. A patient complains of acute spastic abdominal pain, frequent urge to defecate, liquid bloody feces with mucus. Laboratory analysis of fecal smear revealed inconstant in shape organisms with erythrocytes. What is the most likely diagnosis?
A. Amebiasis
B. Schistosomiasis
C. Lambliasis
D. Intestinal trichomoniasis
E. Balantidiasis

63. A 40-year-old man has returned home after his voyages along the coast of West Africa that lasted for many months. 15 days later he developed weakness, headache, elevated temperature, and fever. He was diagnosed with malaria. What laboratory methods of analysis can confirm this diagnosis?
A. Microscopy, serology
B. Bacteriology, allergy testing
C. Bacterioscopy, biologic method
D. Microscopy, microbial culture
E. Serology, biologic method

64. In an experiment, cerebral neurons of a test animal were electrostimulated, which resulted in hypophagia (refusal to eat food). Where in the brain were the electrodes placed?

A. Hypothalamus
B. Adenohypophysis
C. Red nucleus
D. Neurohypophysis
E. Thalamus

65. A 27-year-old patient with neck wound has lost over 30% of blood volume. The patient is in severe condition: blood pressure – 60/40 mm Hg, heart rate – 140/min., respirations – 30/min., conscious. Charact-Characterize the patient's condition:
A. Collapse
B. Coma
C. Cardiogenic shock
D. Arterial hypertension
E. Hypovolemic shock

66. A cell is an elementary living system that ensures proper structure, development, functioning, adaptation, procreation, and regeneration of the organism. Name the th-three main structural components of a cell:
A. Cell membrane (plasmalemma), cytoplasm, nucleus
B. Cytoplasm, organelles, nucleus
C. Glycocalyx, nucleus, organelles
D. Hyaloplasm, plasmalemma, nucleus
E. Cell membrane (plasmalemma), inclusions, organelles

67. Sodium citrate is used to preserve donor blood. What should be added to this blood to induce its coagulation?
A. Calcium ions
B. Sodium ions
C. Fibrinogen
D. Vitamin K
E. Prothrombin

68. During heart ultrasound a 1.5-year- old child presents with non-closure of the foramen ovale, which is clinically confirmed. Where in the heart is this defect located?
A. Interatrial septum
B. Right atrioventricular valve
C. Cardiac apex
D. Left atrioventricular valve
E. Interventricular septum

69. A 43-year-old man complains of sudden skin edema and redness with vesicles and itching. He developed these signs after eating shrimps. Such local signs are characteristic of the following type of hypersensitivity:
A. Local signs of type I hypersensitivity
B. Local signs of type IV hypersensitivity
C. -
D. Type III hypersensitivity reaction
E. Local signs of type II hypersensitivity

70. A patient suffers from diabetes mellitus with fasting hyperglycemia over 7.2 mmol/L. What blood plasma protein would allow to assess the patient's glycemia level retrospectively (4-8 weeks prior to examination)?
A. Glycated hemoglobin
B. C-reactive protein
C. Fibrinogen
D. Ceruloplasmin
E. Albumin

71. Autopsy of a 2-year-old child, who died of meningitis, shows absence of thymus and T-dependent areas in the peripheral lymphoid tissue. What immunodeficiency syndrome can be characterized by these changes?
A. Cellular immunodeficiency syndrome
B. Humoral immunodeficiency syndrome
C. Secondary immunodeficiency syndrome
D. Combined immunodeficiency syndrome
E. Deficiency syndrome of monocytic phagocytes

72. 30 minutes after dental treatment the patient developed red itching spots on the face and oral mucosa. The patient was diagnosed with urticaria. What bioactive substance with vasodilating and pruriginous effect is produced in this type of allergic

reaction?
A. Histamine
B. Bradykinin
C. Prostaglandin E2
D. Leukotriene B4
E. Interleukin-1

73. To terminate hypertensive crisis the patient was administered solution of magnesium sulfate. What route of drug administration should be chosen?
A. Intravenous
B. Oral
C. Duodenal
D. Intra-arterial
E. Rectal

74. A patient with essential hypertension presents with significant increase in left ventricular myocardial mass. It is likely to be caused by:
A. Increased volume of cardiomyocytes
B. Increased number of cardiomyocytes
C. Proliferation of connective tissue
D. Myocardial fluid retention
E. Fatty infiltration of the myocardium

75. The patient's EEG shows delta and theta rhythms, which indicates that the patient is in a state of:
A. Slow-wave sleep
B. Rapid eye movement sleep
C. Rest with eyes open
D. Active wakefulness
E. Rest with eyes closed

76. A 53-year-old patient with a long history of nephrolithiasis underwent nephrectomy. The removed kidney is a thin-walled sac filled with urine. Renal parenchyma is atrophied. Specify this complication of nephrolithiasis:
A. Hydronephrosis
B. Pyelonephritis
C. Nephrosclerosis
D. Multicystic kidney disease
E. Pyonephrosis

77. To speed up the healing process in a wound located on the patient's oral mucosa, the patient was prescribed a medicine that is a thermostable protein. This protein can be found in human tears, saliva, and breastmilk and it can be detected in freshly laid eggs. It is known as a factor of the body's natural resistance. Name this protein:
A. Lysozyme
B. Interferon
C. Interleukin
D. Complement
E. Imanin

78. A patient with trigeminal neuralgia was given parenterally a non-narcotic analgesic with rapid onset and short action. This analgesic is manufactured in tablets and ampoules. What drug was the patient administered?
A. Analgin (Metamizole)
B. Piroxicam
C. Indometacin
D. Mefenamic acid
E. Ibuprofen

79. What artery can be damaged when conduction anesthesia is being administered to the area of mandibular foramen?
A. Inferior alveolar artery
B. Middle meningeal artery
C. Lingual artery
D. Buccal artery
E. Pterygoid branches of the maxillary artery

80. What type of hemophilia inheritance results in men being affected by hemophilia and in women being carriers of this disease?
A. X-linked recessive
B. Autosomal recessive
C. X-linked dominant
D. Holandric

E. Autosomal dominant

81 Presence of citrulline and high ammonia levels are detected in the urine of a newborn. This child is likely to present with disturbed production of the following substance:
A. Urea
B. Creatine
C. Creatinine
D. Uric acid
E. Ammonia

