

1. A hunter was drinking raw water from a pond. He risks infection with the following type of trematodiasis:

- a. Clonorchiasis
- b. Fascioliasis**
- c. Opisthorchiasis
- d. Paragonimiasis
- e. Dicrocoeliasis

2. A man was immunized with a recombinant vaccine against hepatitis B) What serological marker was detected in the patient's blood serum?

- a. Anti-HBs IgG**
- b. HBs antigen
- c. HBe antigen
- d. Anti-HBc IgM
- e. Viral DNA

3. In tubootitis, tympanic membrane retraction occurs. The handle of one of the auditory ossicles, connected to the tympanic membrane, becomes more horizontal. In such cases, the doctor needs to determine the position of the following bone during the examination:

- a. Squama os temporale
- b. Stapes
- c. Incus
- d. Processus mastoideus
- e. Malleus**

4. A patient has a penetrating wound of the oral diaphragm. What muscle must be sutured to restore the intactness of the floor of the mouth?

- a. M. omohyoideus
- b. M. sternocleidomastoideus
- c. M. platysma
- d. M. stylohyoideus
- e. M. mylohyoideus**

5. A 1.5-year-old child with signs of nitrate poisoning was brought to the admission department with persistent cyanosis, dyspnea, and convulsions. What form of hemoglobin causes these signs?

- a. Carbhemoglobin
- b. Oxyhemoglobin
- c. Methemoglobin**
- d. Reduced hemoglobin
- e. Carboxyhemoglobin

6. In an experiment, thymus was removed from the newborn mice. After its removal, the blood of these mice exhibited low lymphocyte count, no production of antibodies, and no rejection of foreign tissues. In the work of which system of the body thymus plays an important role?

- a. Reproductive
- b. Nervous
- c. Circulatory
- d. Endocrine
- e. Immune**

7. A woman was diagnosed with purulent stomatitis. What complete blood count finding is characteristic of this disease?

- a. Monocytosis
- b. Anemia
- c. Thrombocytosis
- d. Leukocytosis**
- e. Lymphocytosis

8. 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 C
- b. Vitamin PP**
- c. Vitamin A
- d. Vitamin B₁
- e. Vitamin B₂

9. Microslide of a cardiac tissue shows rectangular cells with central location of the nucleus and well-developed myofibrils connected with Z-disks. These cells perform the following cardiac function:

- a. Protective
- b. Endocrine
- c. Impulse conduction
- d. Regenerative
- e. Contraction**

10. 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. Adrenaline
- b. Histamine
- c. Dopamine**
- d. Noradrenaline
- e. Acetylcholine

11. During appointment with the dentist, patients often develop anxiety, fear, and depression. These psychoemotional changes occur due to increased secretion of a certain mediator in the central nervous system. Name this mediator:

- a. Noradrenalin
- b. Acetylcholine
- c. Serotonin**
- d. Dopamine
- e. GABA

12. During 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. 8-9
- b. 12-13
- c. 10-11
- d. 4-5
- e. 6-7**

13. A 60-year-old man with diabetes mellitus was prescribed insulin. What type of pharmacological therapy is it?

- a. Symptomatic
- b. Etiotropic
- c. Preventive
- d. Replacement**
- e. Pathogenetic

14. After examination, the signs of acromegaly were detected in a patient. What endocrine gland is involved in this pathological process?

- a. Neurohypophysis
- b. Adenohypophysis**
- c. Adrenal glands
- d. Pineal gland
- e. Thyroid gland

15. On the day before a surgery, the patient was stressed out. This condition is associated with high blood levels of the following hormone:

- a. Prolactin

- b. Progesterone
- c. Insulin
- d. Adrenaline**
- e. Glucagon

16. To treat tuberculosis, an antibiotic that colors urine red is prescribed. Name this antibiotic:

- a. Cefotaxime
- b. Nitroxoline
- c. Erythromycin
- d. Amoxicillin
- e. Rifampicin**

17. Beriberi is a classical example of thiamine deficiency. Active form of this vitamin is synthesized by an enzyme belonging to the following group:

- a. Oxidoreductases
- b. Hydrolases
- c. Isomerase
- d. Lyases
- e. Transferases**

18. A patient with trauma has an epidural hematoma in the temporal region. What artery was damaged?

- a. Posterior communicating artery
- b. Anterior cerebral artery
- c. Anterior meningeal artery
- d. Middle meningeal artery**
- e. Medial cerebral artery

19. Specify the concentration of ethyl alcohol that has the most active antimicrobial action in a protein-containing medium:

- a. 60%
- b. 15%
- c. 40%
- d. 96%
- e. 70%**

20. 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, heart muscle is dull, flaccid, striped on section, with yellowish areas under the endocardium. What type of degeneration was detected in cardiac myocytes?

