

1. A 30-year-old man complains of abdominal pain and diarrhea that persist for 5 days already, chills, and fever of 37.5°C . The day before, he was in a forest, where he was drinking from an open body of water. Bacteriology confirmed the diagnosis of amebic dysentery. What is the drug of choice for the treatment of this condition?

- A. Metronidazole
- B. Furazolidone
- C. Levomycetin (Chloramphenicol)
- D. Phthalazol (Phthalylsulfathiazole)
- E. Emetine hydrochloride

2. A 40-year-old woman on examination presents with intensified basal metabolic rate. What hormone present in excess leads to such a condition?

- A. Triiodothyronine
- B. Thyrocalcitonin
- C. Glucagon
- D. Aldosterone
- E. Somatostatin

3. A 16-year-old girl has no hair on the pubis and in the armpits, her mammary glands are underdeveloped, no menstruations. This condition can be caused by the following hormone imbalance:

- A. Ovarian failure
- B. Hyperthyroidism
- C. Hypothyroidism
- D. Pancreatic islet failure
- E. Adrenal medulla hyperfunction

4. From the feces of a patient with acute gastroenteritis a pure culture of microorganisms was obtained. The microorganisms are small mobile slightly curved gram-negative bacilli that within 6 hours grow into a light blue film on the 1% alkaline peptone water. Such properties are characteristic of the following microorganisms:

- A. Vibrios
- B. Spirochaetes
- C. Clostridia
- D. Bacilli
- E. Spirilli

5. A 5-year-old child was brought to an admission room. The doctor determined the following signs: severe motor excitation, delirium, and hoarse voice, dilated pupils unresponsive to the light, hot and dry hyperemic skin, tachycardia, and tachypnea. These signs developed after the child had eaten belladonna berries. What pharmacological group of drugs should be

prescribed in this case?

- A. Anticholinesterase drugs
- B. Nicotinic antagonists
- C. Nicotinic agonists
- D. Muscarinic agonists
- E. Cholinesterase reactivators

6. A 20-year-old man periodically develops weakness and icteric sclerae and skin. He was diagnosed with Minkowski-Chauffard disease. What hematological status is the most characteristic of this disease?

- A. Microspherocytosis
- B. Anulocytosis
- C. Agranulocytosis
- D. Macrocytosis
- E. Thrombocytosis

7. Several months after giving birth, a woman became inert, her teeth and hair started falling out and she started losing weight. Her blood pressure, body temperature, and blood glucose are low. Examination shows low blood levels of growth hormone and adrenocorticotrophic hormone. What functional disturbance of pituitary gland is observed in the patient?

- A. Panhypopituitarism
- B. Hypophyseal nanism
- C. Acromegalia
- D. Cushing disease
- E. Diabetes insipidus

8. A patient was prescribed atropine sulfate for relief of intestinal colic. What condition can be a contraindication for the prescription of this drug?

- A. Glaucoma
- B. Bronchial asthma
- C. Sinus bradycardia
- D. Hypotension
- E. Vertigo

9. A patient complains of pain in the upper umbilical region. On palpation there is a mobile painful intestine. What intestine is being palpated by the doctor?

- A. Transverse colon
- B. Jejunum
- C. Duodenum
- D. Ileum
- E. Sigmoid colon

10. A patient, who lived in a southern coastal city, developed marked vomiting and diarrhea and died of dehydration. Autopsy of the body shows acute gastroenteritis with serous-desquamative inflammation in the small intestine. What

is the most likely diagnosis?

- A. Cholera
- B. Bacterial dysentery
- C. Typhoid fever
- D. Amebiasis
- E. Salmonellosis

11. A woman with menstrual disorders that include prolonged bleeding presents with hypochromia, low reticulocyte count, microcytosis, and hyposideremia. What pathogenetic group of anemia is it?

- A. Iron-deficiency anemia
- B. B_{12} and folate-deficiency anemia
- C. Hypoplastic anemia
- D. Hemolytic anemia
- E. Metaplastic anemia

12. A 65-year-old woman with insulin-independent diabetes mellitus was prescribed glibenclamide to be taken orally. What is the mechanism of its hypoglycemic action?

- A. Stimulates secretion of endogenous insulin by beta cells
- B. Inhibits gluconeogenesis in the liver
- C. Intensifies peripheral glucose utilization
- D. Inhibits glucose absorption in the intestine
- E. Inhibits alpha-glucosidase and breakdown of polysaccharides

13. Histological slide of the biopsy material obtained from epidermis of a healthy adult shows dividing cells in the basement layer. What process occurs due to these cells?

- A. Physiological regeneration
- B. Differentiation
- C. Adaptation
- D. Reparative regeneration
- E. Apoptosis

14. A person with carbon monoxide (CO) poisoning developed headache, shortness of breath, and dizziness. These signs are caused by a drop in blood levels of a certain compound. Name this compound:

- A. Oxyhemoglobin
- B. Carboxyhemoglobin
- C. Carbaminohemoglobin
- D. Methemoglobin
- E. Deoxyhemoglobin

15. In an experiment a neuromuscular frog preparation was used to study single contractions of a muscle in response to electrostimulation of the nerve. How will muscle contractions change, after the muscle is processed with a curare-like

substance?

- A. Disappear
- B. Increase in force
- C. Increase in duration
- D. Decrease in duration
- E. Remain unchanged

16. Pressure in a pressure chamber was lowered to 400 mm Hg. How will external respiration change in a person sitting in this chamber?

- A. Depth and frequency of respirations will increase
- B. Depth and frequency of respirations will decrease
- C. Depth of respirations will decrease, frequency of respirations will increase
- D. Depth of respirations will increase, frequency of respirations will decrease
- E. Respiration will remain unchanged

17. A lab rat has subcutaneously received mercury(II) chloride in the amount of 5 mg/kg. 24 hours later the plasma creatinine concentration increased several times. What mechanism of retention azotemia is observed in this case?

- A. Decreased glomerular filtration
- B. Increased creatinine production in the muscles
- C. Increased creatinine reabsorption
- D. Increased glomerular filtration
- E. Increased creatinine secretion in the renal tubules

18. A 67-year-old woman has gastric cancer with metastases in the liver. What characteristic of tumor cells gives them the ability to form metastases?

- A. Infiltrative growth
- B. Biochemical atypism
- C. Rapid growth
- D. Autonomy
- E. Immunological anaplasia

19. Blood test of the patient revealed albumin content of 20 g/L and increased activity of lactate dehydrogenase isoenzyme 5 (LDH₅). The disorder of which organ indicate these results?