82. A newborn failed to take his first breath. Autopsy revealed that despite unobstructed airways the lungs of the newborn were unable to stretch. What is the most likely cause of this condition?
A. Absence of surfactant
B. Pleural thickening
C. Alveolar enlargement
D. Bronchial rupture
E. Bronchial narrowing

83. A patient with a head trauma was brought to the hospital. He was diagnosed with a fracture of the sphenoid bone at the base of the pterygoid process. What canal is likely to be damaged in this case?
A. Pterygoid canal
B. Carotid canal
C. Tympanic canal
D. Musculotubal canal
E. Facial canal

84. A patient diagnosed with hepatic abscess was brought into the surgery department. He has a history of recurrent gastrointestinal disorders. Laboratory stool analysis detected round cells with 4 nuclei. What protozoal invasion can be detected in this case?
A. Entamoeba hystolytica
B. Trichomonas hominis
C. Balantidium coli
D. Trichomonas vaginalis
E. Entamoeba gingivalis

85. In an experiment, the myotome was destroyed in a rabbit fetus. This manipution will result in malformation of the following structure:
A. Skeletal muscles
B. Smooth muscles
C. Serous membranes
D. Axial skeleton
E. Dermal connective tissue

86. A patient, who works in underground mining, developed pulmonary fibrosis. In this case spirometry shows the following:
A. Decreased vital capacity of lungs
B. Normal airway resistance
C. Decreased airway resistance
D. Increased airway resistance
E. Increased vital capacity of lungs

87. A certain hereditary syndrome affects teeth, hair, and bones. Each generation has affected individuals. The syndrome occurs equally frequent in men and women. What type of inheritance is it?
A. Autosomal dominant
B. Autosomal recessive
C. Y-linked
D. X-linked recessive
E. X-linked dominant

88. In what organ does biotransformation (metabolic transformation) of most medicicinal agents occur upon their introduction into an organism?
A. Liver
B. Kidneys
C. Intestine
D. Skin
E. Lungs

89. A 22-year-old man was brought into the inpatient department with complaints of fever and weakness. One of his enlarged cervical lymph nodes was excised for histological analysis. In the tissues of the lymph node there are necrotic foci surrounded with epithelioid cells, Langhans

multinucleated giant cells, and lymphocytes. What disease can be suspected in this case?
A. Tuberculosis
B. Lymphatic leukemia
C. Lymphogranulomatosis
D. Sarcoidosis
E. Syphilis

90. A patient has a head trauma in the area of the suture between two parietal bones. What sinus of dura mater is likely to be damaged in this case?
A. Superior sagittal sinus
B. Sigmoid sinus
C. Transverse sinus
D. Occipital sinus
E. Inferior sagittal sinus

91. A woman complains of headache, muscle pain during swallowing, chewing, and eyeball movement, elevated temperature, swollen face and eyelids. The signs developed 1.5-2 months after she had eaten pork without sanitary certificate. What helminth can cause these signs in a human?
A. Trichinella
B. Ascaris lumbricoides
C. Ancylostoma
D. Necator
E. Enterobius

92. A woman with allergic dermatitis has been taking an antiallergic drug for a week. As the result of taking this drug, she developed marked somnolence. Name this drug:
A. Dimedrol (Diphenhydramine)
B. Cromolyn sodium (Cromoglicic acid)
C. Aminazine (Chlorpromazine)
D. Adrenaline hydrochloride
E. Loratadine

93. A diet must include fats. Fats perform plastic function in an organism due to their inclusion in:
A. Cell membranes
B. Cell ion pumps
C. Cell end-organs
D. Cell ion channels
E. Glycocalyx

94. The patient was prescribed Vicasol (Menadione) several days before the elective surgery for peptic ulcer disease of the stomach. What is the mechanism of action of this drug?
A. Increases blood coagulability via intensified prothrombin synthesis
B. Suppresses fibrinolysis
C. Decreases vascular permeability
D. Suppresses platelet aggregation
E. Binds free calcium ions, removing calcium from coagulation reaction

95. A 38-year-old man suddenly died. Autopsy revealed myocardial infarction in the posterior wall of the left ventricle. What are the most likely changes in myocardiocyte structure that can be revealed microscopically in the infarction focus?
A. Karyolysis
B. Calcification
C. Protein degeneration
D. Carbohydrate degeneration
E. Adipose degeneration

96. Examination of a patient shows base metabolism increased by 50%. This change is caused by increased secretion of the following hormone:
A. Thyroxine
B. Prolactin
C. Growth hormone
D. Parathormone
E. Insulin

97. An electron microphotograph of duodenal epithelium clearly shows a cell with electron-dense granules in the basal pole. What cell is it?
A. Endocrine
B. Poorly differentiated
C. Parietal
D. Goblet

98. The pediatrician examines a one-year-old child. The child has 4 teeth in the oral cavity. How many milk teeth should the child have at this age?
A. 8
B. 20
C. 12
D. 10
E. 14

99. Disturbed auditory function can be caused by changes in the structure of the receptor cells of spiral organ of Corti. What cells are affected in such cases?
A. Hair cells
B. Supporting cells
C. Marginal cells
D. Phalangeal cells
E. Pillars

100. A structural gene — a DNA molecule segment — was damaged. However, it did not result in amino acid replacement in the protein, because after a time this damage was corrected with specific enzymes. Name this DNA ability:
A. Repair
B. Replication
C. Mutation
D. Reverse transcription
E. Transcription

101. For a rapid relief of hypertensive crisis, a 65-year-old man was prescribed a drug that suppresses the reabsorption of sodium chloride in the thick segment of the ascnding limb of the loop of Henle and has marked diuretic effect. Name this drug:
A. Furosemide
B. Spironolactone
C. Triamterene
D. Hydrochlorothiazide
E. Mannitol

102. A 26-year-old man presents with anemia against the background of chronic gastritis with intrinsic Castle factor deficiency. What type of anemia is characteristic of such cases?
A. B_{12} and folate deficiency
B. Chronic posthemorrhagic
C. Iron-deficiency
D. Hypoplastic
E. Thalassemia