- a. Carbohydrate
- b. Fatty**
- c. Hydropic
- d. Ballooning
- e. Hyaline droplet

21. Membrane-acting protein/peptide hormones regulate metabolism in the cells, using intracellular mediators (messengers) for this purpose. ACTH causes intracellular effects by forming:

- a. Cyclic guanosine monophosphate
- b. -
- c. Cyclic adenosine monophosphate**
- d. Calcium/calmodulin
- e. Inositol trisphosphate

22. People of various nationalities, who live in the Arctic climate, develop a number of features to adapt to their environment. Representatives of the Arctic adaptive type compared to the natives of the Central Africa have the following characteristic feature:

- a. Hyperhidrosis
- b. Increased layer of subcutaneous fat**

- c. Elongated legs and shorter arms
- d. Lean stature
- e. Lower need for fat intake

23. 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. Canaliculus of the chorda tympani
- b. Carotid canal
- c. Facial canal
- d. Musculotubal canal
- e. Tympanic canal

24. A 10-day-old child has undergone a surgery to repair cleft upper lip ("hare-lip"). 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 maxillary and mandibular processes of the first pharyngeal arch
- c. Nonclosure of the second pharyngeal arch
- d. Nonclosure of the third pharyngeal arch
- e. Nonclosure of palatine tori of maxillary processes of the first pharyngeal arch

25. A child with a point mutation presents with absence of glucose 6-phosphatase, hypoglycemia, and hepatomegaly. These signs are characteristic of:

- a. Parkinson disease
- b. McArdle disease (glycogen storage disease type V)
- c. Von Gierke disease (glycogen storage disease type I)
- d. Addison disease (primary adrenal insufficiency)
- e. Gaucher disease

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. Ampicillin
- b. Cefazolin
- c. Streptomycin sulfate
- d. Doxycycline
- e. Erythromycin

27. 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. Nonpropulsive segmental activity
- b. Peristalsis
- c. Tonic contraction of sphincters
- d. Pendular movements of intestine
- e. Mastication

28. A patient was diagnosed with thrombosis of the inferior mesenteric artery. What part of the intestine is affected in this case?

- a. Ileum
- b. Jejunum
- c. Duodenum
- d. Vermiform appendix
- e. Sigmoid colon

29. 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. Parenchymatous jaundice
- b. Familial nonhemolytic (Gilbert's) syndrome

c. Chronic cholecystitis

d. Mechanical jaundice

e. Hemolytic jaundice

30. 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. Gram stain

b. Loeffler stain

c. Burri stain

d. Ziehl-Neelsen stain

e. Aujeszky stain

31. A trauma patient has wound in the temporal region, with trickle of bright-red blood streaming from it. What blood vessel is damaged?

a. A) maxillaris

b. A) occipitalis

c. A) temporalis superficialis

d. A) auricularis posterior

e. A) facialis

32. 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. Left gastroepiploic artery

b. Right gastric artery

c. Right gastroepiploic artery

d. Superior pancreaticoduodenal artery

e. Splenic artery

33. A patient had an angina pectoris attack during a visit to the dentist. What drug must be used in this case?

a. Nitrosorbide (Isosorbide dinitrate)

b. Propranolol

c. Nitroglycerin

d. Verapamil

e. No-Spa (Drotaverine)

34. A group of people came to a hospital complaining of weakness, intestinal pain, and indigestion. Their stool tests detected cysts with four nuclei that are characteristic of the following protozoon:

a. Entamoeba gingivalis

b. Balantidium coli

c. Entamoeba histolytica

d. Giardia

e. Entamoeba coli

35. A 66-year-old man was given a magnesium sulfate solution intravenously for hypertensive crisis relief. However, his blood pressure did not decrease. After a repeated administration of this medicine he developed inertness, sluggishness, and depressed consciousness and respiration. What drug is a magnesium sulfate antagonist and removes the signs of its overdose?

a. Activated charcoal

b. Potassium permanganate

c. Potassium chloride

d. Sodium chloride

e. Calcium chloride

36. Examination of a sick child detected partial absence of lingual papillae on the lateral surface of the tongue. What papillae are affected?

a. Fungiform

b. Vallate

c. Folate

d. Conoid

e. Filiform

37. A patient with essential hypertension has increased blood vasopressin levels. This hormone has an effect on the functioning of the following organ:

a. Liver

b. Heart

c. Adrenal glands

d. Kidneys

e. Lungs

38. 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 fine-grained surface. These changes are indicative of:

a. Senile renal atrophy

b. Hypoplasia

c. Dysfunctional atrophy

d. Atrophy due to inadequate blood supply

e. Compression atrophy

39. An unconscious man with carbon monoxide poisoning was brought to the hospital by an ambulance. In his case, hypoxia is caused by accumulation of the following in the blood:

a. Carboxyhemoglobin

b. Sulfhemoglobin

c. Oxyhemoglobin

d. Methemoglobin

e. Carbhemoalbumin

40. A patient, who works in underground mining, developed pulmonary fibrosis. In this case spirometry shows the following:

a. Decreased vital capacity of lungs

b. Increased vital capacity of lungs

c. Decreased airway resistance

d. Increased airway resistance

e. Normal airway resistance

41. Electric current has affected skeletal muscle fiber resulting in depolarization of the membrane. Depolarization develops due to the following ions penetrating the membrane:

a. Ca^{2+}

b. HCO_3^-

c. K^+

d. Na^+

e. Cl^-

42. A patient with essential hypertension was prescribed captopril. In this case, formation of a certain substance will decrease. Name this substance.

a. Bradykinin

b. Angiotensin II

c. Serotonin

d. Renin

e. Histamine

43. A 30-year-old patient has markedly positive Wassermann reaction (++++). What infectious disease can be diagnosed, using the Wassermann reaction?

a. Brucellosis

b. Poliomyelitis

c. Influenza

d. Tuberculosis

e. Syphilis

44. During a preventive examination, microbial cysts with eight nuclei were detected in the feces of a cafeteria worker. These cysts belong to the following protozoa:

a. Toxoplasma

b. Entamoeba histolytica

c. Lamblia

d. Pentatrichomonas hominis

e. Balantidium

45. A patient with an incised wound in the area of the middle part of the sternocleidomastoid muscle presents with impaired skin sensitivity in the front part of the neck. What nerve is damaged in this case?

