

1. As a result of dehelminthization a 2 m helminth came out with feces. It had segmented body, 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

2. A man is ill with a protozoan disease characterized by cerebral affection and loss of sight. Blood 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

3. 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

4. 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

5. A 16 y.o. girl consulted a dentist about 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

6. Microscopical examination of discharges from the gums of a patient ill with paradontosis revealed some protozoan pear-shaped organisms 6-13 micrometer long. The parasite has one nucleus and undulating membrane, there are four flagella at the front of its body. What protozoan were found?

- A. Trichomonads
- B. Leishmania
- C. Amoebae
- D. Balantidia
- E. Lamblia

7. 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. Dermatotropic leishmania
- E. Viscerotropic leishmania

8. 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 other body part of this patient. What type of transplantation is it?

- A. Autotransplantation
- B. Explantation
- C. Allotransplantation
- D. Xenotransplantation
- E. Homotransplantation

9. It is known that information about 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. Tripletty
- E. Specificity

**10.** Helminthological examination of patient's feces revealed oval brown eggs with tuberos external membrane. Name the type of helminth:

- A.** Ascarid
- B.** Pinworm
- C.** Whipworm
- D.** Dwarf tapeworm
- E.** Broad tapeworm

**11.** A 9 y.o. boy was admitted to the endocrinological department. This boy has already had several fractures of his extremities due to bone brittleness. The function of the following endocrinal glands (gland) is disturbed:

- A.** Parathyroid
- B.** Thyroid
- C.** Thymus
- D.** Adrenal
- E.** Epiphysis

**12.** Vishnevsky's technique of vagosympathetic blockade lies in introduction of novocaine solution along the posterior edge of sternocleidomastoid muscle above its intersection with 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

**13.** Approach to the thyroid gland from the transversal (collar-like) access requires 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

**14.** A 28 y.o. patient was diagnosed with acute inflammation of mucous membrane of nasolacrimal duct. It is known from his anamnesis that he was having nasal discharges for 10 days after he had recovered from flu. From which part of nasal cavity could the infection have penetrated into the nasolacrimal duct?

- A.** Inferior nasal meatus
- B.** Medial nasal meatus
- C.** Superior nasal meatus
- D.** Vestibule of nose
- E.** Frontal sinus

**15.** A patient has a right-sided fracture and a hemorrhage (haematoma) in the area of 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

**16.** During lancing of deep abscess of a cheek a vertical section was performed. It resulted in paresis (dysfunction) of muscles on the side of operation. There were cut the branches of the following nerve:

- A.** Facial
- B.** Maxillary
- C.** Mandibular
- D.** Vagus
- E.** Sublingual

**17.** A patient has a trauma of his upper jaw with an injury of supraorbital foramen. What jaw surface was damaged?

- A.** Anterior
- B.** Nasal
- C.** Orbital
- D.** Subtemporal
- E.** -

**18.** 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

**19.** 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

**20.** A patient has a disturbed function

of masticatory muscles. What nerve is damaged?

- A. Mandibular
- B. Lingual
- C. Auriculotemporal
- D. Buccal
- E. Maxillary

21. As a result of road accident a driver got multiple injuries of 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*

22. 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

23. 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

24. As a result of punctate retinal hemorrhage a patient lost 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 retina
- C. Iris
- D. Blind spot
- E. Vascular membrane

25. A 35 y.o. patient diagnosed with sterility came to gynaecological department for diagnostic biopsy of endometrium. Microscopic examination revealed that mucous membrane is edematous, uterine glands are convoluted and filled with thick secreta. Such changes in the endometrium are caused by excess of the following hormone:

- A. Progesterone
- B. Estrogen
- C. Testosterone
- D. Somatotropin
- E. ACTH

26. 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

27. Medullary substance of a hemopoietic organ's lobule in a histological specimen is lighter coloured and contains epithelial bodies. What organ are these morphological properties typical for?

- A. Thymus
- B. Lymph node
- C. Spleen
- D. Liver
- E. Kidney

28. Histological examination in the area of cervix of a fundic gland reveals small cells that have high nuclear-cytoplasmic 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

29. A blood smear of a patient who has recently recovered from flu contains 10% of roundish cells 4,5-7 micrometer large with a big round nucleus and basophilically stained cytoplasm in form of a narrow border around the nucleus. What blood status are they typical for?