103. Erythrocyte needs energy in the form of ATP for its vital functions. What process supplies erythrocytes with necessary amount of ATP?
A. Anaerobic glycolysis
B. Pentose phosphate pathway
C. Tricarboxylic acid cycle
D. Aerobic oxidation of glucose
E. β-oxidation of fatty acids

104. A 28-year-old patient had been diagnosed with multifragmental fracture of the right hip. On the third day after the injury he began to complain of pain in the right side of chest, difficult respiration. A day later the death occurred against the background of progressive heart and respiratory failure. Histological study of pulmonary and cerebral blood vessels revealed orange sudanophilic droplets that completely obstructed the vessels of microvasculature. What complication caused the death of the patient?
A. Fat embolism
B. Thromboembolism
C. Gas embolism
D. Microbial embolism
E. Drug-induced embolism

105. A 14-year-old patient presents with disturbed twilight vision. What vitamin is deficient in the body of this patient?
A. A
B. B_{12}
C. B_6
D. B_1
E. C

106. A patient with wrist wound started to

106. A patient with wrist wound started to develop an edema. At what stage of local circulatory disturbance does it usually occur?
A. Stasis
B. Arterial hyperemia
C. Arteriolar spasm
D. Prestasis
E. Venous hyperemia

107. A patient on examination presents with prolonged I heart sound. This heart sound occurs as the result of:
A. Closing of the atrioventricular valves
B. Opening of the mitral valve
C. Opening of the tricuspid valve
D. Closing of the aortic valve
E. Closing of the pulmonary valve

108. A 36-year-old patient with diabetes mellitus developed seizures with loss of consciousness after an insulin injection. What was the result of blood glucose test?
A. 2.5 mmol/L
B. 5.5 mmol/L
C. 8.0 mmol/L
D. 3.3 mmol/L
E. 10 mmol/L

109. A fixed-run taxi passenger has a severe attack of tachycardia. A doctor travelling by the same taxi has managed to slow down his heart rate by pressing upon the eyeballs and thus inducing the following reflex:
A. Aschner-Dagnini reflex
B. Holtz reflex
C. Bainbridge reflex
D. Hering-Breuer reflex
E. Frank-Starling mechanism

110. A sick child has gingivitis caused by anaerobic infection. The child needs to be prescribed an antimicrobial drug that belongs to the following class:
A. Nitroimidazoles
B. Nitrofurans
C. Aminoglycosides
D. Polymyxins
E. Sulfonamides

111. When providing dental care, the dentist received a trauma of the index finger. The skin was breached and the wound is likely to be contaminated with the patient's blood. In such cases regulations require for the patient to be examined for HIV-infection and viral hepatitis. What type of examination is necessary in this case?
A. Study blood for hepatitis markers and anti-HIV antibodies
B. Inoculate blood sample on sugar broth
C. Determine the causative agent by infecting cell culture
D. Study the level of T helper cells
E. Identify specific antibodies

112. A patient with acute retention of urine has been brought to an admission room. During examination a doctor found out that the patient has urethral obturation caused by pathology of the surrounding organ. Name this organ:
A. Prostate
B. Epididymis
C. Seminal vesicle
D. Spermatic cord
E. Testicle

113. At the crown apex of the second molar, on the surface that comes into contacts with the cheek, the doctor detected a carious cavity. Name the affected crown surface:
A. Facies vestibularis
B. Facies lingualis
C. Facies occlusalis
D. Facies mesialis
E. Facies distalis

114. A person develops alimentary (nutritional) hyperglycemia after eating, which stimulates secretion of the following hormone:

A. Insulin
B. Adrenaline
C. Noradrenaline
D. Glucagon
E. Cortisol

115. A patient who died of chronic kidney disease has dull pericardial layers with thin fiber-like gray deposits. What pathologic process is observed in the pericardium?
A. Fibrinous inflammation
B. Serous inflammation
C. Catarrhal inflammation
D. Suppurative inflammation
E. Proliferative inflammation

116. An 84-year-old patient suffers from parkinsonism. One of the pathogenetic development elements of this disease is deficiency of a certain mediator in some of the brain structures. Name this mediator:
A. Dopamine
B. Acetylcholine
C. Noradrenaline
D. Histamine
E. Adrenaline

117. Microscopy of a plaque-like structure extracted from the lateral surface of the tongue of a man with dentures revealed significant thickening of the epithelial layer along with processes of parakeratosis, hyperkeratosis, and acanthosis; in the connective tissue there are small round cell infiltrations. Make the diagnosis of this pathological condition:
A. Leukoplakia
B. Atrophic (Hunter's) glossitis
C. Chronic glossitis
D. Chronic stomatitis
E. Ichthyosis

118. The doctor observes a disturbed process of lacrimation in the patient due to irritation of one of the branches of the VII pair of cranial nerves. What branch is irritated?
A. N. petrosus major
B. Chorda tympani
C. R. colli
D. N. auricularis posterior
E. N. stapedius

119. A patient complains of painful chewing, especially when his lower jaw moves forward and to the side. It indicates functional disorder of the following muscles:
A. Lateral pterygoid muscles
B. Masseter muscles
C. Mylohyoid muscles
D. Temporal muscles
E. Medial pterygoid muscles

120. Examination of the femur detected suppurative inflammation of compact bone substance and bone marrow with formation of sequestra. What disease causes such changes?
A. Osteomyelitis
B. Periostitis
C. Multiple myeloma
D. Giant cell tumor of bone
E. Reticulosarcoma

121. A 28-year-old patient complains of frequent gingival hemorrhages. Blood test revealed the clotting factor II (prothrombin) deficiency. What phase of blood coagulation is impaired in this patient?
A. Thrombin generation
B. -
C. Clot retraction
D. Vascular-platelet hemostasis
E. Fibrinolysis

122. Lysozyme is a hydrolyzing enzyme that provides protective function of saliva. Its antibacterial properties are based on its ability to break the structural integrity of a bacterial cell wall by inducing hydrolysis of the following:
A. Glycosidic bonds of mucopolysaccharides

B. Peptide bonds of proteins
C. Ester bonds of lipids
D. Cell wall antigens and endotoxins
E. Glycosidic bonds of nitrogen bases and pentoses