a. N. phrenicus

b. Nn. supraclaviculares

c. N. occipitalis minor

d. N. auricularis magnus

e. N. transversus colli

46. Dopamine precursor - dioxyphenylalanine (DOPA) - is used in treatment of Parkinson's disease. This active substance is produced from the following amino acid:

a. Tyrosine

b. Cysteine

c. Alanine

d. Histidine

e. Tryptophan

47. 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 maintenance of normal vision. In dental practice it is used to accelerate mucosal re-epithelization during parodontosis. Name this substance:

a. Tocopherol acetate

b. Cyanocobalamin

c. Ergocalciferol

d. Menadione (Vicasolum)

e. Retinol acetate

48. Blood stains were found on the clothes of a person accused of murder. What reaction can prove that it is human blood?

a. Neutralization reaction

b. Immunofluorescence assay

c. Precipitation reaction

d. Agglutination test

e. Complement fixation test

49. During the study of pancreatic cells, disturbed functions of concentration, dehydration, and condensation of intracellular secretion products was detected at the subcellular level. What organelle ensures these processes?

a. Endoplasmic reticulum

b. Golgi complex

c. Ribosome

d. Mitochondria

e. Lysosome

50. Autopsy of the body of a woman, who died of acute myocardial infarction, detected a thrombus in a vein of her left shin. Microscopy of the thrombus shows that it is substituted with a connective tissue with diffuse deposits of calcium salts. Name this type of thrombosis outcome:

a. Septic autolysis

- b. Organization
- c. Organization and canalization
- d. Aseptic autolysis

e. Petrification

51. A patient complaining of intense toothache was prescribed a non-narcotic analgesic (an aniline derivative) with a marked analgesic and antipyretic effect and a weak anti-inflammatory effect. What drug is it?

a. Analgin (Metamizole sodium)

b. Paracetamol

c. Butadion (Phenylbutazone)

d. Ibuprofen

e. Acetylsalicylic acid

52. The toxicology department received a patient with signs of acute mercury compound poisoning. What drug should be prescribed as an antidote?

a. Unithiol (Dimercaptopropansulfonate)

b. Triphthazin (Trifluoperazine)

c. Barrol (Rabeprazole)

d. Plantaglucid (Plantaginis majoris foliorum extract)

e. Neuromidin (Ipidacrine)

53. A group of men came to a doctor with complaints of fever, headache, muscle pain, and swollen eyelids and face. These men are hunters and eat meat of wild animals. What disease can be characterized by these signs?

a. Cysticercosis

b. Taenia saginata invasion

c. Trichinosis

d. Taenia solium invasion

e. Filariasis

54. A 35-year-old man had an acute onset of the disease. He developed temperature of 39°C , rhinitis, cough, and lacrimation. Examination shows swollen and hyperemic nasopharyngeal mucosa with profuse mucus discharge. What type of inflammation developed in the nasopharynx?

a. Suppurative inflammation

b. Hemorrhagic inflammation

c. Fibrinous inflammation

d. Serous inflammation

e. Catarrhal inflammation

55. 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. Verapamil

b. Nifedipine

c. Novocainamide (Procainamide)

d. Ajmaline

e. Anaprilin (Propranolol)

56. Some drugs can be classified as enzymes. Select one such enzyme drug among the listed compounds.

a. Insulin

b. Glucose oxidase

c. Glucokinase

d. Hydrocortisone

e. Pepsin

57. A patient is diagnosed with deformed posterior portion of the nasal septum. What bone is deformed?

- a. Medial pterygoid plate
- b. Perpendicular plate of ethmoid bone
- c. Vertical plate of palatine bone
- d. Lateral pterygoid plate

e. Vomer

58. X-ray detected pus accumulation in the sphenoidal sinus. The pus is being excreted into the following nasal meatus:

- a. Right inferior nasal meatus
- b. Left inferior nasal meatus
- c. Left middle nasal meatus
- d. Right middle nasal meatus

e. Right and left superior nasal meatus

59. 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. Metabolic acidosis

b. Respiratory acidosis

c. -

d. Metabolic alkalosis

e. Respiratory alkalosis

60. 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. 45

b. 46

c. 47

d. 44

e. 48

61. A patient suffering from acute bronchitis with difficult expectoration was prescribed acetylcysteine. What drug action will provide curative effect?

a. Reflex stimulation of bronchiolar peristalsis

b. Stimulation of the bronchial glands

c. Activation of bronchial ciliated epithelium

d. Mucoproteins depolymerization

e. Alkalinization of sputum

62. In the body of a female Anopheles mosquito, the malaria Plasmodium reproduces via copulation (a type of sexual process). What type of host is this insect for malaria Plasmodium?

a. Definitive

b. Reservoir

c. Optional

d. Additional

e. Intermediate

63. In an experiment, a test animal lost its orienting reflexes after certain structures of its central nervous system had been destroyed. At what level did the damage occur?

a. Red nuclei

b. Corpora quadrigemina

c. Diencephalon

d. Lateral vestibular nuclei

e. Cerebellum

64. Megalocytes can appear in the peripheral blood of a person. When is the presence of these cells in the blood considered to be normal?

