1. After a brain trauma, a person developed impaired perception of visual information. What cortical region was damaged?
a. Parietal region of the cerebral cortex
b. Temporal region of the cerebral cortex
c. Precentral gyrus
d. Occipital region of the cerebral cortex
e. Postcentral gyrus
2. Autopsy of the body of a patient, who died of cardiovascular failure, shows stenosing coronary atherosclerosis, complicated with thrombosis. Histologically, the thrombus consists of platelets, leukocytes, and fibrin. What type of thrombus can be observed in this case?
a. Red thrombus
b. -
c. Hyaline thrombus
d. Mixed thrombus
e. White thrombus
3. A 60-year-old man with diabetes mellitus was prescribed insulin. What type of pharmacological therapy is it?
a. Etiotropic
b. Symptomatic
c. Preventive
d. Replacement
e. Pathogenetic
4. After a nose trauna, a boxer developed an impaired sense of smell. What cells can cause a loss of smell, when damaged?
a. Neurosensory epithelial cells
b. Supporting epithelial cells
c. Basement epithelial cells
d. Microvillous epithelial cells
e. Ciliary epithelial cells
5. A child with a point mutation presents with absence of glucose 6-phosphatase, hypoglycemia, and hepatomegaly. These signs are characteristic of:
a. McArdle disease (glycogen storage disease type V)
b. Parkinson disease
c. Von Gierke disease (glycogen storage disease type I)
d. Addison disease (primary adrenal insufficiency)
e. Gaucher disease
6. What parasite has a mollusk as an intermediate host?
a. Trichinella
b. Giardia
c. Fasciola hepatica
d. Echinococcus
e. Diphyllobothrium latum
7. A patient with essential hypertension presents with circadian fluctuations in total peripheral vascular resistance to blood flow. What vessels will be the most affected in this case?
a. Arteriolovenular anastomoses
b. Capillaries
c. Veins
d. Aorta
e. Arterioles
8. Acid resistance of human teeth depends on the ratio of calcium to phosphorus in the enamel. What is the normal calcium to phosphorus ratio?
a. 0.8
b. 1.1
c. 1.67
d. 0.9

e. 0.5
9. A certain enzyme transports functional groups from one substrate to another. What is the class of this enzyme?
a. Oxidoreductase
b. Hydrolase
c. Ligase
d. Isomerase
e. Transferase
10. A 60-year-old woman with hepatocirrhosis developed hemorrhagic syndrome. What mechanism leads to the development of this condition?
a. Decreased synthesis of prothrombin and fibrinogen
b. Deceased blood oncotic pressure
c. Reduction of hepatic glycogen stores
d. Emergence of neurotoxins in the blood
e. Increased portal venous pressure
11. A man has high levels of protein-bound thyroxine (T4) and normal levels of free T3. How would you describe the basal metabolic rate of this man?
a. Decreased
b. Extremely high
c. Normal
d. Increased
e. -
12. A worker of a cattle farm is brought to the surgeon with fever up to 40^oC, headache, weakness. Objective examination of his back revealed hyperemia and a dark red infiltration up to 5 cm in diameter with black bottom in its center, which was surrounded with pustules. What disease are these presentations typical of?
a. Furuncle
b. Anthrax
c. Abscess
d. Tularemia
e. Plague
13. A sick child is suspected to have tuberculosis and is referred for Mantoux test. 24 hours later the place of allergen injection became swollen, hyperemic, and tender. What main components determine the development of this reaction?
a. Plasma cells, T-lymphocytes, and lymphokines
b. Mononuclear cells, T-lymphocytes, and lymphokines
c. Macrophages, B lymphocytes, and monocytes
d. Granulocytes, T-lymphocytes, and IgG
e. B-lymphocytes and IgM
14. A patient diagnosed with gout has a significant increase in the levels of uric acid in the blood. Uric acid is the end product of the metabolism of:
a. Purine bases
b. Globulins
c. Fatty acids
d. Albumins
e. Triglycerides
15. The patient's right palpebral fissure is markedly larger than the left. What mimic muscle is functionally disturbed in this case?
a. M. corrugator supercilli
b. M. zygomaticus major
c. M. occipitofrontalis (venter frontalis)
d. M. procerus
e. M. orbicularis oculi
16. What drug can be used in treatment of ciliary arrhythmia, is a potassium channel blocker, alpha and beta dual receptor blocker, and can cumulate in the body?