123. Erythrocytes of a person with fourth blood group (genotype IAIB) contain both antigen A controlled by allele IA and antigen B that is the product of allele IB expression. What type of gene interaction is demonstrated by this phenomenon?
A. Codominance
B. Semidominance
C. Epistasis
D. Polymery
E. Complementarity

124. What immunoglobulins produced in salivary glands ensure local immunity of oral mucosa?
A. IgA
B. IgM
C. IgD
D. IgE
E. IgG

125. A 12-year-old boy has tetanic convulsions. What gland is likely to be functionally impaired in this case?
A. *Glandulae parathyroidea*
B. *Hypophisis*
C. *Glandula pinealis*
D. *Glandula thyroidea*
E. *Thymus*

126. Histological examination of a lymph node removed from the posterior triangle of neck of an 18-year-old patient revealed cell agglomerations that included single multinuclear Reed-Sternberg cells, major Hodgkin's cells, minor Hodgkin's cells, and many lymphocytes, single plasmatic cells, and eosinophils. What is the most likely diagnosis?
A. Lymphogranulomatosis
B. Lymphocytic lymphoma
C. Chronic lymphoid leukemia
D. Burkitt tumor
E. Nodular lymphoma

127. A patient presents with osteoporosis. Hypercalcemia and hypophosphatemia are observed in the patient's blood. What is the cause of this condition?
A. Increased parathormone secretion
B. Increased thyroxin secretion
C. Inhibited parathormone secretion
D. Increased corticosteroid secretion
E. Inhibited corticosteroid secretion

128. Blood test for diabetes mellitus shows lactic acid levels of 2.5 mmol/L. What complication is it?
A. Lactacidemic coma
B. Hypoglycemic coma
C. Hyperketonemic coma
D. Hyperosmolar coma
E. Hyperglycemic coma

129. Examination of a sick child detected partial absence of lingual papillae on the lateral surface of the tongue. What papillae are affected?
A. Foliate
B. Conoid
C. Filiform
D. Vallate
E. Fungiform

130. A 36-year-old man was hospitalized into the infectious diseases hospital with profuse diarrhea, signs of exicosis, and low body temperature. He died of uremia. Autopsy revealed a colorless liquid resembling rice water in the lumen of the small intestine; mucosa is edematous. Microscopy of the small intestine shows plethoric vessels, focal hemorrhages, enterocyte desquamation, hypersecretion of goblet cells, and lympholeukocytic infiltration of mucosal stroma. Make the diagnosis:

A. Cholera
B. Salmonellosis
C. Crohn disease
D. Dysentery
E. Typhoid fever

131. Chronic inflammation of gingiva resulted in excessive growth of connective tissue fibers. What cell elements are leading in the development of this condition?
A. Fibroblasts
B. Osteoblasts
C. Osteoclasts
D. Fibrocytes
E. Macrophages

132. What antimicrobial drug is not a cephalosporin antibiotic?
A. Ciprofloxacin
B. Cefalexin
C. Cefepime
D. Ceftriaxone
E. Cefazolin

133. A patient with dislocated jaw was given a short-acting muscle relaxant by a doctor. Name this drug:
A. Dithylinum (Suxamethonium chloride)
B. Papaverine hydrochloride
C. Cytitonum (Cytisine)
D. Procaine
E. Pyridostigmine hydrobromide

134. A 50-year-old man declined anesthesia during dental manipulations. Due to severe pain he developed anuria caused by acute increase in production of:
A. Adrenaline
B. Thyroxin
C. Renin
D. Thymosin
E. Glucagon

135. Among organic substances of a cell there is a polymer composed of dozens, hundreds, and thousands of monomers. This molecule is capable of self-reproduction and can be an information carrier. X-ray structure analysis shows this molecule to consist of two complementary spiral threads. Name this compound:
A. DNA
B. RNA
C. Hormone
D. Carbohydrate
E. Cellulose

136. A dental surgeon has diagnosed a 24-year-old woman with suppurative inflammation of the sphenoidal sinus. All possible measures are taken to prevent the artery wall from being involved in this process. The artery is located in the cavernous sinus and its involvement can cause fatal hemorrhage. Name this artery:
A. *A. carotis interna*
B. *A. ophthalmica*
C. *F. supraorbitalis*
D. *A. infraraorbitalis*
E. *A. carotis externa*

137. Microscopy of the samples obtained from the patient's pharynx and stained according to Neisser shows bacilli with thickened poles situated at an angle to each other. Name the likely species of these microorganisms:
A. *Corynebacterium diphtheriae*
B. *Mycobacterium tuberculosis*
C. *Streptococcus pyogenes*
D. *Neisseria gonorrhoeae*
E. *Leptospira interrhogans*

138. Degenerative changes resulted in formation of mineralized foci in the tongue pulp. Some of these foci contain canaliculi. Name these formations:
A. Ossification patches
B. Denticles
C. Bone tissue
D. Cement
E. Fibrous bodies

139. Gastroscopy of a patient revealed in-

sufficient amount of mucus in the coating of the mucous membrane. It can be caused by the dysfunction of the following cells of gastric wall:
A. Cells of prismatic glandular epithelium
B. Parietal cells of gastric glands
C. Cervical cells
D. Main exocrinocytes
E. Endocrinocytes

140. A patient with acute pancreatitis presents with significantly increased urine diastase levels. What proteolysis inhibitor must be included into complex therapy of this patient?
A. Contrykal (Aprotinin)
B. Digestal
C. Pancreatine
D. Festal
E. Mezym forte

141. Examination shows that the patient has disturbed secretory function of a parotid gland due to pathology of the nerve that carries parasympathetic postganglionic nerve fibers from the otic ganglion to the affected gland. What nerve is it?
A. *N. auriculotemporalis*
B. *N. lingualis*
C. *N. facialis*
D. *N. buccalis*
E. *N. petrosus major*

142. In the genetic consultancy a pregnant woman (20 weeks of pregnancy) was examined. US shows normally developed fetus, no abnormalities in the cardiovascular system, ductus arteriosus is functional. What fetal vessels are connected with ductus arteriosus?
A. Pulmonary trunk and aorta
B. Aorta and superior vena cava
C. Pulmonary trunk and inferior vena cava
D. Pulmonary trunk and pulmonary veins
E. Aorta and inferior vena cava