- A. Liver
- B. Kidneys
- C. Heart
- D. Lungs
- E. Spleen

20. In an acute test, a narcotized dog received vasopressin, which resulted in decreased urine output, because this

substance:

- A. Increases water reabsorption
- B. Increases sodium reabsorption
- C. Decreases water reabsorption
- D. Decreases calcium reabsorption
- E. Increases calcium reabsorption

21. Examination detected disturbed circulation in the patient's pancreas. What artery is likely to be damaged in this case?

- A. *A. lienalis*
- B. *A. hepatica propria*
- C. *A. dastrica sinistra*
- D. *A. gastroepiploica dextra*
- E. *A. gastrica dextra*

22. Section shows significant enlargement of the patient's right kidney. There is a nephrolith at the place of incision. Renal pelvic lumen is distended with accumulating urine. Renal parenchyma is substantially thinned out. What is the most correct diagnosis?

- A. Hydronephrosis
- B. Pyelectasis
- C. Hydroureteronephrosis
- D. Renal cyst
- E. Nephroblastoma

23. A patient presents with acute attack of cholelithiasis. What in this case will show the laboratory examination of the patient's feces?

- A. Negative reaction to stercobilin
- B. Positive reaction to stercobilin
- C. Connective tissue
- D. Partially digested cellulose
- E. Starch granules

24. A test animal was given a cytochrome oxidase blocker, which resulted in its instant death. What potassium compound can cause it?

- A. Cyanide
- B. Nitrite
- C. Sulfate
- D. Phosphate
- E. Oxalate

25. Autopsy of the body revealed a large wedge-shaped patch of a dense dark red tissue with clear margins in the upper lobe of the right lung. Histological examination detected there necrosis of the alveolar walls; the alveolar lumen is tightly packed with erythrocytes. What process occurred in the lungs?

- A. Hemorrhagic infarction
- B. Carnification
- C. Gangrene
- D. Hemorrhage
- E. Atelectasis

26. On the day before giving birth a woman had ESR of 40 mm/hour. This value of ESR is caused by high blood levels of:

- A. Fibrinogen
- B. Albumins
- C. Proteins
- D. Erythrocytes
- E. Lipoproteins

27. X-ray shows a shadow in the right maxillary sinus, which indicates an accumulation of pus. Into what nasal meatus will this pathological fluid be discharged?

- A. Right middle nasal meatus
- B. Right inferior nasal meatus
- C. Right superior nasal meatus
- D. Right common nasal meatus
- E. Right supreme nasal meatus

28. A patient suffers from hydrocele testis. What testicular structure is affected, causing this pathology?

- A. *Tunica vaginalis testis*
- B. *Tunica dartos*
- C. *Fascia spermatica externa*
- D. *Fascia spermatica interna*
- E. *Fascia cremasterica*

29. Regional lymph nodes surrounding an infected wound are enlarged. Histological examination shows increased number of macrophages, lymphocytes, and lymphatic follicles in the cortical layer of the lymph nodes, as well as a large amount of plasma cells. What process in the lymph nodes is indicated by these histological changes?

- A. Antigen stimulation
- B. Acquired deficiency of lymphoid tissue
- C. Congenital deficiency of lymphoid tissue
- D. Neoplastic aberration
- E. Transplant rejection

30. Autopsy of the body of a 62-year-old man shows a supravalvular aortic rupture with cardiac tamponade. Histology of the ascending aorta detected infiltrations of lymphoid, plasma, and epithelioid cells in its tunica externa and tunica media, while there are necrotic foci in the tunica media, and proliferation of adventitial cells, endotheliocytes, and vessels in the tunica externa. Such changes in the aorta are characteristic of:

- A. Syphilitic aortitis
- B. Septic aortitis
- C. Rheumatic aortitis
- D. Atherosclerosis
- E. Essential hypertension

31. Histological slides of spleen and lymph node show enlargement of lymphoid tissue, which can indicate activation of immune responses. Where in these organs can be found a zone of antigen-independent proliferation and differentiation of B lymphocytes (B zone)?

- A. Germinal center of a lymph node
- B. Mantle zone
- C. Paracortical zone
- D. Brain sinuses
- E. Periarterial zone

32. Examination revealed that patient has problems with seeing color green. What cells are absent in the patient's retinas, causing the vision impairment?

- A. Neurosensory cells – cones
- B. Neurosensory cells – rods
- C. Retinal pigment epithelium
- D. Bipolar neurons
- E. Ganglionic neurons

33. An electronic microphotograph of the biopsy material shows structures containing surfactant, type I alveolocytes, basement membrane, and fenestrated capillary endothelium. What histogemetic barrier of the human body has such structures?

- A. Blood-air barrier
- B. Blood-brain barrier
- C. Blood-thymus barrier
- D. Blood-cerebrospinal fluid barrier
- E. Blood-testis barrier

34. A 45-year-old woman has breast cancer. Metastases can spread in this case to the following regional lymph nodes:

- A. Axillary, parasternal
- B. Abdominal, cervical
- C. Cervical, parasternal
- D. Parasternal, bronchomediastinal
- E. Aortic, bronchomediastinal

35. Ingestion of 100 mL of 25% magnesium sulfate solution (saturated) results in profuse liquid stool. Why does it occur?

- A. Increase of intestinal osmotic pressure
- B. Stimulation of gastric juice secretion
- C. Inhibition of intestinal motility
- D. Stimulation of hormone secretion in the duodenum
- E. Decrease of osmotic pressure

36. A patient used an indirect-acting adrenergic agonist to treat rhinitis. After the patient has been using the drops for several days, the vasoconstrictive effect of the drug gradually diminished. Name this phenomenon:

- A. Tachyphylaxis
- B. Idiosyncrasy
- C. Teratogenicity
- D. Allergy
- E. Cumulation

37. A medical student was hospitalized into the infectious diseases unit on the 2nd day after the disease onset. The patient is suspected to have infectious mononucleosis. What results of laboratory analysis can confirm this diagnosis immediately on the day of the hospitalization?

- A. IgM antibodies to Epstein-Barr virus were detected
- B. IgM antibodies to herpes simplex virus were detected
- C. Fourfold increase in number of antibodies to Epstein-Barr virus was detected
- D. Herpesvirus was isolated
- E. Cytomegalovirus antibodies were detected

38. A 25-year-old woman, who gave birth one month ago, complains of decreased lactation. What hormone is deficient in this case, causing this condition?