a. Verapamil
b. Asparcam
c. Nicotinamide
d. Metoprolol
e. Amiodarone
17. Examination shows that the patient has disturbed secretory function of a parotid gland due to pathology of the nerve that carries parasympathetic postganglionic nerve fibers from the otic ganglion to the affected gland. What nerve is it?
a. N. facialis
b. N. auriculotemporalis
c. N. petrosus major
d. N. buccalis
e. N. lingualis
18. The patient's ciliary body is damaged. What ocular apparatus is likely to be dysfunctional in this case?
a. Trophic apparatus
b. Protective apparatus
c. Photosensitive apparatus
d. Accommodation apparatus
e. Light-conducting apparatus
19. A patient suffers from diabetes mellitus with fasting hyperglycemia over 7.2 mmol/L. What blood plasma protein would allow to assess the patient's glycemia level retrospectively (4-8 weeks prior to examination)?
a. Ceruloplasmin
b. C-reactive protein
c. Albumin
d. Fibrinogen
e. Glycated hemoglobin
20. 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 corneum
b. Stratum granulosum and stratum lucidum
c. Stratum spinosum and stratum granulosum
d. Stratum basale and stratum spinosum
e. Stratum lucidum and stratum corneum
21. A woman complains of headache, muscle pain during swallowing, chewing, and eyeball movement, elevated temperature, swollen face and eyelids. The signs developed 1.5-2 months after she had eaten pork without sanitary certificate. What helminth can cause these signs in a human?
a. Trichinella
b. Ascaris lumbricoides
c. Ancylostoma
d. Enterobius
e. Necator
22. A woman is diagnosed with Turner's syndrome (karyotype 45, X0). How many autosomal pairs would her somatic cells contain?
a. 44
b. 45
c. 23
d. 24
e. 22
23. After extraction of an upper premolar, the patient bleeds from the alveolar socket. What should be used to stop the bleeding in this case?
a. Neodicoumarin (Ethyl biscoumacetate)
b. Aminocaproic acid
c. Heparin

d. Thrombin topically
e. Vicasol (Menadione)
24. An examination of the oral cavity of a 50-year-old man, who is a long-term smoker, detected on the lingual mucosa an irregularly-shaped whitish plaque. Histologically, there are thickening of the stratified squamous epithelium, parakeratosis, hyperkeratosis, and acanthosis. Specify the type of the pathological process:
a. Leukoplakia
b. Chronic stomatitis
c. Avitaminosis A
d. Hypertrophic glossitis
e. Keratoacanthoma
25. The condition of teeth depends on fluorine intake by the body, particularly with water. What is the hygienic norm for fluorine content in 1 liter of potable water?
a. 9.0 mg
b. 12.0 mg
c. 1.5 mg
d. 6.0 mg
e. 3.0 mg
26. A 35-year-old man had been suffering from bronchial asthma for a long time. Eventually he developed a status asthmaticus that became lethal. Examination of section materials shows a bronchiolar spasm in the lungs. The bronchiolar walls show signs of cellular infiltration with predominance of eosinophilic leukocytes and lymphocytes, labrocytes with signs of degranulation are observed. What mechanism of hypersensitivity is the cause of these changes?
a. Cell-mediated cytotoxicity
b. -
c. Immune complex
d. Reaginic reaction
e. Antibody-dependent
27. A patient presents with disturbed patency of the airways at the level of small and medium bronchial tubes. What acid-base imbalance can the patient develop?
a. Metabolic alkalosis
b. Respiratory acidosis
c. Acid-base balance remains unchanged
d. Respiratory alkalosis
e. Metabolic acidosis
28. A culture of coccal bacteria was obtained from the oropharynx of a boy with chronic tonsilltits. In the smears these bacteria are arranged in chains. What bacteria are likely in this case?
a. Staphylococci
b. Vibrio
c. Clostridia
d. Escherichia
e. Streptococci
29. A 38-year-old man with chronic alcoholism died of progressve heart failure. An autopsy shows lobar pleuropneumonia in the lower lobe of the right lung. Histology shows a fibrinous exudate and segmented leukocytes in the alveoli. Determine the stage of croupous pneumonia:
a. Resolution
b. -
c. Red hepatization
d. Influx
e. Gray hepatization
30. The patient's ECG shows a shortened R-R interval. How will the cardiac activity change as the result?
a. Force of cardiac contractions will decrease
b. Force of cardiac contractions will increase
c. Frequency of cardiac contractions will increase