143. A 24-year-old patient was administered glutamic acid to treat epilepsy. Medicinal effect in this case occurs not due to glutamate itself, but due to the product of its decarboxylation:
A. γ-aminobutyric acid
B. Dopamine
C. Histamine 4-monooxygenase
D. Taurine
E. Serotonin

144. After ineffective treatment of stomatitis with antibiotics, the patient consulted a dentist. The dentist made a diagnosis of herpetic stomatitis. What medicine should the patient be prescribed?
A. Acyclovir
B. Clotrimazole
C. Metrogyl (Metronidazole)
D. Azithromycin
E. Sulfacyl sodium (Sulfacetamide)

145. A man after a traffic accident was brought in a severe condition to the intensive care unit. The patient's condition can be described as a severe pathologic process accompanied by exhaustion of vital functions that brings the body to the brink of death due to critical decrease of capillary circulation in the affected organs. Name the patient's condition:
A. Shock
B. Coma
C. Collapse
D. Agony
E. Preagony

146. Intensive physical work leads to accumulation of lactic acid in muscles. What enzyme enables formation of lactic acid from pyruvate in the process of anaerobic glycolysis?
A. Lactate dehydrogenase
B. Pyruvate carboxylase
C. Phosphofructokinase
D. Pyruvate dehydrogenase
E. Aldolase

147. A bacteriological laboratory received a sample of dried fish from an outbreak of food poisoning. Inoculation of the sample on Kitt-Tarozzi medium revealed microorganisms resembling tennis racket. These microorganisms are causative agents of the following disease:
A. Botulism
B. Typhoid fever
C. Dysentery
D. Diphtheria
E. Salmonellosis

148. A patient came to the doctor with complaints of general weakness and sleep disturbances. Objectively the patient's skin is yellow. In blood there is increased concentration of direct bilirubin and bile acids. Acholic stool is observed. What condition can be characterized by these changes?
A. Mechanical jaundice
B. Parenchymatous jaundice
C. Hemolytic jaundice
D. Familial nonhemolytic (Gilbert's) syndrome
E. Chronic cholecystitis

149. The patient's blood group is being determined using monoclonal test reagents. Agglutination reaction is positive with anti-A and anti-B reagents and negative with anti-D reagents. Name the blood group of this patient:
A. AB (IV) Rh (-)
B. 0 (I) Rh (+)
C. AB (IV) Rh (+)
D. B (III) Rh (-)
E. A (II) Rh (+)

150. A student, who throughout the semester was studying poorly, is emotionally tense during the final exam. Leading mechanism of emotional tension in this case is the lack of:
A. Information
B. Time
C. Energy and information
D. Time and energy
E. Energy

I. Read the text and answer the questions to it.

MUMPS

The causative agent is a filtrable virus. It is found in the saliva of patients **(7)** where it may be present for at least 24 hours before swelling of the salivary glands develop, and throughout the entire period of glandular enlargement. Spread is by droplet infections or direct contact with materials contaminated with infected saliva. **(5)** Most cases occur in children between 5 and 15 years of age; **(10)** the disease is unusual in children under 2 years. Infants up to 10 months ordinarily are immured. However, the disease may occur at any age, and cases in the older age groups may be seen. **(4)**

After an incubation period of 14 to 21 days onset is marked by chilly sensations, headache, anorexia and malaise. This is accompanied by a low to moderate fever which may last from 12 to 24 hours before any involvement of the salivary glands. In mild cases, these prodromal symptoms may be absent. Pain on chewing or swallowing is the earliest symptom of parotitis. **(6)** There is marked sensitivity to pressure over the angle of the jaw. With development of parotitis, the temperature frequently rises to 103 or 104 F. Swelling of the gland reaches its maximum about the 2nd day and is associated with swelling, involving the cheek and area below the ear. In most cases, both parotid glands are involved. Occasionally the submaxillary and sublingual glands also may be swollen, or, more rarely **(8)** may be the only gland affected. In such cases, there is swelling of the neck beneath the jaw. **(1)**

The diagnosis of typical cases during an epidemic is simple, but sporadic cases present a more difficult problem. **(9)** Swelling of the parotid or other salivary glands due to the mumps virus must be distinguished from: **(3)**

1) bacterial parotid involvement occurring in streptococcal throat infections, diphtheria or debilitated patients with poor oral hygiene, typhoid or typhus fever; 2) malignant tumors of the salivary glands; 3) postoperative parotitis.

In uncomplicated mumps, prognosis is extent. However, relapses may occur occasionally after about 2 weeks. In complicated cases, deafness or facial paralysis has been known to occur following involvement of the nervous system. **(2)**

1. Only parotid salivary glands can be affected in the case of mumps:
   A. *False
   B. True
2. Mumps can be complicated with deafness:
   A. ***True**
   B. False

3. In some cases, mumps must be distinguished from diphtheria:
   A. *True
   B. False

4. Elder people are immune to mumps:
   A. *True
   B. False

5. The virus is spreading with the saliva of the people, who are sick:
   A. ***True**
   B. False

6. Choose the correct statement:
   A. ***The first symptom of parotitis is a pain when swallowing**
   B. The first symptom of parotitis is a headache
   C. The first symptom of parotitis is fever

7. The virus which causes mumps can be found in the urine of the patients
   A. ***False**
   B. True

8. Usually only one parotid gland is affected by the disease:
   A. ***False**
   B. True

9. It is always easy to diagnose this disease
A. *False
B. True

10. Choose the correct statement:
A. *Most cases of the diseases occur in children older that five years old
B. Most cases of the diseases occur in children younger than two years old
C. Most cases of the diseases occur in infants under ten month

II. Choose the right answer.

11. A 49-year-old man comes to his physician with complaints of moderate headaches and profuse sweating. He mentions that his coworkers have made comments about his apparent increase in gloves and boots size. He says that since he joined his company 10 years ago, he has changed the size of clothes at least 4 times. Physical examination shows hyperhidrosis, noticeable large pores, hypertrichosis, widely spaced teeth and prognathism. Which of the following is the most likely cause of this pathology?
A. Excess secretion of growth hormone
B. Decreased secretion of insulin
C. Excess secretion of vasopressin
D. –
E. Decreased secretion of glucocorticoids

12. A 42-year-old female comes to the physician 2 days after the sudden onset of pain and swelling of her right knee. She has had no injury. Examination of the right knee shows warmth, erythema, and effusions. Laboratory studies show an increase in the concentration of acute phase reactants. Which of the following is the most appropriate pharmacotherapy for this patient?