- A. Lymphocytopenia
- B. Thrombopenia
- C. Leukopenia
- D. Lymphocytosis
- E. Monocytopenia

30. 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

31. Recovery of an organism from an infectious disease is accompanied by neutralization of antigens by specific antibodies. What cells produce them?

- A. Plasmocytes
- B. Fibroblasts
- C. Tissue basophils
- D. Eosinophils
- E. T-lymphocytes

32. During embryogenesis trophoblast develops into an organ rudiment that has endocrinal function. What rudiment is it?

- A. Villous chorion
- B. Amnion
- C. Yolk sac
- D. Allantois
- E. Umbilical cord

33. A lightly dressed man is standing in a room; air temperature is  $+14^{\circ}\text{C}$ . 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

34. Speed of excitement conduction was studied on 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

35. 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. Such condition may be caused by deficiency of the following hormone:

- A. Vasopressin
- B. Oxytocin
- C. Insulin
- D. Triiodothyronine
- E. Cortisol

36. A student has dry mouth during exam

passing. It is caused by realization of the following reflexes:

- A. Sympathetic conditioned
- B. Sympathetic conditioned and unconditioned
- C. Parasympathetic conditioned
- D. Parasympathetic unconditioned
- E. Sympathetic and parasympathetic unconditioned

37. Dentists widely apply local anaesthesia adding adrenalin to an anaesthetic 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

38. A patient had a cranial trauma that resulted in sight loss. What area of cerebral cortex was damaged?

- A. Occipital
- B. Frontal
- C. Parietal
- D. Temporal
- E. Parietal and temporal

39. Hepatic disfunctions accompanied by 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

40. 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

41. 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

42. In 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*

43. Deglutition of a patient is disturbed as a result of a trauma. The most probable cause of this disturbance is 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

44. Estimation of heat expenditures of a man's organism by means of indirect calorimetry had the following results: the organism 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

45. A patient ill with chronic glomerulonephritis has a disturbed excretory 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

46. 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

47. 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.  $1, 25(\text{OH})_2\text{D}_3$  generation
- B. Proline hydroxylation
- C. Lysine hydroxylation
- D. Glutamate carboxylation
- E. Cortisol hydroxylation

48. Blood of patients ill with diabetes mellitus has 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-cholesterol-acyltransferase of plasma

49. Pellagra may be caused by maize domination and low quantity of animal foodstuffs in the dietary intake. This pathology results from lack of the following amino acid:

- A. Tryptophane
- B. Isoleucine
- C. Phenylalanine
- D. Methionine
- E. Histidine

50. A patient with systemic scleroderma has an 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

51. What substance makes the saliva viscous and mucous and performs protective function, including protection from mechanical injury of mouth mucous membrane?

- A. Mucin
- B. Glucose
- C. Kallikrein
- D. Amylase
- E. Lysozyme

52. Parodontitis is accompanied by proteolysis activation in the parodontium tissues. Proteolysis activation is signalized by increase of the following component of mouth liquid:

- A. Amino acids
- B. Organic acids
- C. Glucose
- D. Biogenic amines
- E. Cholesterol

53. A neurological department admitted a 62 y.o. man in grave condition on account of cerebral hemorrhage. Objectively: increase of respiration depth and frequency, then its decrease to apnoea, whereupon 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

54. 3 years ago a 52 y.o. man underwent an operation for stomach extraction. Results of blood analysis: erythrocytes -  $2,0 \cdot 10^{12}/l$ , Hb- 85 g/l, colour index - 1,27. These changes were caused by disturbed assimilation of the following vitamin:

- A.  $B_{12}$
- B.  $B_6$
- C. C
- D. P
- E. A

55. An employee was working with radioactive substances and as a result of an incident he was irradiated with 4 Gy. He complains about headache, nausea, dizziness. What changes of blood formula can be expected 10 hours after irradiation?

- A. Neutrophilic leukocytosis
- B. Lymphocytosis
- C. Leukopenia
- D. Agranulocytosis
- E. Neutropenia

56. Introduction of a local anesthetic to a patient resulted in the development of anaphylactic shock. What is the lead-

ing mechanism of blood circulation disturbance?