- A. Prolactin
- B. Somatostatin
- C. Adrenocorticotrophic hormone
- D. Insulin
- E. Glucagon

39. In chromosomal disorders, to study the karyotype, the cell culture during mitosis is processed with colchicine. This substance blocks contractions of the fibers that form mitotic spindle. At what stage will the mitosis be interrupted?

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

40. A 30-year-old man has acute pancreati-

tis with disturbed extracellular digestion of proteins. This disturbance can be caused by insufficient synthesis and production of the following by the pancreas:

- A. Trypsin
- B. Pepsin
- C. Lipase
- D. Dipeptidases
- E. Amylase

41. A patient has a skin inflammation in the first interdigital space of the foot. What regional lymph nodes will be swollen and painful in this case?

- A. Superficial inguinal lymph nodes
- B. Anterior tibial lymph nodes
- C. Posterior tibial and popliteal lymph nodes
- D. Superficial and deep inguinal lymph nodes
- E. External iliac lymph nodes

42. Histological specimen shows parenchyma of an organ that consists of lymphoid tissue that forms lymph nodules; the nodules are located diffusely and have a central artery. What anatomical structure has such morphological characteristics?

- A. Spleen
- B. Tonsil
- C. Lymph node
- D. Thymus
- E. Red bone marrow

43. A 25-year-old woman complains of deteriorating vision. Examination revealed a defect in accommodation, the pupil is dilated and unresponsive to light. What muscles are functionally disturbed in this case?

- A. Iris sphincter muscle, ciliary muscle
- B. Iris dilator muscle, ciliary muscle
- C. Superior oblique muscle, ciliary muscle
- D. Lateral rectus muscle, iris sphincter muscle
- E. Iris sphincter and iris dilator muscles

44. A 45-year-old man, who for a long time was keeping to a plant-based diet, has a negative nitrogen balance. What problem with the diet caused this condition in the patient?

- A. Not enough proteins
- B. Too much water
- C. Too much carbohydrates
- D. Not enough fats
- E. Not enough fats and proteins

45. A 65-year-old woman, who had been

suffering from deep vein thrombophlebitis of the lower leg, suddenly died when awaiting her appointment with the doctor. Autopsy revealed loose friable red masses with corrugated dull surface in the main pulmonary artery and its bifurcation. What pathologic process was discovered by the pathologist in the pulmonary artery?

- A. Thromboembolism
- B. Thrombosis
- C. Tissue embolism
- D. Foreign body embolism
- E. Fat embolism

46. A test animal receives electrical impulses that irritate the sympathetic nerve that innervates blood vessels of the skin. What reaction will it cause in the blood vessels?

- A. Arterial and venous constriction
- B. No reaction
- C. Arterial dilation
- D. Arterial and venous dilation
- E. Venous dilation

47. Respiratory quotient was measured in a patient, who for 10 days was keeping to a strict diet. The patient's respiratory quotient was 1.0. What kind of diet was it?

- A. Mainly containing carbohydrates
- B. Mainly containing proteins and lipids
- C. Mainly containing lipids and carbohydrates
- D. Mixed type
- E. Mainly containing proteins and carbohydrates

48. T lymphocytes were affected by HIV. In the process, viral enzyme reverse transcriptase (RNA-dependent DNA-polymerase) catalyzes the synthesis of:

- A. DNA on the viral RNA matrix
- B. Viral RNA on the DNA matrix
- C. Viral protein on the viral RNA matrix
- D. Viral DNA on the DNA matrix
- E. Informational RNA on the viral protein matrix

49. A person developed increased pulmonary ventilation due to physical exertion. What indicator of external respiration will be significantly increased compared to the resting state?

- A. Respiratory volume
- B. Vital lung capacity
- C. Inspiratory reserve volume
- D. Expiratory reserve volume
- E. Total lung capacity

50. Autopsy of the body of a 56-year-old man detected several ulcers from 4 to 5 cm in size in the terminal portion of the small intestine. There are numerous oval structures up to 5 cm in their longest part, with the surface that resembles cerebral cortex. Ulcer margins are raised above the mucosa, while ulcer walls are covered in gray-yellow crumbling masses. Widal test is positive. Make the diagnosis:

- A. Typhoid fever
- B. Paratyphoid
- C. Relapsing fever
- D. Dysentery
- E. Crohn disease

51. A patient is diagnosed with an acute necrotizing pancreatitis. What peritoneal cavity will be immediately exposed to exudate?

- A. *Bursa omentalis*
- B. *Bursa subhepatica*
- C. *Bursa pregastrica*
- D. *Canalis lateralis sinister*
- E. *Canalis lateralis dexter*

52. A child developed high fever, punctulated rash, and conjunctivitis. The child died of superimposed pneumonia. Pulmonary histology shows endo-, meso-, and panbronchitis with giant cell pneumonia. Such changes are characteristic of:

- A. Measles
- B. Scarlet fever
- C. Croupous pneumonia
- D. Diphtheria
- E. Chickenpox

53. A child is idiosyncratic to a certain medicinal substance, which is caused by:

- A. Hereditary enzymopathy
- B. Depletion of a substrate, with which this medicinal substance interacts
- C. Accumulation of the medicinal substance in the body
- D. Inhibition of hepatic microsomal enzymes
- E. Concomitant disease of a target organ

54. A 9-year-old boy, who undergoes treatment in the inpatient department, has high blood pressure and problems with kidneys. This condition is caused by high levels of a certain bioactive peptide. Name this peptide:

- A. Angiotensin II
- B. Antidiuretic hormone
- C. Glucagon
- D. Kallidin
- E. Insulin

55. A 60-year-old man came to the doctor complaining of chest pain. In his blood serum there is a significant increase of enzyme activity, namely of aspartate aminotransferase, creatine phosphokinase, and its CPK-MB isoenzyme. These changes indicate a pathological process that occurs in the:

- A. Cardiac muscle
- B. Pulmonary tissues
- C. Skeletal muscles
- D. Hepatic tissues
- E. Smooth muscles

56. A patient with an infectious disease is sensitized to benzylpenicillin. What antibiotic will be the safest for this patient?

- A. Azithromycin
- B. Bicillin
- C. Ampicillin
- D. Amoxicillin
- E. Oxacillin

57. Utilization of arachidonic acid along the cyclooxygenase pathway produces bioactive substances. Name them:

- A. Prostaglandins
- B. Thyroxine
- C. Biogenic amines
- D. Somatomedins
- E. Insulin-like growth factors

58. 24 hours after an appendectomy the patient's blood test shows neutrophilic leukocytosis with a regenerative shift. What is the most likely mechanism of absolute leukocytosis development in the patient's peripheral blood?