d. Frequency of cardiac contractions will decrease
e. Frequency and force of cardiac contractions will decrease
31. 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. Thyroid gland
b. -
c. Pineal gland
d. Parathyroid glands
e. Anterior lobe of the pituitary gland
32. A 40-year-old patient has been diagnosed with herpetic stomatitis. What antiviral drug should be prescribed in this case?
a. Tinidazole
b. Oxacillin sodium
c. Acyclovir
d. Para-aminosalicylic acid
e. Phthalazol (Phthalylsulfathiazole)
33. A 35-year-old patient, who complains of heartburn and sharp pain in the epigastrium on an empty stomach, was prescribed an H_2-histamine blocker. What drug is it?
a. Methacin (metocinium iodide)
b. Almagel
c. Atropine
d. Vicaline
e. Ranitidine
34. 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. Lactic acid, urea, ammonia
b. Alkaline and acid phosphatase
c. Hyaluronidase, cathepsin D
d. Lysozyme, immunoglobulins, leukocytes
e. Lactate dehydrogenase, glucuronidase
35. A man, who for a long time has been suffering from chronic mandibular osteomyelitis, died of chronic kidney disease. Autopsy revealed large lardaceous kidneys. What process had occurred in the kidneys?
a. Renal amyloidosis
b. Glomerulonephritis
c. Necrotic nephrosis
d. Arterial nephrosclerosis
e. Contracted kidney
36. For differential diagnostics of meningitis, cerebrospinal fluid needs to be analyzed. Where is it safe to conduct a lumbar puncture?
a. Th12-L1
b. L5-S1
c. L4-L5
d. L3-L4
e. L1-L2
37. A 65-year-old patient underwent surgical removal of a patch of mucosa on the lower surface of the tongue that had a large gray-white plaque with clear contours and a rough surface that could not be scraped off. The patient's history states that he is a heavy smoker. Microscopically, the following is observed: hyperplasia, hyperkeratosis, parakeratosis, acanthosis of the stratified epithelium, lymphoplasmacytic infiltration, and fibrosis of the mucosal lamina propria. What pathology of the tongue is it?
a. Leukoplakia
b. Lupus erythematosus
c. Lichen ruber planus
d. Chronic candidiasis

e. Keratoacanthoma

38. Two weeks after the recovery from tonsillitis, a 17-year-old young man developed acute diffuse glomerulonephritis. What is the most common cause of this complication?

a. Mycobacterium tuberculosis

b. Staphylococci

c. Streptococci

d. Viruses

e. Candida fungi

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

a. Ribosomes

b. Centrosome

c. Mitochondria

d. Lysosomes

e. Golgi complex

40. During removal of a carious tooth, the dental surgeon noticed a soft elastic gray-pink nodule 1.3 cm in diameter in the region of the dental root. Microscopically, the nodule consists of granulation tissue with lymphocytes, plasma cells, mast cells, macrophages, xanthome cells, and fibroblasts. Make the diagnosis:

a. Granulating periodontitis

b. Simple granuloma

c. Cystic granuloma

d. Epithelial granuloma

e. Eosinophilic granuloma

41. What drugs are used for specific treatment of diphtheria?

a. Antitoxic serum

b. Placental gamma globulin

c. Antibiotics

d. Anatoxin

e. Native plasma

42. A patient with a head trauma was brought to the hospital. He was diagnosed with a fracture of the sphenoid bone at the base of the sphenoidal process. What canal is likely to be damaged in this case?