- A. Decrease of vascular tone
- B. Hypervolemia
- C. Pain
- D. Activation of sympathoadrenal system
- E. Reduction of contractile myocardium function

57. A patient ill with adenoma of glomerular zone of 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

58. 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

59. A patient dropped into an ice hole, froze in the wind and fell ill. Body temperature rose up to  $39,7^{\circ}C$  and varied from  $39,0^{\circ}C$  to  $39,8^{\circ}C$ . Name the type of the patient's temperature profile?

- A. *Febris continua*
- B. *Febris recurrens*
- C. *Febris hectica*
- D. *Febris intermittens*
- E. *Febris remittens*

60. 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

61. A 5 y.o. girl has high temperature and sore throat. Objectively: soft palate edema, tonsils are covered with grey fi-

lms that can be hardly 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

62. A patient has deformed jaw bones. Histological examination revealed in the place of bones the growth of cellular-fibrous tumour-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

63. Soft palate arches were taken for bi-optic examination because of suspected tumour (macroscopical examination revealed an ulcer with dense floor). Biopsy revealed necrosis of mucous membrane along 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

64. During morphological examination of pulp floor three zones can be clearly 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

65. Macroscopic examination of lung tissue revealed areas of high airiness with small bubbles. histological examination revealed thinning and rupture of alveolar septa accompanied by 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

66. 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

67. A 5 y.o. child had a temperature rise up to  $40^{\circ}\text{C}$ , acute headache, vomiting, anxiety, chill. 4 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. Meningococcal nasopharyngitis
- E. -

68. 48 hours after tuberculine test (Mantoux test) a child had a papule up to 10 mm in diameter on the spot of tuberculine introduction. What hypersensitivity mechanism underlies the mentioned changes?

- A. Cellular cytotoxicity
- B. Anaphylaxis
- C. Antibody-dependent cytotoxicity
- D. Immunocomplex cytotoxicity
- E. Granulomatosis

69. 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 epithelium in this area. What pathological process was revealed in the mucous membrane?

- A. Leukoplakia
- B. Hyalinosis
- C. Leukoderm
- D. Local tumourous amyloidosis
- E. Focal ichthyosis

70. 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 pure culture of causative agent had been singled out?

- A. Toxigenity test
- B. Detection of volutine granules
- C. Cystinase test
- D. Hemolytic ability of a causative agent
- E. Phagolysability

71. Immune-enzyme assay of blood serum revealed presence of HBs-antigen. What disease is signaled by this antigen?

- A. Viral hepatitis B
- B. Viral hepatitis A
- C. AIDS
- D. Tuberculosis
- E. Syphilis

72. The first grade pupils went through a medical examination aimed at selection of children needing tuberculosis revaccination. What test was applied?

- A. Mantoux test
- B. Schick test
- C. Supracutaneous tularin test
- D. Burne test
- E. Anthracene test

73. Vaccination is done by means of a toxin that has been neutralized by a formaldehyde (0,4%) at a temperature 37 – 40°C 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

74. 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. Immuno-electrophoresis

75. 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

76. For the purpose of 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

77. All nonsteroidal anti-inflammatory drugs can be harmful for stomach mucous membrane. In order to find substances that don't cause such complication it is necessary to know factors it is connected with. What molecular substrate should be less affected in order to reduce intensity of this complication?

- A. Cyclooxygenase 1
- B. Cyclooxygenase 2
- C. Kallikrein
- D. Lysosomal enzymes
- E. Adenylate cyclase

78. A patient with acute attack of 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  $H_2$ -receptors:

- A. Ranitidine
- B. Belladonna extract
- C. Atropine
- D. Methacin
- E. Platyphyllin

79. 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. Aceclidine
- D. Pilocarpine
- E. Acetylcholine

80. For treatment of skin diseases with apparent inflammation in the maxillofacial area the topical glucocorticoids are applied. What preparation has the minimal resorptive effect?

- A. Flumethasoni pivalas
- B. Prednisolone
- C. Hydrocortisone
- D. Triamcinolone
- E. Dexamethasone

81. 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. Tranquillizers
- E. Lithium salts

82. 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

83. 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

84. Up to 50% of world population aged above thirty is affected by paradontosis. The leading part in 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 microflora
- E. Immune damage of tissues

85. 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, epidermis is attenuated, 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

86. A patient was delivered to the hospital with neck injury. Examination revealed a damaged nerve located in the front part of anterior scalene muscle. What nerve is damaged?