- A. Intensification of leukopoiesis
- B. Leukocyte redistribution
- C. Decreased leukocyte disintegration
- D. Deceleration of leukocyte migration to the tissues
- E. Immunity activation

59. An electronic microphotograph of the myocardium shows appendaged cells with few organelles. These cells have secretory granules and well-developed endoplasmic reticulum. Name these cells:

- A. Secretory cardiomyocytes
- B. Ventricular cardiomyocytes
- C. Pacemaker cells
- D. Transitional atypical cells
- E. His bundle cells

60. A histological specimen demonstrates a vessel with the wall that consists of endothelium, basement membrane, and loose connective tissue. What type of vessel is it?

- A. Non-muscular vein
- B. Artery
- C. Muscular vein
- D. Hemocapillary
- E. Lymph capillary

61. A 33-year-old man was diagnosed with gastric perforation and peritonitis, which resulted in "board-like" muscle rigidity of the anterior abdominal wall. What reflex causes this sign?

- A. Viscerosomatic reflex
- B. Viscerovisceral reflex
- C. Viscerocutaneous reflex
- D. Cutaneovisceral reflex
- E. Somatovisceral reflex

62. When a skeletal muscle cell was exposed to electric current, its membrane depolarized. What ions pass through the membrane, playing the main role in its depolarization?

- A. Na^+
- B. HCO_3^-
- C. Ca_2^+
- D. Cl^-
- E. K^+

63. When examining a patient, the neurologist determined the absence of the knee-jerk reflex that normally occurs, when patellar tendon is being struck with a reflex hammer. What nerve is likely to be damaged in this case?

- A. Femoral nerve
- B. Obturator nerve
- C. Gluteal nerve
- D. Tibial nerve
- E. Common fibular nerve

64. A patient has a chromosomal disorder — Klinefelter syndrome — with the total number of chromosomes being 47 (karyotype XXY). The patient's somatic cells contain sex chromatin in the amount equal to X chromosome number minus 1. In somatic cells, sex chromatin is called:

- A. Barr bodies
- B. Jolly bodies
- C. Cabot rings
- D. Doehle bodies
- E. Mallory bodies

65. After a craniocerebral trauma, the patient has lost the ability to read and understand written text (alexia). Name the location of the corresponding center in the cerebral cortex:

- A. *Gyrus angularis*
- B. *Gyrus supramarginalis*
- C. *Gyrus paracentralis*
- D. *Gyrus lingualis*
- E. *Gyrus parahippocampalis*

66. A surgeon performs primary surgical treatment of a deep incised wound on the lateral surface of the knee joint. What ligament needs to be sutured in this case?

- A. *Lig. collaterale fibulare*
- B. *Lig. collaterale tibiale*
- C. *Lig. popliteum obliquum*
- D. *Lig. popliteum arcuatum*
- E. *Lig. patellae*

67. During a surgery on the thoracic spine, the surgeon severed the ligaments that connect the vertebral arches. What ligaments were severed by the surgeon?

- A. *Ligg. flava*
- B. *Ligg. intertransversaria*
- C. *Ligg. interspinalia*
- D. *Lig. longitudinale posterius*
- E. *Lig. supraspinale*

68. A patient with myocardial infarction has acute heart failure. Among the drugs that increase the force of heart contractions the least dangerous drug in this case will be:

- A. Dobutamine
- B. Adrenaline
- C. Isadrine (Isoprenaline)
- D. Euphyllin (Aminophylline)
- E. Caffeine

69. A nurse was making an intramuscular injection into the posterior surface of the patient's shoulder. Suddenly the patient felt a severe pain in her shoulder muscles, which spread to the posterior surface of the forearm. What nerve was damaged during the injection?

- A. Radial nerve
- B. Ulnar nerve
- C. Median nerve
- D. Musculocutaneous nerve
- E. Axillary nerve

70. Examination shows that the patient's apical beat is displaced 3.5 cm to the left from the left midclavicular line. What heart chambers are likely to be hypertrophic in this case?

- A. Left ventricle
- B. Right ventricle
- C. Right atrium
- D. Left atrium
- E. All heart chambers

71. A child has a hereditary skin condition — no sweat glands (anhidrosis) — which impairs important skin functions — perspiration and thermoregulation. This condition results from maldevelopment of the following structure during embryogenesis:

- A. Ectoderm
- B. Endoderm
- C. Sclerotome
- D. Dermatome
- E. Splanchnotome

72. A patient, who had a severe infectious disease that affected CNS functioning, has instable body temperature that within 24 hours reaches different values (above and below the norm) each 2 hours. Such fluctuations in body temperature can be caused by:

- A. Hypothalamic damage
- B. Hypoxia
- C. Circulatory dysfunction
- D. Peripheral microcirculatory dysfunction
- E. Disturbed cortical processes in the brain

73. A woman presents with weight loss, exophthalmus, tachycardia, negative nitrogen balance, high blood glucose and high blood levels of free fatty acids. What dysfunction can be characterized by such changes?

- A. Hyperthyroidism
- B. Adrenal insufficiency
- C. Hypothyroidism
- D. Overproduction of growth hormone
- E. Diabetes mellitus

74. Detailed examination of the karyotype of a person with Down syndrome detects two populations of somatic cells — normal cells and cells with trisomy 21. Name this genetic phenomenon:

- A. Mosaicism
- B. Phenocopy
- C. Polyploidy
- D. Genocopy
- E. Modification

75. A 5-year-old child is diagnosed with Bruton's disease (X-linked agammaglobulinemia) that manifests itself in severe clinical course of bacterial infections and absence of B lymphocytes and plasma cells. What changes of immunoglobulin content can be observed in blood serum of the child with immunodeficiency?

- A. Decreased IgA, IgM
- B. Increased IgA, IgM
- C. Decreased IgD, IgE
- D. Increased IgD, IgE
- E. No changes

76. A laboratory rat with chronic kidney failure has osteoporosis, pathologic calcification of the internal organs, and arterial hypertension. These disturbances are associated with the increased activity of the following hormone:

- A. Parathyroid hormone
- B. Thyroxine
- C. Triiodothyronine
- D. Calcitonin
- E. Adrenaline

77. A 2-year-old child presents with marked delay in psychomotor development, vision and hearing deterioration, marked enlargement of the liver and spleen. The child is diagnosed with hereditary Niemann-Pick disease. What genetic defect is the cause of this disease?