a. During pregnancy

b. During the embryonic stage

c. At the age of under 1 year

- d. At middle age
- e. At the age of 1 to 3 years

65. A patient with cholelithiasis produces colorless fatty feces because of obturation of the bile ducts. Steatorrhea is caused by the absence of a certain bile component. Name this component:

- a. Bile acids**
- b. Fatty acids
- c. Bile pigments
- d. Cholesterol
- e. Alkaline phosphatase

66. 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. Testosterone
- b. Glucagon
- c. Gastrin
- d. Insulin
- e. Renin**

67. A patient with megaloblastic anemia was taking a water-soluble vitamin. Name this substance:

- a. Pyridoxine
- b. Tocopherol acetate
- c. Ascorbic acid
- d. Thiamine chloride
- e. Cyanocobalamin**

68. 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. Fibrous pulpitis
- b. Serous pulpitis**
- c. Granulating pulpitis
- d. Suppurative pulpitis
- e. Gangrenous pulpitis

69. The substances are excreted from the cell, when membrane structure of the Golgi apparatus connects to the cell membrane. The content of this structure is then expelled from the cell. This process is called:

- a. Facilitated diffusion
- b. Osmosis
- c. Exocytosis**
- d. Endocytosis
- e. -

70. A 25-year-old man has lost all sensitivity due to damage of his peripheral nerves. Name this disorder:

- a. Hypoesthesia
- b. Hyperesthesia
- c. Anesthesia**
- d. -
- e. Ataxia

71. For the treatment of gingivitis, a dentist prescribed the patient a drug with an antiprotozoal and antibacterial effect, which can cause an aversion to alcohol. What drug did the doctor prescribe?

- a. Metronidazole**
- b. Ceftriaxone
- c. Levomycetin (Chloramphenicol)
- d. Lincomycin hydrochloride
- e. Tetracycline

72. Synovial fluid is known to reduce friction of the joint surfaces. In rheumatism or arthritis its viscosity reduces because of depolymerization of the following substance:

- a. Albumin
- b. Heparin
- c. Collagen
- d. Glycogen
- e. Hyaluronic acid**

73. Bacteriological testing of the stools of a restaurant cook, who had no clinical manifestations of a disease, resulted in growth of small colonies with a metallic sheen on bismuth-sulfite agar. What microorganisms are most likely to form these colonies?

- a. Shigella
- b. Streptococci
- c. Salmonella**
- d. Staphylococci
- e. Escherichia

74. 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. Bacterioscopy, biologic method
- b. Bacteriology, allergy testing
- c. Microscopy, microbial culture
- d. Serology, biologic method
- e. Microscopy, serology**

75. During mitosis, chromosome disjunction and movement toward opposite poles of the cell has been disturbed because of the decay of microtubules, contained in the centrioles. What protein makes up centriole microtubules?

- a. Vimentin
- b. Actin
- c. Tubulin**
- d. Dynein
- e. Myosin

76. Lab rats were used to study the effect of a certain vitamin on the body. Deficiency of this vitamin has resulted in a disturbed reproductive function and skeletal muscle dystrophy. What vitamin is it?

- a. B₂
- b. E**
- c. A
- d. D
- e. K

77. 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)

- a. Cromolyn sodium (Cromoglicic acid)
- b. Adrenaline hydrochloride
- c. Aminazine (Chlorpromazine)
- d. Loratadine**

78. Tyrosine is used as a substrate in thyroxine synthesis. What chemical element takes part in this process?

- a. Iodine**
- b. Zinc
- c. Iron
- d. Copper
- e. Calcium

79. After a tooth extraction, the patient developed acute heart failure. What drug should be

prescribed in this case?

- a. Digitoxin
- b. Convallaria majalis tincture
- c. Strophanthin**
- d. Cordigitum
- e. Adonisid

80. 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. Riboflavin
- b. Folic acid
- c. Thiamine
- d. Ascorbic acid**
- e. Retinol

81. Folding is a post-translational modification of a protein. What is the mechanism of pepsin folding in the chief cells of the gastric mucosa?

- a. Methylation
- b. Covalent modification
- c. Partial proteolysis**
- d. Phosphorylation
- e. Acetylation

82. Oral examination revealed dark yellow and brown spots and stripes on the labial and lingual surfaces of the patient's teeth; more than the half of the dental surface is affected; enamel and dentin are destroyed. What diagnosis is the most likely?

- a. Metastatic calcification
- b. Dystrophic calcification
- c. Cuneiform defect
- d. Dental calculus
- e. Fluorosis**

83. In certain cells of an adult person, mitosis is not observed throughout the life and the quantitative content of DNA remains constant. Name these cells.

- a. Muscle (smooth)
- b. Endothelium
- c. Neurons**
- d. Hematopoietic
- e. Epidermis

84. A patient who had his lower second molar extracted presents with bleeding from the tooth socket. What vessel is the source of the bleeding in this case?

- a. Facial artery
- b. Ascending pharyngeal artery
- c. Lingual artery
- d. Ophthalmic artery
- e. Maxillary artery**

85. Prior to tooth extraction the patient was given a local anesthetic, lidocaine. What is the mechanism of anesthetic action of this drug?