- A. Diaphragmatic
- B. Vagus
- C. Glossopharyngeal
- D. Sublingual
- E. Cervical part of sympathetic trunk

87. A hospital admitted a 9 y.o. boy with mental and physical retardation. Biochemical blood analysis revealed 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

88. A patient with 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

89. 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 very weakened

90. 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

91. An electronic microphotography represents a cell without nucleoli and nuclear membrane. Chromosomes are loosely scattered, centrioles migrate to the poles. What phase of cell cycle is it?

- A. Prophase
- B. Anaphase
- C. Metaphase
- D. Telophase
- E. Interphase

92. An 18 y.o. boy applied to a geneticist. The boy has 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

93. An electronic microphotography represents a cell of neural origin that is a component of mucous membrane epithelium. Distal part of its peripheral process has a clavate thickening with 10-12 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

94. A patient consulted a doctor about high pain sensitivity of skin behind his auricle and external acoustic meatus. Palpation behind the sternocleidomastoid muscle is painful. It can be caused by irritation of the following nerve:

- A. *N. auricularis magnus*
- B. *N. transversus colli*
- C. *N. occipitalis minor*
- D. *Nn. supraclaviculares*
- E. *N. vagus*

95. A 50 y.o. man abruptly felt palpitation, heart ache, strong weakness, 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

96. 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

97. A child is presumably ill with diphtheria. A specimen of 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

**98.** On the 2nd day after myocardium infarction a patient experienced 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 volume of circulating blood
- D.** Paroxysmal tachycardia
- E.** Anaphylactic reaction to the myocardial proteins

**99.** A 42 y.o. patient complains of pain in the epigastral area, vomiting; vomit masses have the colour of "coffee-grounds", the patient has also melena. Anamnesis records gastric ulcer. Blood formula: erythrocytes -  $2,8 \cdot 10^{12}/l$ , leukocytes -  $8 \cdot 10^9/l$ , Hb- 90 g/l. What complication is it?

- A.** Haemorrhage
- B.** Penetration
- C.** Perforation
- D.** Canceration
- E.** Pyloric stenosis

**100.** 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

**101.** A patient suffers from bradyarrhythmia caused by hypertension. What drug should be administered?

- A.** Platyphyllin hydrotartate
- B.** Clonidine
- C.** Papaverine hydrochloride
- D.** Reserpine
- E.** Methyldopa

**102.** 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 deficiency of the following

vitamin:

- A.** PP
- B.** B<sub>1</sub>
- C.** B<sub>2</sub>
- D.** B<sub>9</sub>
- E.** B<sub>8</sub>

**103.** It was reported an outbreak of food poisoning connected with consumption of pastry that had been stored at a 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

**104.** 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.** Obturative jaundice
- E.** Addison's disease

**105.** 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

**106.** A microphotography represents a fragment of 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

**107.** A man's heart rate was measured according to his pulse. It equaled 120 bpm. What is the duration of cardiac cycle?

- A. 0,5 s
- B. 0,7 s
- C. 0,8 s
- D. 0,9 s
- E. 1,0 s

**108.** A patient was stung by a bee. Examination results: his left hand is hot, pink and edematous, 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 oncotic pressure of tissue
- E. Reduction of osmotic pressure of tissue

**109.** 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

**110.** A surgeon used novocaine as an anaesthetic during surgical manipulations. 10 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

**111.** 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

**112.** A patient applied to a doctor complaining about dizziness, memory impairment, periodical convulsions. It was found out that such changes were caused by a product of glutamic acid decarboxylation. What product is meant?

- A. GABA
- B. Pyridoxalphosphate
- C. Thymidine diphosphate
- D. ATP
- E. Tetrahydrofolate

**113.** 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

**114.** A student applied to a doctor and asked him to prescribe a drug for 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

**115.** 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

**116.** An embryo has signs of disturbed process of dorsal mesoderm segmentation and somite generation. What part of skin is most likely to have developmental abnormalities?