- A. Sphingomyelinase deficiency
- B. Glucose 6-phosphatase deficiency
- C. Amylo-1,6-glucosidase deficiency
- D. Acid lipase deficiency
- E. Xanthine oxidase deficiency

78. A 12-year-old child has a relatively short stature with disproportionate built and mental retardation. What hormone or hormones can cause this condition, if underproduced?

- A. Thyroid hormones
- B. Insulin
- C. Glucocorticoids
- D. Growth hormone
- E. Mineralocorticoids

79. A patient has plasma glucose levels of 15 mmol/L, polyuria, thirst. What hormone levels are low in the patient's blood, causi-

ng such changes?

- A. Insulin
- B. Glucagon
- C. Cortisol
- D. Growth hormone
- E. Growth hormone-releasing factor

80. A patient with marked pneumosclerosis after recovery from infiltrative pulmonary tuberculosis developed respiratory insufficiency. What pathogenetic type of respiratory insufficiency is it?

- A. Restrictive
- B. Obstructive
- C. Dysregulatory
- D. Reflex
- E. Apneustic

81. A patient with pale skin, low body temperature, weak and shallow pulse, and low blood pressure was brought to the admission room. These signs are characteristic of acute morphine poisoning. What drug should be administered first in this case?

- A. Naloxone
- B. Adrenaline hydrochloride
- C. Atropine sulfate
- D. Codeine sulfate
- E. Isadrine (Isoprenaline)

82. Genealogical analysis of a child with myotonic dystrophy determined that this disease manifests in every generation, is in equal measure present in the relatives of both genders, the risk of inheriting this disease is equal no matter which parent is affected. If one of the parents is heterozygous for this disease and the other parent is healthy, the risk of them giving birth to a sick child is 50%. What type of disease inheritance is it?

- A. Autosomal dominant
- B. Autosomal recessive
- C. X-linked dominant
- D. X-linked recessive
- E. Y-linked

83. A young woman, a foreign student from Tehran, has made an appointment with the urologist. She complains of the sensation of heaviness in her lower abdomen and a small amount of blood being excreted with urine at the end of each urination. Microscopy of urine detects the presence of parasite eggs, approximately 140x70 micron in size, with a terminal spike. What diagnosis can be made by the infectious diseases specialist?

- A. Schistosomiasis
- B. Opisthorchiasis
- C. Dicrocoeliasis
- D. Paragonimiasis
- E. Fascioliasis

84. The patient's ECG shows that in the second standard lead from the extremities the P waves are positive, their amplitude is 0.1 mV (norm is 0.05-0.25 mV), duration — 0.1 seconds (norm is 0.07–0.10 seconds). It can be concluded that the following process occurs normally in the cardiac atria during:

- A. Depolarization
- B. Repolarization
- C. Excitation
- D. Contraction
- E. Relaxation

85. Inhibiting effect of GABA is based on increased permeability of postsynaptic membrane to chloride ions. This mediator forms in the result of decarboxylation of:

- A. Glutamate
- B. Aspartate
- C. Glutamine
- D. Asparagine
- E. Arginine

86. A cell with vitamin *E* deficiency was exposed to ionizing radiation. It resulted in intensified release of hydrolytic enzymes into the cytoplasm and a complete destruction of intracellular structures — autolysis. What organelles caused this phenomenon?

- A. Lysosomes
- B. Endoplasmic reticulum
- C. Golgi apparatus
- D. Microbodies
- E. Mitochondria

87. Mother of a 12-year-old child came to a gastroenterologist, complaining of loss of appetite and meteorism in her child. Endoscopy shows biliary dyskinesia. There are pear-shaped protozoa with two nuclei and multiple flagella in the duodenal content. What disease is the most likely in this case?

- A. Lambliasis
- B. Balantidiasis
- C. Amebiasis
- D. Trichomoniasis
- E. Toxoplasmosis

88. A woman complains of itching and burning in her external genitalia and purulent frothy discharge from them. Di-

schARGE samples contain unicellular pear-shaped organisms with 4 flagella, undulating membrane, and a spike on one end of their bodies. What species do they belong to?

- A. *Trichomonas vaginalis*
- B. *Lamblia intestinalis*
- C. *Trichomonas hominis*
- D. *Toxoplasma gondii*
- E. *Entamoeba gingivalis*

89. A 40-year-old man with pulmonary tuberculosis was prescribed isoniazid. Prolonged taking of this drug can result in the development of the following vitamin deficiency:

- A. Pyridoxine
- B. Thiamine
- C. Cobalamin
- D. Biotin
- E. Folic acid

90. During blood transfusion, it is recommended to transfer only the blood of the corresponding group. In ABO system the blood group is determined by:

- A. Carbohydrate determinants of erythrocyte membranes
- B. Blood serum proteins
- C. Protein determinants of erythrocyte membranes
- D. Protein-polysaccharide components of leukocytes
- E. Carbohydrate determinants of leukocyte membranes

91. In the structure of prokaryotic DNA operons there is a fragment, to which RNA polymerase attaches at the stage of transcription initiation. Name this fragment:

- A. Promoter
- B. Primary transcript
- C. Operator gene
- D. Regulator gene
- E. Structural gene

92. A patient complains of skin itching, especially between the fingers, in the armpits, and on the lower abdomen. Examination revealed small vesicles on the affected areas. Laboratory diagnostics determined that this condition is caused by a certain *Arthropoda* species. Name this disease:

- A. Scabies
- B. Demodicosis
- C. Myiasis
- D. Pediculosis
- E. Dermatotropic leishmaniasis

93. An oncology patient is to undergo a surgery on the descending colon. Name the main source of the blood supply to this organ:

- A. Inferior mesenteric artery
- B. Superior mesenteric artery
- C. Celiac trunk
- D. Middle colic artery
- E. Splenic artery

94. During cytostatic chemotherapy, blood test of a patient with bladder cancer shows the following: leukocytes — $0.8 \cdot 10^9/L$, granulocytes — $0.6 \cdot 10^9/L$. What is observed in the patient's white blood cells?

- A. Agranulocytosis
- B. Leukemia
- C. Leukemoid reaction
- D. Leucopenia
- E. Leukocytosis

95. After chronic pneumonia a patient developed pulmonary fibrosis. What indicator of pulmonary ventilation will be the most affected in this case?