- a. Stimulation of muscarinic acetylcholine receptors
- b. Stimulation of GABA receptors
- c. Block of β_2 -adrenergic receptors
- d. Sodium channels block**
- e. Block of H1-histamine receptors

86. A patient is undergoing a surgery for a trauma of the temporomandibular joint. An incision revealed a structure that improves the congruence of joint surfaces. Name this structure:

- a. Lip

- b. Fold
- c. Ligament
- d. Meniscus

e. Disc

87. 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. Muscular vein
- b. Mixed type artery
- c. Blood capillary

d. Elastic artery

- e. Muscular artery

88. 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. Mantle dentin
- b. Periodontium
- c. Reticulofibrous bone tissue
- d. Enamel

e. Cellular cement

89. What organelles carry out the process of digestion and excretion of the remains?

- a. Centrosome

b. Lysosomes

- c. Golgi complex
- d. Ribosomes
- e. Mitochondria

90. A child is diagnosed with a helminthic invasion. What changes in the leukogram should be expected in this case?

- a. Increased number of monocytes

b. Increased number of eosinophils

- c. Increased number of neutrophils
- d. Increased number of lymphocytes
- e. Increased number of erythrocytes

91. Examination of a patient detects calcinosis cutis, Raynaud's syndrome, esophageal motility disorder, sclerodactyly, and telangiectasia. These changes are called CREST syndrome. What disease can be characterized by the described changes?

- a. Rheumatoid arthritis
- b. Dermatomyositis
- c. Systemic lupus erythematosus

d. Systemic scleroderma

- e. Gouty arthritis

92. 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. Acute cavernous tuberculosis
- b. Infiltrative tuberculosis
- c. Cirrhotic tuberculosis

d. Caseous pneumonia

- e. Tuberculoma

93. Histology of an extracted tooth detects a lower number and reduced size of odontoblasts and pulpocytes with sclerosis of the connective tissue base of the pulp. What diagnosis is likely in this case?

a. Pulp dystrophy

b. Pulp atrophy

c. Pulp hyalinosis

d. Acute pulpitis

e. Pulp necrosis

94. Due to an accident on board 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. Eosinophilia

b. Agranulocytosis

c. Neutrophilic leukocytosis

d. Leukopenia

e. Lymphocytosis

95. On examination a woman was diagnosed with a retropharyngeal abscess. What cervical space should be accessed by the surgeon lancing this abscess?

a. Suprasternal space

b. Previsceral space

c. Interscalene space

d. Retrovisceral space

e. Prescalene space

96. A patient developed 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?

a. Amphotericin

b. Gentamicin

c. Nystatin

d. Tetracycline

e. Griseofulvin

97. The molecules of mature mRNA in a cell are the carriers of genetic information about the sequence, in which certain amino acids must attach to each other. What is coded within the mRNA molecules?

a. Primary structure of lipids

b. Secondary structure of carbohydrates

c. Primary structure of a protein

d. Primary structure of polynucleotides

e. Primary structure of carbohydrates

98. The patient's masticatory muscles are paralyzed on the left. These muscles are innervated by the branches of the:

a. Zygomatic nerve

b. Mandibular nerve

c. Nasociliary nerve

d. Maxillary nerve

e. Supraorbital nerve and infratrochlear nerve

99. A woman had a formation with a fibrous capsule at the tip of her tooth. The formation was surgically removed. Microscopy shows that the formation consists of fibroblasts, macrophages, a small number of lymphocytes, plasma and xanthoma cells, cholesterol crystals, isolated cells of foreign bodies, as well as bands of stratified epithelium. Name this formation.

a. Complex granuloma

b. Cystogranuloma

c. Simple granuloma

d. Radicular cyst of the jaw

e. Follicular cyst of the jaw

100. The patient's joints are enlarged and painful. The patient's blood urate levels are high. Name this

pathology:

- a. Rickets
- b. Pellagra
- c. Scurvy
- d. Caries

e. Gout

101. A cell is an elementary living system that ensures proper structure, development, functioning, adaptation, procreation, and regeneration of the organism. Name the three main structural components of a cell:

- a. Glycocalyx, nucleus, organelles
- b. Cell membrane (plasmalemma), inclusions, organelles
- c. Cytoplasm, organelles, nucleus

d. Cell membrane (plasmalemma), cytoplasm, nucleus

e. Hyaloplasm, plasmalemma, nucleus

102. 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. Synergo-antagonism
- c. Competitive antagonism
- d. Non-competitive antagonism
- e. Additive synergism

103. 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. Normocythemmic hypovolemia

- b. Polycythemmic hypovolemia
- c. Hypervolemia
- d. No disturbances in blood volume
- e. Oligocythemmic hypovolemia

104. 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. AABb
- b. AA
- c. Aa
- d. AaBb

e. aa

105. A man complains of weight loss, rapid physical and mental fatigability, decreased appetite, arterial hypotension, and hyperpigmentation of the skin. Examination allowed diagnosing him with Addison's disease. What endocrine gland is hypofunctional in this case, causing this condition in the patient?

- a. Parathyroid gland
- b. Gonads

c. Adrenal glands

- d. Pituitary gland
- e. Thyroid gland

106. A patient has torticollis. What muscle of the neck is damaged?

a. M. Sternocleidomastoideus

- b. M. Omohyoideus
- c. M. Platysma
- d. M. Sternohyoideus

e. M. Mylohyoideus

107. 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. Sero-identification
- b. Repeated inoculations
- c. Biochemical profiles
- d. Phage typing of the obtained cultures
- e. Antibiotic sensitivity testing

108. A man with a cardiovascular pathology presents with overproduction of angiotensin II. What enzyme takes part in angiotensin II synthesis?