- A. Derma
- B. Hair
- C. Sebaceous glands
- D. Epidermis
- E. Sudoriferous glands

**117.** A pregnant woman lost for 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 clinical situation?

- A. Blood
- B. Cardiovascular
- C. Mixed
- D. Tissue
- E. Respiratory

**118.** Laboratory examination of a child revealed high content of leucine, valine, isoleucine and their ketoderivates in blood and urine. Urine had the typical smell of maple syrup. This disease was caused by deficiency of the following enzyme:

- A. Dehydrogenase of branched amino acids
- B. Aminotransferase
- C. Glucose-6-phosphatase
- D. Phosphofruktokinase
- E. phosphofruktomutase

**119.** 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 presence of immobile streptobacilli able of capsulation. What microorganisms are causative agents of this disease?

- A. *Bacillus antracis*
- B. *Stapylococcus aureus*
- C. *Bacillus anthracoides*
- D. *Bacillus megaterium*
- E. *Bacillus subtilis*

**120.** 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 tympanic cavity could have penetrated into 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

**121.** A 3 m.o. baby has white film on the mucous membrane of his mouth, tongue and lips. A doctor suspected candidosis. What nutrient medium should be applied for 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

**122.** During tooth development peridontium preserves remains of embryonal coleorhiza (Hertwig's epithelial root sheath) that are called Malassez's epithelial rests. They can be source of cyst or tumour 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

**123.** Antigens of Sonne shigella placed on the objects of outdoor environment and foodstuffs can be revealed by means of a certain test with application of a diagnostic test system that includes a polystyrene tray with adsorbed specific antibodies. What reaction is it?

- A. Immune-enzyme assay
- B. Immunofluorescence test
- C. Passive inverse hemagglutination test
- D. Direct hemagglutination test
- E. Immunoelectrophoresis test

**124.** Isonitol triphosphates are produced in the organism tissues as a result of phosphatidyl inositol 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

**125.** 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

**126.** 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

127. It was revealed that a patient with coagulation failure has thrombosis of a branch of inferior mesenteric artery. What bowel segment is affected?

- A. *Colon sigmoideum*
- B. *Ileum*
- C. *Caecum*
- D. *Colon transversum*
- E. *Colon ascendens*

128. Enzymatic jaundices are characterized by disbalanced activity of UDP-glucuronyl transferase. What compound is accumulated in the blood serum in case of these pathologies?

- A. Indirect bilirubin
- B. Direct bilirubin
- C. Biliverdin
- D. Mesobilirubin
- E. Verdoglobulin

129. A patient was admitted to a hospital because of 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

130. A patient has an allergic reaction accompanied by itching, edemata and reddening of skin. What biogenic amine has an increased concentration in the tissues?

- A. Histamine
- B. Serotonin
- C. Tryptamine
- D. Dopamine
- E. Gamma-aminobutyric acid

131. Clinical examination enabled to make 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

132. Typical symptom of cholera is loss of a large quantity of water and sodium ions by an organism. What mechanism underlies 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 oxydation in the adrenal cortex
- D. Inhibition of vasopressin synthesis in the hypothalamus
- E. Intensified corticotropin synthesis

133. A patient ill with diabetes mellitus went through an operation on account of abscess in the area of posterior part of his neck. The wound healing lasted for a month and a half; the wound constantly 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

134. A patient with a craniocerebral trauma has respiratory standstill. What part of cerebrum is most likely to be damaged?

- A. Medulla oblongata
- B. Telencephalon
- C. Mesencephalon
- D. Cerebellum
- E. Thalamencephalon

135. In course of an experiment the middle part of an animal's cochlea was damaged. It resulted in disturbed perception of sound vibrations of the following frequency:

- A. Medium
- B. Low
- C. High
- D. High and medium
- E. Low and medium

136. 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. Hypothalamo-pituitary-adrenal

**137.** 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

**138.** A patient being treated in the burns department has 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

**139.** 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. 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, mucous membrane is here and there ulcerated. 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

**140.** After the mouth is closed and teeth are clenched the mouth begins to open reflectory. This reflex is initiated by the following receptors:

- A. Periodont 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

**141.** A couple applied to a genetic consultation with a question about probability of giving birth to children with X-linked rachitis (dominant character). Father is healthy, 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