- A. Vital capacity will decrease
- B. Residual volume will increase
- C. Functional residual capacity will increase
- D. Inspiratory reserve volume will increase
- E. Expiratory reserve volume will increase

96. During examination a man was diagnosed with acute radiation sickness. Laboratory tests detected an acute decrease in his platelet serotonin levels. It is likely to be caused by disturbed metabolism of a certain substance. Name this substance:

- A. 5-Hydroxytryptophan
- B. Tyrosine
- C. Histidine
- D. Phenylalanine
- E. Serine

97. A 30-year-old woman was using a fluorescent lipstick for a long time. She developed limited erythema and slight peeling on the border of her lips. Later her lips developed small transversal grooves and fissures. Specialized microscopy technique detected sensitized lymphocytes and macrophages and signs of cytolysis in the connective tissue of the affected area. What type of immunological

hypersensitivity developed in the patient's lips?

- A. Type IV (cell-mediated cytotoxicity)
- B. Type I (reagine type)
- C. Type II (antibody-mediated cytotoxicity)
- D. Type III (immune complex-mediated cytotoxicity)
- E. Granulomatosis

98. After a prolonged protein-free diet a student developed edema. Her condition indicates a decrease in the following blood protein fractions:

- A. Albumins
- B. Globulins
- C. Fibrinogen
- D. Plasminogen
- E. Transferrin

99. It is known that not all sensory signals are consciously registered by a person. This way brain separates important information from less important information. What part of the brain plays the main role in this process?

- A. Thalamus
- B. Cerebellum
- C. Cerebral cortex
- D. Basal ganglia
- E. Hypothalamus

100. What component of a human diet cannot be digested in the gastrointestinal tract, but nevertheless is a necessary part of nutrition?

- A. Cellulose
- B. Starch
- C. Sucrose
- D. Protein
- E. Lipids

101. One of the causes of pernicious anemia is the disturbed synthesis of transcortin — Castle's intrinsic factor — in the parietal cells of the stomach. What substance is called Castle's extrinsic factor?

- A. Cobalamin
- B. Folic acid
- C. Pyridoxine
- D. Riboflavin
- E. Biotin

102. 24 hours after an exam the student's blood test shows leukocytosis without significant changes in the leukogram. What mechanism of leukocytosis development is the most likely in the peripheral blood in this case?

- A. Redistribution of leukocytes in the body
- B. Intensification of leukopoiesis
- C. Decreased leukocyte destruction
- D. Decelerated leukocyte extravasation
- E. Accelerated leukocyte exit from the bone marrow

103. Pathogenic bacteria can actively penetrate into the internal environment of the body and intensively spread through the tissues. What enzyme gives bacteria their invasive properties?

- A. Hyaluronidase
- B. Lactase
- C. Catalase
- D. Oxidoreductase
- E. Plasma coagulase

104. A woman with enteritis accompanied by severe diarrhea presents with the loss of water in the extracellular space, increased water content in the cells, and decreasing blood osmolarity. Name this type of water-electrolyte imbalance:

- A. Hypoosmolar hypohydration
- B. Hyperosmolar hyperhydration
- C. Hyperosmolar hypohydration
- D. Hypoosmolar hyperhydration
- E. Isoosmolar hypohydration

105. After a stroke that occurred one week ago, a 64-year-old woman has lost the mobility of her left arm and leg. The affected limbs have pathological reflexes and increased muscle tone and reflex responses. What type of paralysis is it?

- A. Hemiplegia
- B. Monoplegia
- C. Diplegia
- D. Paraplegia
- E. Tetraplegia

106. A laboratory received a sample of the patient's sputum. It is necessary to perform bacteriological tests for tuberculosis. What technique should the medical laboratory scientist use to stain the preparation for detection of mycobacteria?

- A. Ziehl-Neelsen
- B. Romanowsky-Giemsa
- C. Gram
- D. Fuchsin
- E. Methylene blue

107. During gastric resection the patient received mixed anesthesia with tubocurarine chloride muscle relaxant. To restore unassisted respiration in the patient, the patient was given proserin. What

pharmacological group does this drug belong to?

- A. Cholinesterase inhibitors
- B. Angiotensin-converting-enzyme inhibitors
- C. Calcium channel blockers
- D. Muscarinic antagonists
- E. Muscarinic agonists

108. A patient with arterial hypertension and signs of angina pectoris was prescribed an antianginal drug that is a calcium antagonist. Name this drug:

- A. Amlodipine
- B. Metoprolol
- C. Anaprilin (Propranolol)
- D. Pentoxifylline
- E. Molsidomine

109. The infectious diseases department received a patient with acute respiratory viral disease and body temperature of 39.5°C . What antipyretic drug should be prescribed in this case?

- A. Paracetamol
- B. Ambroxol
- C. Salbutamol
- D. Adrenaline hydrochloride
- E. Retabolil (Nandrolone)

110. To treat the burns, a patient was prescribed a drug with antiseptic properties that are based on formation of atomic oxygen in the presence of organic substances. This drug has also an astringent (anti-inflammatory) effect due to formation of albuminates. Name this drug:

- A. Potassium permanganate
- B. Ethyl alcohol
- C. Sodium bicarbonate
- D. Hydrogen peroxide
- E. Chlorhexidine digluconate

111. A patient is diagnosed with glucocerebroside lipidosis (Gaucher's disease) that manifests as splenomegaly, liver enlargement, affected bone tissue, and neuropathies. What enzyme of complex lipid catabolism is deficient, causing this disease?

- A. Glucocerebrosidase
- B. Hexosaminidase
- C. Sphingomyelinase
- D. β -galactosidase
- E. Hyaluronidase

112. A patient with heart failure was taking intermediate-acting cardiac glycoside digoxin in tablets for a long time. It resulted

in a loss of vision acuity and occasional bouts of nausea. What characteristic of this drug can cause such complications?

- A. Cumulation
- B. Sensitization
- C. Dependence
- D. Tolerance
- E. Potentiation

113. Autopsy of the body of a woman, who suffered from purulent cholecystitis and died of sepsis, revealed 100 mL of turbid green-yellow fluid in the gallbladder. The gallbladder walls are flaccid, thinned-out, dull, and plethoric. Histologically, there are hyperemia and diffuse neutrophilic infiltration of the gallbladder wall. What type of inflammation is observed in the patient's gallbladder?

- A. Empyema
- B. Fibrinous inflammation
- C. Serous inflammation
- D. Acute abscess
- E. Chronic abscess

114. 12 days after a recovery from tonsillitis, a child developed lumbar pain, slight edema, and urinary syndrome. Renal biopsy was performed. Microscopy shows intracapillary proliferative inflammation, while electronic microscopy detects large subepithelial electron-dense deposits, resembling "humps". What renal disease developed in the child?