A. Nonsteroidal anti-inflammatory drugs (NSAIDs)
B. Antibiotics
C. Antidepressants
D. Sulfonamides
E. Opioids

13. A 38-year-old woman presents to the emergency room with severe shortness of breath, cough and wheezing. She has a history of bronchial asthma. Her vitals are as follows: respiratory rate is 39/min., pulse is 121/min., blood pressure is 130/70 mm Hg, and temperature is 37.2° C. On physical exam, she looks confused and has bilateral diffuse wheezes on chest auscultation. Which of the following is the β2-agonist and is the most appropriate drug to rapidly reverse her respiratory distress?
A. Albuterol (Salbutamol)
B. Adrenaline
C. Atropine
D. Ipratropium bromide
E. –

14. An 11-year-old boy comes to the pediatric dentist with the chief complaint of «not being able to close his left eye or smile». Examination reveals the disappearance of the nasolabial fold, the left eyebrow sagging, and partial inability to close the left eye. Which of the following nerves is most likely affected?
A. Facial nerve
B. Glossopharyngeal nerve
C. Accessory nerve
D. Trigeminal nerve
E. Hypoglossal nerve

15. A 35-year-old woman is brought to the physician because of a 4-month history of progressive weakness of both lower limbs. She notes difficulty climbing stairs and complains of lethargy and loss of muscle bulk. Her diet consists primarily of «polished» rice. A diagnosis of dry beriberi is suspected. Deficiency of which of the following vitamins is most likely to be detected in her blood?
A. Vitamin B_1 (thiamine)
B. Vitamin B_3 (niacin)
C. Vitamin B_6 (pyridoxine)
D. Vitamin C (ascorbic acid)
E. Vitamin B_2 (riboflavin)

16. A 6-year-old girl with diphtheria is administered an intravenous injection of diphtheria antitoxin. Ten days after the initial administration of drug, she develops a pruritic rash, fever, and arthralgias. Which of the following is the most likely diagnosis?
A. Serum sickness
B. Anaphylaxis
C. Atopy
D. Allergic contact dermatitis
E. Delayed type hypersensitivity

17. A 58-year-old woman comes to her dentist complaining of a «strange mass» in her mouth. On intraoral examination of the oral mucosa the dentist reveals a vegetative lesion with pedunculated base observed at the soft palate level lateral to the base of the uvula. An excisional biopsy is performed and histopathological examination shows proliferations of stratified keratinized squamous epithelium with fibrovascular connective tissue stroma and many papillary infoldings of the epithelium. Which of the following is the most likely pathology revealed by the dentist?
A. Papilloma
B. Epithelial hyperplasia
C. Fibrolipoma
D. Fibroma
E. Basal-cell carcinoma

18. A 25-year old woman is admitted to the hospital because of a 6-week history of double vision and difficulty to talk after prolonged speaking. Her husband reports fluctuating droopy eyelids in the morning and evening. An immunologic assay detects the presence of circulating autoantibodies against the certain receptors at the neuromuscular junction. Affected binding of which of the following neurotransmitters is the most likely cause of this patient's symptoms?
A. Acetylcholine
B. Epinephrine
C. Serotonin
D. Dopamine
E. γ-aminobutyric acid (GABA)

19. A 28-year-old female patient dies of progressive respiratory failure after she was diagnosed with comminuted fracture of the right hip. Prior to her death she developed severe hypoxemia, neurologic abnormalities, and petechial rash. At autopsy, examination of pulmonary microvasculature shows intraluminal orange sudanophilic droplets. Which of the following complications is the most likely cause of this patient's death?
A. Fat embolism
B. Thromboembolism
C. Air embolism
D. Amniotic fluid embolism
E. Tumor embolism

20. Histologic examination of a biopsy specimen shows a structure of the oral cavity composed of the bone tissue, which is covered by stratified squamous non-keratinizing epithelium and lamina propria. The specimen has also minor mucous salivary glands. In all parts of the lamina propria the collagenous fibers form thick bundles that bind the mucosa to the periosteum. Based on these findings, which of the following is the most likely structure?
A. Hard palate
B. Soft palate
C. Tongue
D. Lip
E. Cheek

21. A 56-year-old woman comes to the emergency department complaining of severe abdominal pain for the last several hours. The pain is cramp-like in nature, constant and has worsened over time. She gives a history of episodic right upper abdominal pain for the past few months, mostly after consuming fatty foods, radiating to the tip of the scapula. Ultrasound of the gallbladder shows hyperdense structures with an acoustic shadow (gallstones) and a thickened wall. Which of the following processes is most likely disturbed in presence of the stone in the gallbladder?
A. Emulsification of lipids

B. Proteins digestion to amino acids
C. Carbohydrates digestion to monosaccharides
D. Inhibition of saliva secretion
E. Hydrochloric acid (*HCl*) secretion in stomach

22.A 10-year-old boy is brought to the physician by his parents because of fever, cough, and fatigue. He has been admitted to the hospital five times because of pneumonia. Attempts to induce immunity using the pneumococcal vaccine have failed. The first hospitalization was at the age of 12 months. Laboratory findings show marked reduction in all classes and subclasses of serum immunoglobulins. Which of the following immune cells is most likely to be reduced in the peripheral blood of this patient?
A. B-cells
B. T-cells
C. NK-cells
D. Macrophages
E. Neutrophils

23.At autopsy, section of the right ovary shows a round lesion 2.5 cm in diameter with a clear serous fluid, surrounded by a smooth glistening membrane. Which of the following macroscopic lesions best represents the autopsy findings?
A. Cyst
B. Nodule with central necrosis
C. Nodule
D. Ulcer
E. Infiltrate