- a. Urokinase
- b. Cyclooxygenase
- c. Kininase
- d. Angiotensin converting enzyme
- e. Kallikrein

109. A patient was diagnosed with xeroderma pigmentosum that manifested in skin keratinization, eye damage, and dilation of capillaries. In this disease, prolonged exposure to UV radiation results in skin tumors. What exogenous factor will significantly aggravate the condition of a patient with this diagnosis?

- a. Ultrasound
- b. High humidity
- c. Overexposure to cold
- d. Light
- e. High temperature

110. Prolonged exposure of a human body to toxic substances has resulted in destruction of the organelles that perform protein synthesis in the hepatocytes. Name these organelles:

- a. -
- b. Ribosomes
- c. Lysosomes
- d. Mitochondria
- e. Peroxisomes

111. A 42-year-old man was examined. He has a slightly feminized stature, testicular atrophy, and sparse hair growth on his face and chest. His neutrophilic leukocytes contain drumstick-shaped sex chromatin. What is the most likely diagnosis in this case?

- a. Phenylketonuria
- b. Patau syndrome
- c. Trisomy X
- d. Down syndrome
- e. Klinefelter syndrome

112. During examination of the patient's oral cavity a dentist noticed deformation of the teeth and a crescent indentation on the upper right incisor. 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. Neurosyphilis
- c. Primary
- d. Early congenital
- e. Secondary

113. A patient presents with disturbed blood supply to the medial surface of the right cerebral hemisphere. What artery is damaged in this case?

- a. A. chorioidea
- b. A. cerebri anterior**
- c. A. cerebri posterior
- d. A. communicans posterior
- e. A. cerebri media

114. A woman is diagnosed with a hemorrhage into the posterior horns of the spinal cord. What is their function?

- a. Sensory**
- b. -
- c. Motor
- d. Parasympathetic
- e. Sympathetic

115. During a prolonged starvation, glucocorticoid secretion by the adrenal cortex increases. Glucocorticoids increase the synthesis of gluconeogenic enzymes in the liver. Name the terminal enzyme of this process:

- a. Fructose-6-phosphatase
- b. Glucose-1-phosphatase
- c. Fructose-2,6-bisphosphatase
- d. Fructose-1,6-bisphosphatase
- e. Glucose-6-phosphatase**

116. A microslide 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. Kidney
- c. Adrenal gland
- d. Spleen
- e. Thymus

117. A patient has been diagnosed with Vaquez disease (polycythemia vera). What is the cause of this pathology?

- a. Local renal hypoxia
- b. Hereditary defect
- c. Tumor damage to the progenitor cells of myelopoiesis**
- d. Redistribution of erythrocytes
- e. Increased erythropoietin production

118. A 43-year-old man has stomatitis, glossitis, and a smooth crimson tongue. His complete blood count shows the following: Hb - 100 g/L, erythrocytes - $2.3 \cdot 10^{12}/L$, color index - 1.30. What pathological condition can be characterized by such clinical and laboratory findings?

- a. Hypoplasia of the red bone marrow
- b. Iron deficiency
- c. Disturbed porphyrin synthesis
- d. Vitamin B₁₂ deficiency**
- e. Erythrocyte hemolysis

119. 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. Pineal glands
- b. Thymus gland
- c. Thyroid gland
- d. Adrenal glands
- e. Parathyroid gland**

120. 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. Polymery
- b. Codominance**
- c. Complementarity
- d. Semidominance
- e. Epistasis

121. A sputum sample obtained from a 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. Gram
- c. Romanovskyi
- d. Burri-Gins
- e. Zdrodovskyi

122. A patient has high levels of blood aldosterone. What physiologically active substance is likely to have contributed to this condition?

- a. Prostaglandin E2
- b. Cyclic guanosine monophosphate
- c. Angiotensin II**
- d. Natriuretic factor
- e. Cyclic adenosine monophosphate

123. Increased stimulation rate of isolated heart of a rabbit leads to incomplete relaxation of the heart ventricles due to:

- a. Increased potassium content in the interstitial tissue
- b. Inhibition of K-Na pump
- c. Calcium accumulation in cardiomyocytes**
- d. Increased potassium content in cardiomyocytes
- e. Increased sodium content in cardiomyocytes

124. A histological slide shows a hematopoietic organ that consists of lobes of varying shape. Each lobe has its cortical and medullary substances. Such structure is characteristic of the following organ:

- a. Thymus**
- b. Lymph node
- c. Spleen
- d. Vermiform appendix
- e. Tonsils

125. 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. Renal azotemia
- d. Decreased tubular reabsorption
- e. Decreased synthesis of renal prostaglandins

126. Numerous substances dangerous to the body can get into the oral cavity with water and food. What components of saliva and gingival fluid provide protection against these compounds?

- a. Lactate dehydrogenase, glucuronidase
- b. Lactic acid, urea, ammonia
- c. Alkaline and acid phosphatase
- d. Lysozyme, immunoglobulins, leukocytes**
- e. Hyaluronidase, cathepsin D

127. In a patient with chronic hepatitis, tooth extraction was complicated by prolonged bleeding. What is the cause of the hemorrhagic syndrome in this case?

- a. Increased fibrinogen synthesis
- b. Decreased fibrin formation
- c. Increased thromboplastin formation
- d. Intensified fibrinolysis
- e. Decreased thrombin formation**

128. A man developed a malignant neoplasm in his tongue. What characteristics of this tumor allow identifying it as malignant?