a. Facial canal

b. Tympanic canal

c. Musculotubal canal

d. Pterygoid canal

e. Carotid canal

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

a. Fascioliasis

b. Paragonimiasis

c. Opisthorchiasis

d. Dicroceliasis

e. Clonorchiasis

44. Sodium thiopental was administered to a patient as a pre-anesthetic, after which the patient developed hypersalivation and laryngospasm. What drug could have prevented these effects, if it had been administered in this case?

a. Atropine sulfate

b. Piracetam

c. Analgin (Metamizole sodium)

d. Ditylin (Suxamethonium)

e. Adrenaline hydrochloride

45. It is known that in metabolism of catecholamine mediators the special role belongs to monoamine oxidase (MAO). How does this enzyme activate these mediators (noradrenaline, adrenaline, dopamine)?

a. Carboxylation

b. Oxidative deamination
c. Hydrolysis
d. Methyl group removal
e. Amino group attachment
46. An 84-year-old patient suffers from parkinsonism. One of the pathogenetic development elements of this disease is deficiency of a certain mediator in some of the brain structures. Name this mediator:
a. Dopamine
b. Noradrenaline
c. Acetylcholine
d. Histamine
e. Adrenaline
47. A 65-year-old man presents with acute mandibular osteomyelitis. 3 days after the disease onset he developed marked edema of skin and soft submandibular cervical tissues. Microscopically there is a diffuse infiltration with neutrophils. What complication of the main disease occurred in the patient's skin tissues?
a. Phlegmon
b. Abscess
c. Carbuncle
d. Furuncle
e. Actinomycosis
48. A patient with chronic hepatitis undergoes blood test for serum protein fractions. Total protein levels are low, which indicates that in the hepatic cells the following organelles are functionally disturbed:
a. Granular endoplasmic reticulum
b. Golgi apparatus
c. Lysosomes
d. Cytoskeleton
e. Mitochondria
49. An excessive bone tissue loss is often observed in older people, which indicates osteoporosis development. What bone tissue cells are activated, resulting in the development of this disease?
a. Osteoblasts
b. Macrophages
c. Tissue basophils
d. Osteoclasts
e. Osteocytes
50. A person died of potassium cyanide poisoning. The death of this person was caused by a compound formed by cyanide and a certain other substance. Name this substance.
a. DNA
b. Cytochrome
c. ATP
d. tRNA
e. Riboflavin
51. Analgin (metamizole) effectively relieves pulpitis-induced pain not only after its resorptive administration, but after topical administration as well. What action of this drug results in anesthetic effect in the latter case?
a. Inhibition of P substance release
b. Inhibition of algogenic kinin formation
c. Cyclooxygenase-2 inhibition
d. Counter-attracting action
e. Local anesthetic effect of Analgin (Metamizole)
52. A child presents with a wound behind the mastoid bone. Bright red blood streams from the wound. Damage was sustained to the branches of the following artery:
a. A) temporalis superior
b. A) carotis interna
c. A) carotis externa