24. A 66-year-old male is brought to the emergency department with central chest pain for 1 hour. He rates his pain as severe, dull in character and it is associated with profuse sweating and shortness of breath. Physical examination reveals a blood pressure of 100/70 mm Hg, pulse – 115/min, oxygen saturation of 95% on room air. An electrocardiogram is done and shows ST elevation in leads II, III and avF which is consistent with an acute myocardial infarction. The patient is given oral aspirin, sublingual nitroglycerine and intravenous morphine. Which of the following is the most likely mechanism of action of morphine?
A. Opioid receptors agonist
B. Adenylyl cyclase activator
C. Acetylcholinesterase inhibitor
D. Histamine receptor antagonist
E. Phosphodiesterase inhibitor

25. Examination of an oral cavity shows puffy gums, pus between teeth and gums, contact bleeding. The dentist suspects gum infection that damages the soft tissue and destroys the bone that supports the teeth. This pathology can cause teeth to loosen or lead to tooth loss. Which of the following is the most likely diagnosis?
A. Periodontitis
B. Galvanosis
C. Acute sialadenitis
D. Xerostomia

26. All of the teeth in the mouth together are referred to as the dentition. Humans have two dentitions throughout life: one during childhood, called the primary dentition, and one that will hopefully last throughout adulthood, called the permanent (secondary) dentition. The first permanent molars usually begin their eruption by/at:
A. Birth
B. –
C. Six to seven years of age
D. Twelve months of age
E. Four to five years of age

27.A 36-year-old male comes to the dental office for extraction of the tooth. Two weeks after the procedure is performed, the stratified squamous epithelium regenerates at the site of extraction. Which of the following organelles is most likely involved in the mucosa regeneration?
A. Ribosomes
B. Centrosomes
C. Smooth endoplasmic reticulum
D. Lysosomes
E. Mitochondria

28.A 34-year-old woman goes into labor at 38 weeks. After several hours of labor a male infant is born with fever, hydrocephalus, hepatosplenomegaly, jaundice, bilateral chorioretinitis and cerebral calcifications. Which of the following protozoan infections is the most likely cause of the infant's condition?
A. Toxoplasmosis
B. Trichomoniasis
C. Balantidiasis
D. Amebiasis
E. Giardiasis

29.A 37-year-old male was admitted to a hospital complaining of abdominal pain, difficulty in swallowing and breathing, constipation, and nausea. He developed respiratory failure and required endotracheal intubation and ventilation. Two days before, the patient consumed dried salted fish bought from an artisanal producer. Laboratory investigation for infectious pathogen was performed using Kitt-Tarozzi's method. Observation under a bright field microscopy revealed the presence of typical microorganisms with «tennis racket» appearance. Which of the following is the most likely diagnosis?
A. Botulism
B. Typhoid fever
C. Cholera
D. Shigella infection
E. Nontyphoidal Salmonella infection

30. A 40-year-old male comes to the physician because of recurrent painful flares and swelling of the metatarsalphalangeal joint of great toe. Laboratory study of-urine-sample shows extremely low pH and pink discoloration. Which of the following metabolic intermediates is the most likely cause of changes in this patient's urine?
A. Uric acid
B. Magnesium sulfate
C. Tricalcium phosphate
D. Chloride
E. Ammonia

31. Calcification of the intracellular substance of bone tissue is accompanied by the deposition of hydroxyapatite crystals along the collagen fibers. This process requires the presence of alkaline phosphatase in the intercellular matrix. Which of the following cells most likely produces this enzyme?
A. Osteoblast
B. Qsteocyte
C. Osteoclast
D. Chondroblast
E. Chondrocyte

32.A molecular-level-process of spontaneous passive transport of water-soluble molecules across a cell membrane is modeled. The molecules move across cell membranes from an area of higher concentration toward an area of lower concentration via specific transmembrane integral proteins. This transport does not directly require chemical energy from ATP hydrolysis. Which of the following transport mechanisms is most likely mentioned?
A. Facilitated diffusion
B. Osmosis
C. Pinocytosis
D. –
E. Active transport

33.During histologic examination of the skeletal muscle specimen, the investigator discovers an organelle that has 2 membranes: smooth outer membrane and internal, that forms multiple ridges of visible folds (crysts). Which of the following is the most likely function of this structure?
A. Synthesis and energy accumulation in the form of ATP
B. –
C. Intracellular digestion of macromolecules
D. Formation of mitotic spindle
E. Synthesis of carbohydrates

34. A group of dental students is studying bacteria and their pathogenesis. They have identified that a substantial number of bacteria

cause human diseases by producing a poisonous substance. This substance is typically a protein, that has different mechanisms of action and acts at different sites. It is secreted by anaerobic bacteria and leads to a potentially life-threatening symptoms which can be prevented by administration of specific antibodies. Which of the following is the most likely substance?
A. Exotoxin
B. Toxoid
C. Antitoxin
D. Enterotoxin
E. –

35. Persistent and heavy proteinuria (albuminuria) associated with nephrotic syndrome leads to hypoalbuminemia, which changes plasma pressure resulting in severe generalized edema. According to the description which of the following circumstances tends to cause nephrotic edema?
A. Decreased plasma oncotic pressure
B. Increased plasma oncotic pressure
C. Decreased venous pressure
D. –
E. Increased tissue hydrostatic pressure

36. In the experiment an investigator reveals that glucose is actively taken up by cells (except brain cells). Moreover, gluconeogenesis in liver is stimulated and glycogen synthesis in liver and muscles is increased. Which of the following hormones is most likely responsible for these changes?
A. Insulin
B. Aldosterone
C. Glucagon
D. Triiodothyronine (T3)
E. Somatostatin

37. A 32-year-old woman presents with increased facial hair growth, headache and decreased libido. She is also currently concerned about sweating excessively even at room temperature. Neurological examination shows loss of visual acuity in both temporal fields of views. A skull X-ray shows sella turcica enlargement and deformity. Which of the following anatomic structures would you most likely expect to be abnormal in this patient?
A. Pineal gland
B. Thalamus
C. Pituitary gland
D. Hypothalamus
E. –