- A. Postinfectious glomerulonephritis
- B. Rapidly progressive glomerulonephritis
- C. Membranous glomerulonephritis
- D. Lipoid nephrosis
- E. Acute suppurative interstitial nephritis

115. Myocardial histology shows a large area, where there are no nuclei in cardiomyocytes and their cytoplasm is pink and homogeneous. On the periphery of the lesion there are dilated, acutely plethoric vessels and marked infiltration with segmented leukocytes. This histological presentation indicates:

- A. Demarcation inflammation around the infarction
- B. Septic disintegration of the infarction
- C. Impending infarction
- D. Aseptic autolysis of the infarction
- E. Infarction encapsulation

116. After administration of antitetanus serum the patient developed anaphylactic shock. What cells produce mediators in classic anaphylactic reaction?

- A. Mast cells
- B. Eosinophils
- C. T lymphocytes
- D. Neutrophils
- E. B lymphocytes

117. The main part of anaerobic infectious treatment is timely administration of a serum with specific antibodies. What is being neutralized by the serum in this case?

- A. Exotoxin
- B. Anatoxin
- C. Antitoxin
- D. Enterotoxin
- E. Anaerobic bacteria

118. Mucous tunics of the human body often produce an enzyme that causes lysis of bacteria. This enzyme is present in tears, saliva, and gastrointestinal mucus. Name this enzyme:

- A. Lysozyme
- B. Opsonin
- C. Complement
- D. Hyaluronidase
- E. Fibrinolysin

119. Autopsy of the body of a 67-year-old man shows acutely swollen and dull rectosigmoid mucosa in his large intestine. The mucosa there has multiple erosions and ulcers, as well as single polyps. Histologically, the mucosa has acute infiltrations consisting of lymphocytes, plasma cells, neutrophilic granulocytes, and eosinophils, which are located mainly in the lumina of the crypts (crypt abscesses). The intestinal wall is sclerotic and there are proliferations of granulation tissue that form polyps. What is the most likely diagnosis?

- A. Exacerbation of nonspecific ulcerative colitis
- B. Crohn disease
- C. Acute ulcerative colitis
- D. Typhoid fever
- E. Dysentery

120. Bacteriological study of feces inoculated on Endo medium results in the growth of red colonies with a metallic shine. They were agglutinated on a glass slide, using a polyvalent serum against OK types of bacterial strains. How to determine the pathogenic variant of colibacillus?

- A. Based on its antigenic characteristics
- B. Based on its morphological characteristics
- C. Based on its cultural characteristics
- D. Based on its toxigenic characteristics
- E. Based on its phage sensitivity

121. For a short surgical procedure, the patient was given droperidol and fentanyl. What effect results in a loss of pain sensitivity, if they are taken together?

- A. Potentiation
- B. Summation
- C. Cumulation
- D. Chemical interaction
- E. Antagonism

122. During haymaking time, one of the workers developed high body temperature, chills, and runny nose and eyes. He says that it happens to him every year during this season. What type of allergic response is it according to Gell and Coombs?

- A. Type I
- B. Type II
- C. Type III
- D. Type IV
- E. Type V

123. Biopsy material obtained from thickened nasal mucosa of a 29-year-old woman, who has problems with nasal breathing, contains clusters of lymphocytes, plasma cells, and epithelioid cells, among which there are numerous round hyaline inclusions (Russell bodies) and large macrophages with pale cytoplasm (Mikulicz cells). What type of inflammation developed in the patient's nasal mucosa?

- A. Granulomatous
- B. Interstitial
- C. With formation of polyps and pointed condylomas
- D. Exudative
- E. Mixed type

124. A 70-year-old man died of general emaciation. Autopsy shows yellow-brown shrunken heart and liver. Microscopy detects small brown pigment granules in the cytoplasm of cardiomyocytes and hepatocytes near the nuclei. Their iron test is negative. What pigment is it?

- A. Lipofuscin
- B. Hemosiderin
- C. Hematoidin
- D. Hemozoin (malarial pigment)
- E. Bilirubin

125. A tumor was removed from extraperitoneal fat of a 75-year-old man. The tumor is 16.0x8.0x6.5 cm in size. Microscopically, there are anaplastic cells with marked signs of atypia, polymorphism, and mitotic activity. In some areas there are large deformed cells with sudanophilic vacuoles in their cytoplasm. What is the most likely diagnosis?

- A. Liposarcoma
- B. Angiomyolipoma
- C. Lipoma
- D. Leiomyosarcoma
- E. -

126. Allergologist examined a patient and diagnosed him with pollinosis. What technique can be used for allergen-specific desensitization?

- A. Fractional introduction of allergen
- B. Antihistamines
- C. Glucocorticoids
- D. Introduction of physiological saline
- E. -

127. A 36-year-old man went mountain climbing on his vacation. At the altitude of over 2000 meters above the sea level he developed increased respiratory rate, tachycardia, and slight dizziness. Two days later the signs returned to normal. This process is called:

- A. Adaptation
- B. Compensation
- C. Regeneration
- D. Inhibition
- E. Proliferation

128. A patient with chronic glomerulonephritis has edema, blood pressure of 210/100 mm Hg, heart rate of 85/min., and expanded border of the heart. What is the main mechanism of arterial hypertension development?

- A. Activation of renin-angiotensin-aldosterone system
- B. Increased volume of circulating blood
- C. Increased vasopressin production
- D. Increased activity of sympathetic nervous system
- E. Hyperfunction of the heart

129. A 1.5-year-old child was diagnosed with immunodeficiency. B lymphocyte count is normal, but they are functionally inactive. What immune defense factor is absent in the child's oral cavity?

- A. Secretory immunoglobulin A
- B. Lysozyme
- C. Interferon
- D. Lactoperoxidase system
- E. Fibronectin

130. A 55-year-old man was prescribed an antituberculosis agent as a part of his complex therapy for pulmonary tuberculosis. Which of the listed drugs has antibacterial activity only towards *Mycobacterium tuberculosis*?

- A. Isoniazid
- B. Streptomycin sulfate
- C. Gatifloxacin
- D. Cycloserine
- E. Kanamycin sulfate

131. A dental patient complains of a painful burning sensation in his tongue and general weakness. Complete blood count shows that the patient has megaloblastic hyperchromic anemia. What drug should be prescribed in this case?