- a. Infiltrating growth**
- b. Increased number of mitotic cells
- c. Anaplasia
- d. Positive Pasteur effect
- e. Expansive growth

129. A patient of tall stature with 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. Parathyroid glands
- b. Thyroid gland
- c. Anterior lobe of the pituitary gland**
- d. Pineal gland
- e. -

130. Autopsy of the body of a deceased 64-year-old woman diagnosed with tuberculosis shows a dense and enlarged spleen with multiple small gray-white foci. Microscopy detects caseous necrosis in the center of the foci, surrounded by epithelioid cells, multinucleated giant cells, lymphocytes, etc. What spleen disorder did this woman develop?

- a. Septic spleen
- b. Sago spleen
- c. Porphyry spleen
- d. Miliary tuberculosis of the spleen**
- e. Lardaceous spleen

131. Examination detects a fracture of the lateral forearm bone in its middle third. What part of what forearm bone is injured in this case?

- a. Diaphysis of the radius**
- b. Diaphysis of the ulna
- c. Epiphysis of the ulna
- d. Epiphysis of the radius
- e. Metaphysis of the ulna

132. In an experiment, a human cell culture was irradiated with protons. As a result of irradiation, a damage to the nucleoli was observed. Formation of what organelles will be disrupted in this case?

- a. Microtubules
- b. Golgi apparatus
- c. Endoplasmic reticulum
- d. Lysosomes
- e. Ribosomes**

133. A 38-year-old patient has been hospitalized with alcohol-induced psychosis accompanied by marked psychomotor agitation. What neuroleptic must be prescribed in this case?

- a. Aminazine (Chlorpromazine)**
- b. Sodium bromide
- c. Diphenin (Phenytoin)
- d. Galantamine hydrobromide
- e. Valerian extract

134. 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. X-linked dominant

- b. Autosomal recessive
- c. X-linked recessive
- d. Y-linked

e. Autosomal dominant

135. 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. Intramural
- b. Transmural**
- c. -
- d. Subepicardial
- e. Subendocardial

136. A woman diagnosed with dysentery was hospitalized into the infectious diseases unit. Laboratory analysis determined that the causative agents are *Entamoeba histolytica*. What drug should she be prescribed?

- a. Rifampicin
- b. Isoniazid
- c. Benzylpenicillin sodium salt
- d. Metronidazole**
- e. Chingamin (Chloroquine)

137. 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. biceps brachii, m. anconeus
- b. M. deltoideus, m. biceps brachii
- c. M. brachialis, m. biceps brachii**
- d. M. deltoideus, m. infraspinatus
- e. M. coracobrachialis, m. supraspinatus

138. An autopsy of a person with malaria shows markedly icteric skin, sclerae, and mucosal tunics. The spleen is enlarged and colored slate-gray. Such color of the spleen is caused by the presence of:

- a. Hemosiderin
- b. Hemomelanin (hemozoin)**
- c. Lipofuscin
- d. Melanin
- e. Hematoporphyrin

139. What hormone has a marked anti-inflammatory, antiallergic, and immunosuppressive effect?

- a. Thyroxine
- b. Somatotropin
- c. Hydrocortisone**
- d. Adrenaline
- e. Aldosterone

140. Epidermis regeneration in the areas of traumatic damage occurs because of a growth zone (Malpighian layer). What epidermal layers are included into this zone?

- a. Stratum basale and stratum spinosum**
- b. Stratum basale and stratum corneum
- c. Stratum spinosum and stratum granulosum
- d. Stratum granulosum and stratum lucidum
- e. Stratum lucidum and stratum corneum

141. A girl presents with high fever and 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?

- a. Lacunar tonsillitis
- b. Infectious mononucleosis
- c. Pharyngeal diphtheria**
- d. Necrotic tonsillitis
- e. Pseudomembranous (Vincent's) tonsillitis

142. 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. Proliferation of connective tissue
- c. Myocardial fluid retention
- d. Increased number of cardiomyocytes
- e. Fatty infiltration of the myocardium

143. A patient has been hospitalized with high nitrogen levels in the blood. What effect does nitrogen have in the human body, if its levels are high?

- a. Allergic
- b. Chemical
- c. Narcotic**
- d. Physical
- e. Toxic

144. 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. Vitamin A
- b. Cobalamin
- c. Biotin
- d. Niacin**
- e. Pantothenic acid

145. An organ of the cardiovascular system is composed of cells that connect to each other with intercalated discs. What organ is it?

- a. Heart**
- b. Aorta
- c. Mixed type artery
- d. Muscular vein
- e. Muscular artery

146. 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. Inferior sagittal sinus
- b. Transverse sinus
- c. Superior sagittal sinus**
- d. Occipital sinus
- e. Sigmoid sinus

147. 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. Macrocytes
- b. Poikilocytes
- c. Normocytes
- d. Reticulocytes
- e. Annulocytes**

148. 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 5 years ago. What type of immunity does the elder sister have?

a. Natural active

b. Innate

c. Artificial passive

d. Artificial active

e. Natural passive

149. A microslide shows a blood vessel. Its tunica intima is represented by endothelium and subendothelium. Its tunica media is represented by bundles of smooth myocytes, interlaid with loose fibrous connective tissue. Its tunica externa is well-developed and formed by loose connective tissue with separate smooth myocytes. What vessel has such morphological characteristics?