**142.** A patient with enteritis accompanied with intense diarrhea has reduced quantity of water in the extracellular space and increased quantity of water inside the cells as well as low blood osmolarity. Name this disorder of water-electrolytic metabolism:

- A. Hyposmolar hypohydration
- B. Hyperosmolar hypohydration
- C. Osmolar hypohydration
- D. Hyposmolar hyperhydration
- E. Hyperosmolar hyperhydration

**143.** 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 presence of organic substances. What medication is it?

- A. Potassium permanganate
- B. Furacillin
- C. Chlorhexidine
- D. Alcoholic iodine solution
- E. Sodium hydrocarbonate

**144.** 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. Itrakonazole
- D. Furacillin
- E. Acyclovir

**145.** An electrical cardiostimulator was implanted to a 75 y.o. man with heart rate of 40 bpm. After that heart rate rose up

to 70 bpm. Cardiostimulator 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

146. 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. Vasculomotor centre
- C. Respiratory centre
- D. Resistive vessels
- E. Capacitive vessels

147. A 40 y.o. patient had a maxillofacial trauma that resulted in disturbed function of sublingual and submaxillary glands on the left - the glands began to produce some viscous saliva. What nerve's function is disturbed?

- A. Facial
- B. Sublingual
- C. Glossopharyngeal
- D. Trifacial
- E. Vagus

148. During examination of a child's oral cavity a pediatrician found 8 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

149. Blood analysis of a patient ill with jaundice revealed 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

150. A patient has arterial hemorrhage from the cut wound in the area of anterior part of mastication muscle. What vessel

should be ligated?

- A. *A. facialis*
- B. *A. maxillaris*
- C. *Aa. labiales inferiores*
- D. *A. mentalis*
- E. *A. lingualis*

151. 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

152. Prophylactic examination of a patient revealed hyperglycemia, ketonuria, polyuria, glycosuria. What form of acid-base balance disorder is the case?

- A. Metabolic acidosis
- B. Gaseous acidosis
- C. Nongaseous acidosis
- D. Gaseous alkalosis
- E. Metabolic alkalosis

153. A patient has recently had 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

154. 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

155. A patient consulted a doctor about difficulties with urinary excretion. Examination revealed hypertrophy of an organ that encloses proximal part of urethra. What organ is it?

- A. Prostate
- B. Bulbourethral gland
- C. Bulb of penis
- D. Epididymis
- E. Seminal vesicles

**156.** Examination of a child revealed growth of a pharyngeal tonsil causing the obstructed air escape from nasal cavity. What openings of nasal cavity are blocked in this case?

- A. Choanae
- B. Nostrils
- C. Piriform
- D. Pterygopalatine
- E. Maxillary sinus

**157.** 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. Blennorrhoea

**158.** Microscopic examination during 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 form of dense brittle plates. What stage of atherosclerosis morphogenesis is it?

- A. Atherocalcinosis
- B. Liposclerosis
- C. Atheromatosis
- D. Ulceration
- E. Lipoidosis

**159.** A patient was diagnosed with a radicular cyst that had invaded 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

**160.** A patient who had been suffering from a renal disease for many years died from uremia. 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. -

**161.** In order to prevent gum inflammation and to improve regeneration of epithelial periodontium cells manufacturers add to the tooth pastes one of the following vitamins:

- A. Retinol
- B. Calciferol
- C. Thiamine
- D. Biotin
- E. Phyloquinone

**162.** After anlage of primary teeth at the beginning of the fifth month of embryogenesis some factors disturbed growth ability of dental plate behind the mentioned anlagen. What serious consequence is possible?

- A. Permanent teeth won't be anlagen
- 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

**163.** 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

**164.** 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 in order to normalize metabolism?

- A. Uridine
- B. Adenosine
- C. Guanosine
- D. Thymidine
- E. Histidine

**165.** Histological examination of periapi-

cal 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

**166.** Examination of a microspecimen 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. An acinus is surrounded by a basal membrane 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

**167.** 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

**168.** 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 by-effect?

- A. Tetracycline
- B. Lincomycin
- C. Streptocid
- D. Nystatin
- E. Ampicillin

**169.** 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

**170.** 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

**171.** A dentist revealed a shallow cavity with damaged enamel between two central superior incisors. He diagnosed a patient with caries. On what surface of tooth crown will the dentist fill the tooth?