- A. Cyanocobalamin
- B. Ofloxacin
- C. Biseptol (Co-trimoxazole)
- D. Paracetamol
- E. Nootropil (Piracetam)

132. Enzyme lecithin-cholesterol acyltransferase (LCAT) catalyzes the reaction of cholesterol ether synthesis. It occurs when fatty acid residue transfers from the C-2 position of choline phosphatide (lecithin) to cholesterol. With what fatty acid does cholesterol produce ethers?

- A. Linoleic acid
- B. Lauric acid
- C. Palmitic acid
- D. Stearic acid
- E. Myristic acid

133. Transketolase enables the non-oxidative phase of pentose phosphate pathway. It results in accumulation of NADPH and ribose 5-phosphate, which are directly used in the synthesis of:

- A. Nucleotides
- B. Amino acids
- C. Vitamins
- D. Fatty acids
- E. Lipoproteins

134. Numerous effects of the growth hormone occur due to certain proteins that form in the liver in response to the action of somatotropin. Name these proteins:

- A. Somatomedins
- B. Lipotropins
- C. G proteins
- D. Endorphins
- E. Atriopeptins

135. A 2-year-old boy without immunization against measles was in a contact with a measles patient. The doctor prescribed this child an immunoglobulin. What type of immunity forms after administration of immunoglobulins?

- A. Artificial passive
- B. Artificial active
- C. Natural passive
- D. Natural active
- E. -

136. A dental student was hospitalized on day 3 after the onset of the disease. He was provisionally diagnosed with typhoid fever. What method of laboratory diagnostics allows making a microbiological diagnosis?

- A. Bacteriological
- B. Microscopy
- C. Serological
- D. Biological
- E. Allergy testing

137. A 45-year-old man with a past case of left-sided croupous pneumonia died of multiple trauma in a traffic accident. Autopsy shows that the posteriolateral wall of the lower left pulmonary lobe is fused to the chest wall with fibrous commissures. The lobe is shrunken, dense, pink-gray. It has meat-like appearance on section and its pieces sink in the water. Histology shows diffuse proliferation of fibrous connective tissue in these areas. What complication of croupous pneumonia is it?

- A. Carnification
- B. Emphysema
- C. Gangrene
- D. Atelectasis
- E. Abscess

138. A person took a blocker drug, which resulted in an increased heart rate. When this person's eyeballs were pressed, the expected reflex-induced decrease in the heart rate did not occur. What exactly was blocked by this drug in the pacemaker cells?

- A. Muscarinic acetylcholine receptors
- B. α_1 adrenergic receptors
- C. β_1 adrenergic receptors
- D. L-type Ca_2^+ channels
- E. Fast Na^+ channels

139. ECG of the patient shows increased duration of the QRS complex. What is the most likely cause?

- A. Increased period of ventricular excitation
- B. Disturbed conduction in the atrioventricular node
- C. Increased atrial excitability
- D. Increased atrial and ventricular excitability
- E. Increased period of atrial excitation

140. When administered into the human body, dicoumarol causes acute drop in blood levels of prothrombin and other blood coagulation proteins. Dicoumarol is an antivitamin of:

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

141. A 25-year-old woman complains of a rash on her torso. The doctor suspects secondary syphilis. What diagnostic method should be used to confirm this diagnosis?

- A. Serological
- B. Biological
- C. Bacteriological
- D. Virological
- E. Allergy testing

142. In an experiment a vagus nerve was irritated, which stimulated acetylcholine release into the synaptic cleft. As a result, the heart rate slowed down. Name the mechanism of a heart rate decrease in this case:

- A. Hyperpolarization of cardiomyocyte membranes
- B. Depolarization of cardiomyocyte membranes
- C. Increased conduction velocity in the AV node
- D. Increased duration of action potential
- E. Decreased duration of action potential

143. A patient was hospitalized with provisional diagnosis of acute pancreatitis. What enzyme will have a markedly increased activity in the patient's blood and urine in this case?

- A. Alpha-amylase
- B. Creatine phosphokinase
- C. Lactate dehydrogenase
- D. Alanine aminotransferase
- E. Aspartate aminotransferase

144. A tired driver took a rest in the car with its engine running. As a result, he developed carbon monoxide poisoning. What compound formed in his blood, leading to severe consequences?

- A. Carboxyhemoglobin
- B. Methemoglobin
- C. Carbaminohemoglobin
- D. Deoxyhemoglobin
- E. Fetal hemoglobin

145. When examining a biopsy material obtained from the thyroid gland, the pathologist discovered lymphocyte infiltration of the thyroid tissues and destruction of the parenchymal elements. Diffuse lymphocyte infiltration with lymphoid follicles was detected in the stroma. What is the most likely diagnosis?

- A. Hashimoto thyroiditis (chronic lymphocytic thyroiditis)
- B. Papillary thyroid cancer
- C. Undifferentiated thyroid carcinoma
- D. Solid adenoma of the thyroid
- E. Graves disease (toxic diffuse goiter)

146. A patient suffers from ischemic heart disease that disturbs energy supply to the myocardium. What process is the main source of energy for the myocardium?

- A. Fatty acid oxidation
- B. Glycolysis
- C. Gluconeogenesis
- D. Glycogenolysis
- E. Proteolysis

147. A patient has developed status epilepticus. What medicine should be used in

this case to stop the seizures?

- A. Diazepam
- B. Cyclodol (Trihexyphenidyl)
- C. Diprazine (Promethazine)
- D. Sodium bromide
- E. Valerian extract

148. A 48-year-old man is unconscious. He has a history of several syncopal episodes with convulsions. ECG shows deformed QRS complexes unconnected with P waves, atrial contractions are approximately 70/min., ventricular contractions — 25–30/min. Name the type of arrhythmia in this case:

- A. Complete atrioventricular block
- B. First-degree atrioventricular block
- C. Second-degree atrioventricular block
- D. Intraatrial block
- E. Intraventricular block

149. Antibiotic treatment of a 6-year-old child resulted in hepatitis, photodermatitis, and disturbed development of the child's teeth and bones. What group of antibiotics has such side effects?

- A. Tetracyclines
- B. Aminoglycosides
- C. Polyenes
- D. Cephalosporins
- E. Macrolides

150. A patient developed a purulent inflammatory process in the periodontal tissues. The process was caused by activation of the microorganisms inherent in the body, which are a part of oral mucosal microflora. What type of infection is it?

- A. Autoinfection
- B. Exogenous infection
- C. Reinfection
- D. Superinfection
- E. Relapse