a. Mixed type artery

b. Muscular artery

c. Nonmuscular vein

d. Elastic artery

e. Muscular vein

150. The costal margin is an important topographic landmark of the human body. It is formed by the cartilage of the following vertebrae:

a. From 11 to 12

b. From 1 to 12

c. From 7 to 10

d. From 1 to 7

e. Only 12

151. After mushroom poisoning, a person developed yellow coloring of the skin and sclera and dark-colored urine. What pigment causes urine discoloration in patients with hemolytic jaundice?

a. Unconjugated bilirubin

b. Verdoglobulin

c. Biliverdin

d. Bilirubin monoglucuronide

e. Stercobilin

152. A patient with leukemia was prescribed 5-fluorouracil. What effect does this drug have?

a. It inhibits translation

b. It stimulates DNase

c. It inhibits transcription

d. It accelerates replication

e. It inhibits DNA synthesis

153. During an appointment, a patient developed atrioventricular block. What medicinal substance can be used as an emergency aid in this case?

a. Platyphyllin

b. Pirenzepine

c. Anaprilin (Propranolol)

d. Atropine

e. Atenolol

154. 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. Population statistics

b. Cytological

c. Genealogical

d. Cytogenetic

e. Biochemical

155. What structure in the cell becomes the main target, when exposed to ionizing radiation?

a. Cytoplasmic membrane

b. Sarcoplasmic reticulum

- c. Mitochondria
- d. DNA
- e. Ribosomes

156. A certain enzyme transports functional groups from one substrate to another. What is the class of this enzyme?

- a. Ligase
- b. Isomerase
- c. Hydrolase
- d. Oxidoreductase
- e. Transferase

157. 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. Accidental involution
- b. Thymic agenesis
- c. Thymoma
- d. Thymic dysplasia
- e. Congenital thymomegaly

158. 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. Suppurative inflammation
- d. Proliferative inflammation
- e. Catarrhal inflammation

159. After a ride in a car, with a side window open, the driver developed facial asymmetry because of one-sided paralysis of mimic muscles. The left eye cannot be fully closed. What cranial nerve is damaged?

- a. N. accessorius
- b. N. facialis
- c. N. vagus
- d. N. hypoglossus
- e. N. olfactorius

160. A patient needs a surgery on the cervical part of the trachea. Through what part of the neck will the surgeon access the trachea?

- a. Carotid triangle
- b. Omotrapezoid triangle
- c. Submandibular triangle
- d. Lingual triangle
- e. Omotracheal triangle

161. For the treatment of gingivitis, the dentist prescribed the patient a drug with an antiprotozoal and antibacterial effect. This drug can cause an aversion to alcohol. What drug was prescribed by the dentist?

- a. Levomycetin (Chloramphenicol)
- b. Ceftriaxone
- c. Tetracycline
- d. Metronidazole
- e. Lincomycin hydrochloride

162. A patient, who was taking a blood pressure-lowering drug, complains of dry mouth. What antihypertensive agent has such a side effect?

- a. Dibazol (Bendazol)
- b. Adelphane (Reserpine + Dihydralazine)

- c. Anaprilin (Propranolol)
- d. Clophelin (Clonidine)
- e. Verapamil

163. The terminal segments of apocrine sweat glands contain myoepithelial cells. What is the function of these cells?

- a. Secretory function
- b. Contractile function
- c. Supporting function
- d. Protective function
- e. Regenerative function

164. A 6-year-old girl exhibits marked signs of hemolytic anemia. Biochemical analysis of her erythrocytes shows deficiency of glucose 6-phosphate dehydrogenase enzyme. What metabolic process is disturbed in this patient and has leading role in the development of this pathology?

- a. Pentose-phosphate pathway
- b. Oxidative phosphorylation
- c. Anaerobic glycolysis
- d. Tissue respiration
- e. Gluconeogenesis

165. A 50-year-old man declined anaesthesia during dental manipulations. Due to severe pain he developed anuria caused by acute increase in production of:

- a. Thyroxin
- b. Glucagon
- c. Thymosin
- d. Renin
- e. Adrenaline

166. 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. Bromine salts
- b. Valerian preparations
- c. Hop preparations
- d. Motherwort preparations
- e. Adaptogens

167. An 8-year-old schoolboy came to the dentist with a herpetic rash on his lower lip. What medicine will be the most effective in this case and needs to be prescribed for this boy?

- a. Furadonin (Nitrofurantoin)
- b. Ampicillin
- c. Oxacillin
- d. Acyclovir
- e. Ketoconazole

168. To examine the fundus of the eye, a mydriatic was instilled into the patient's conjunctival sac. This mydriatic does not interfere with the process of eye accommodation. Name this drug.

- a. Homatropine
- b. Tropicamide
- c. Atropine
- d. Mesaton (Phenylephrine)
- e. Platyphylline

169. 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. Triple increase

- b. By one titer
- c. Double increase
- d. Fourfold increase or more
- e. By a half-titer

170. 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. Thymus
- b. Posterior lobe of pituitary gland
- c. Anterior lobe of pituitary gland
- d. Middle lobe of pituitary gland
- e. Thyroid gland

171. Autopsy of the body of a man revealed a large wedge-shaped focus of a dark red dense tissue in the upper lobe of the right lung. Histology detected necrosis of the alveolar walls, the lumina of the alveoli were tightly packed with erythrocytes. What process has developed in the lungs?

- a. Pulmonary atelectasis
- b. Pulmonary hemorrhage
- c. Pulmonary carnification
- d. Pulmonary gangrene
- e. Hemorrhagic pulmonary infarction