38. A research lab is investigating the rate of differentiation of hematopoietic cells in order to better understand acute myeloid leukemia in children. A bone marrow biopsy of a 6-year-old boy shows the differentiation stage in which hemopoietic cell extrudes its nucleus. Which of the following processes is most likely associated with biopsy findings?
A. Erythropoiesis
B. Monocytopoiesis
C. Granulopoiesis
D. Lymphocytopoiesis
E. Thrombopoiesis

39. A histologic section is obtained from a diaphysis of a femur and stained with hematoxylin and eosin. At examination of the slide, a thin layer of connective tissue is identified which covers an outer surface of a bone in all places except joints. It consists of an outer layer composed of coarse fibrous connective tissue with numerous blood vessels and nerves, and the inner layer which is more cellular and less vascular. According to the description which of the following structures is most likely identified during the histologic evaluation?
A. Periosteum
B. Osteon (Haversian system)
C. Inner circumferential lamellae
D. –
E. Outer circumferential lamellae

40. A 43-year-old cattle farm worker is brought to the surgeon with fever, malaise, and inflamed lesions on his hands and arms. He reports that about 2 weeks before his presentation at the hospital he noticed small, painless, pruritic papules that quickly enlarged

and developed a central vesicle. The vesicles developed into erosion and left painless necrotic ulcers with black, depressed eschar. Gram's staining of the ulcer reveals gram-positive spore-forming bacilli. Which of the following diseases is the most likely cause of these findings?
A. Anthrax
B. Plague
C. Tularcmia
D. Syphilis
E. Chickenpox

41. Fluorination of teeth is one of the major procedures which is used for enamel strengthening. Due to fluoride ions and fluoridation of the enamel, the teeth get protection from acidic environment and therefore dental caries is prevented. Which of the following is the most likely mechanism of fluorine's anticaries effect?
A. Fluorapatite synthesis
B. Teeth demineralization
C. Chlorapatite synthesis
D. Teeth mineralization
E. Hydroxyapatite synthesis

42. An extreme undernourishment, known as starvation, can be caused by insufficient protein intake. As an example, Kwashiorkor is a form of malnutrition caused by a lack of protein in the diet where decreased plasma protein concentration leads to increased filtration of fluid into interstitium. Which of the following proteins is the most likely cause of decreased oncotic plasma pressure in a starving patient?
A. Albumin
B. α-globulins
C. β-globulins
D. γ-globulins
E. Fibrinogen

43. In microanatomy of some organs, there is a sheet-like structure, which underlies virtually all epithelia. It consists of basal lamina (made of type IV collagen, glycoproteins, and proteoglycans) and reticular lamina. Under the microscope, you can see it as a pink line under the epithelial cells. Which of the following is described above?
A. Basement membrane
B. Nucleus
C. Endoplasmic reticulum
D. –
E. Plasma membrane

44. The dentist should inject a local anesthetic to reduce pain sensation in the maxillary molars and adjacent facial soft tissue and gingiva. He inserts the needle through oral mucosa at the height of the maxillary vestibular fornix just posterior to the maxillary tuberosity. The needle is directed medially and superiorly toward the alveolar canals. Which of the following nerves is most likely to be blocked?
A. Inferior alveolar nerve
B. Posterior superior alveolar nerve
C. Nasopalatine nerve
D. –
E. Buccal nerve

45. Histologic examination of an eye specimen shows multilayer structure. The outermost layer is represented by special pigment epithelium, which is composed of cuboidal melanin-containing cells that absorb light. The photoreceptor layer contains photosensitive outer segments of rods and cones. Which of the following eye structures is mentioned?
A. Retina
B. Ciliary body
C. Sclera
D. Iris
E. Choroid

46. A 10-year-old Indian boy is brought by his parents to a dentist for a routine dental care. They want to remove the noticeable yellow discoloration of his teeth. His mother reports that they immigrated to Ukraine approximately 6 months ago and a lot of children in their state had the similar staining of their teeth. On intraoral examination there are isolated areas of brown staining, which is particularly severe on the incisors and canines. In addition, some

areas have pits which expose, the underlying dentin. Which of the following is the most likely diagnosis?
A. Fluorosis
B. Enamel hypoplasia
C. Acid erosion
D. Enamel erosion
E. Demineralization stage of caries

47. A previously healthy 8-year old boy is brought to the emergency department by his parents because of fever and progressively worsening sore throat and dysphagia. Physical examination shows pharyngeal erythema with tender left and right cervical lymphadenopathy. Contrast-enhanced computed tomography (CT) shows fluid accumulation in the retropharyngeal space. A diagnosis of retropharyngeal abscess is suspected. Which of the following fasciae is most likely involved in this process?
A. –
B. Buccopharyngeal fascia
C. Temporal fascia
D. Parotid fascia
E. Masseteric fascia

48. A 70-year-old patient is brought to the emergency department by his son because of blurry vision and dysarthria. His son says, that the father is always thirsty and has difficulty with urination. Examination reveals dry skin, cutaneous vasodilation, nonreactive mydriasis, and hyperthermia. Drug overdose is suspected. Which of the following drugs is the most likely cause of this patient's toxicity?
A. Atropine
B. Clonidine
C. Reserpine
D. Metamizole
E. Carbachol

49. A 34-year-old male comes to the dentist because of a 1-year history of swelling in the right upper jaw. On intraoral examination, a single diffuse 2x1.5 cm swelling is seen on the right side of anterior maxilla. A biopsy specimen of the lesion shows numerous thin-walled sinusoids in the connective tissue, hemosiderin deposition, and numerous giant cells in a hemorrhagic background. Which of the following is the most likely diagnosis?
A. Giant cell epulis
B. Granular cell ameloblastoma
C. –
D. Gingival fibromatosis
E. Cavernous hemangioma

50. A 58-year-old male patient visited his dentist with the chief complaint of itching and burning sensation in his mouth. On intraoral examination, diffuse white patches were seen on his tongue, right and left buccal mucosa, as well as on his hard palate and soft palatal region. The potassium hydroxide (KOH) preparation of the specimen revealed non-pigmented septate hyphae. Administration of which of the following is the most appropriate initial step in treatment of this patient?
A. Nystatin
B. Penicillin
C. Gentamicin
D. Tetracycline