- A. *Facies contactus mesialis*
- B. *Facies lingualis*
- C. *Facies occlusialis*
- D. *Facies labialis*
- E. *Facies contactus distalis*

**172.** There is a specimen of soft palate where both oral and nasal surfaces can be seen. It was revealed that 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

**173.** Epithelium regeneration of mucous membrane of oral cavity (cell reproduction) was accompanied by semiconservative DNA replication (selfreproduction). 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

**174.** 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

**175.** 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

**176.** 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

**177.** 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

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

**179.** An isolated muscle fiber is under experiment. It was ascertained that 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

**180.** 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

**181.** A patient in a cardiological department has arrhythmia. A doctor administered him amyodaron. What is the main mechanism of amyodaron's antiarrhythmic action?

- A. It blocks mostly potassium channels
- B. It inhibits cholinergic receptors
- C. It stimulates histamine receptors
- D. It activates serotonin receptors
- E. It alters myocardium susceptibility to the acetylcholine

**182.** Hemotransfusion stimulated 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)

**183.** As a result of 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

**184.** 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

**185.** 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

**186.** To subdue the fever and relieve tooth ache a patient was prescribed paracetamol. What is the action mechanism of this medication?

- A. Cyclooxygenase blocking
- B. Monoamine oxidase blocking
- C. Lipoxygenase blocking
- D. Cholinesterase blocking
- E. Phosphodiesterase blocking

**187.** During an operation on account of mandibular dislocation a doctor should consider effect of a certain muscle. Its posterior fascicles draw back protruding lower jaw. What muscle is meant?

- A. *M. temporalis*
- B. *M. masseter*
- C. *M. pterygoideus medialis*
- D. *M. pterygoideus lateralis*
- E. *M. mylohyoideus*

**188.** Examination of a patient revealed change of secretory function of a parotid gland. It is connected with disturbance of its vegetative innervation. What ganglion of vegetative nervous system gives postganglionic parasympathetic fibers for it?

- A. *Ganglion oticum*
- B. *Ganglion ciliare*
- C. *Ganglion pterygopalatinum*
- D. *Ganglion submandibulare*
- E. *Ganglion sublinguale*

**189.** 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

**190.** A dentist was examining a patient and noticed excessive salivation. The dentist applied a medication inducing dryness of oral cavity. What medication is it?

- A. Atropine sulfate
- B. Phentolamine
- C. Pilocarpine hydrochloride
- D. Proserin
- E. Galantamine

**191.** 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. -

**192.** Microscopical examination of a surgical specimen (an ulcerated 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 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

**193.** 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

**194.** A doctor needs to anaesthetize the anterior part of mucous membrane of hard palate. What nerves should he block?

- A.** Nasopalatine nerves
- B.** Inferior alveolar nerves
- C.** Zygomatic nerves
- D.** Pharyngeal nerves
- E.** Suborbital nerves

**195.** Roentgenological examination of a patient revealed a cyst in the area of a premolar that contained a tooth in its cavity. Microscopical examination reveals that the cyst wall is represented by connective tissue and lined with multi-stratal squamous cell epithelium. Specify the diagnosis:

- A.** Follicular cyst
- B.** Radicular cyst
- C.** Primordial cyst
- D.** Eosinophilic granuloma
- E.** Epulis

**196.** 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

**197.** Autopsy of a 35 y.o. woman revealed not only enlargement of many lymph nodes but also enlarged spleen weighting 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

**198.** 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 mucous membrane of his lips and tongue. Objectively: 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. Microscopical examination of the plaques revealed mycelium. What is the most probable diagnosis?

- A.** Candidous cheilitis
- B.** Exfoliative cheilitis
- C.** Leukoplakia
- D.** Contactant allergic cheilitis
- E.** Manganotti's cheilitis

**199.** 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

**200.** Examination of a 60 y.o. man's oral cavity revealed the following changes: the 26th and 27th tooth 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 tooth root. What is the most probable diagnosis?

- A.** Local parodontitis
- B.** Hypertrophic gingivitis
- C.** Chronic catarrhal gingivitis
- D.** Generalized parodontitis
- E.** -