d. A) maxillaris
e. A) occipitalis
53. The cessation of postpartum hemorrhage is associated with the effect of oxytocin on the uterine wall. What uterine membrane responds to this substance?
a. Endometrium
b. Myometrium
c. Submucosa
d. Perimetrium
e. Parametrium
54. During vascular-platelet hemostasis, platelet factor (PF-8) thrombostenin is released from destroyed platelets. What is its function?
a. Platelet aggregation
b. Platelet adhesion
c. Erythrocyte hemolysis
d. Erythrocyte agglutination
e. Thrombus retraction
55. A man with signs of intestinal obstruction was delivered to a hospital. In the process of treatment, roundworms 25-40 cm in size were extracted from the patent's intestine. Determine the species of this helminth:
a. Strongyloides stercoralis
b. Trichocephalus trichiurus
c. Ascaris lumbricoides
d. Enterobius vermicularis
e. Ancylostoma duodenale
56. A skin neoplasm was removed from a patient. The neoplasm is a dense node with a papillary surface that resembles a cauliflower. Microscopically the tumor consists of numerous papillae. Its parenchyma is formed from the covering epithelium with increased number of layers. The epithelium retains the cell polarity, as well as its stratification and intactness of the proper membrane. The tumor stroma is located within the center of the papillae. Make the diagnosis:
a. Cystadenoma
b. Fibroma
c. Fibroadenoma
d. Papilloma
e. Adenoma
57. A histological specimen shows cells that form isogenous groups. There are glycoproteins, proteoglycans, and collagen fibers in the intercellular substance. What tissue is it?
a. Cartilaginous tissue
b. Brown adipose tissue
c. Bone tissue
d. Mucous tissue
e. White adipose tissue
58. Examination of a child detected a patent foramen ovale. Where is this foramen located?
a. In the region of the mitral valve
b. Between the left and right atria
c. Between the right atrium and right ventricle
d. Between the left atrium and left ventricle
e. Between the left and right ventricles
59. If blood glucose levels exceed 10 mmol/L, the following is observed:
a. -
b. Gluconeogenesis
c. Glucosuria
d. Anuria
e. Proteinuria
60. After examination, the signs of acromegaly were detected in a patient. What endocrine gland is involved in this pathological process?

a. Thyroid gland
b. Neurohypophysis
c. Pineal gland
d. Adenohypophysis
e. Adrenal glands
61. When providing dental care, the dentist received a trauma of the index finger. The skin was breached and the wound is likely to be contaminated with the patient's blood. In such cases regulations require for the patient to be examined for HIV-infection and viral hepatitis. What type of examination is necessary in this case?
a. Inoculate blood sample on sugar broth
b. Identify specific antibodies
c. Determine the causative agent by infecting cell culture
d. Study blood for hepatitis markers and anti-HIV antibodies
e. Study the level of T helper cells
62. A 42-year-old man, a hunter, was preparing a fox pelt. One week later, he fell ill. The disease manifested as nervous excitement, hydrophobia, and seizures. Autopsy of the hunter's body revealed encephalitis with damage to the brainstem, walls of the third ventricle, and hippocampus. Encephalitis manifested as accumulation of lymphocytes and microglial cells around dead neurons and blood vessels. Eosinophilic inclusions (Babesh-Negri bodies) were detected in the hippocampal neurons. What disease can be diagnosed in the deceased?
a. Plague
b. Anthrax
c. Brucellosis
d. Tularemia
e. Rabies
63. During identification of pure culture of microorganisms the most important part is a serological identification that is conducted by means of agglutination reaction. What components are necessary to conduct this reaction?
a. Unknown bacterial culture, specific antibodies
b. Specific antigen, known antibody, bacteria
c. Specific antigen, serum sample obtained from the patient
d. Thermoextract, specific serum
e. Unknown antibodies, nonspecific antigen
64. Laboratory analysis confirmed the patient's diagnosis of gout. What analysis was conducted to make this diagnosis?
a. Measuring urine ammonia levels
b. Measuring residual nitrogen in the blood
c. Measuring uric acid levels in the blood and urine
d. Measuring urea levels in the blood and urine
e. Measuring urine creatinine levels
65. An examination of tooth 16 revealed a cavity on its masticatory surface. The cavity has a narrow opening and is filled with softened dentin. Microscopically, there are bacteria in the dilated dentinal canaliculi, some canaliculi are destroyed, the cavities merge together into caverns, decalcification of enamel and dentin occurs without formation of the replacement dentin. Make the diagnosis:
a. Acute superficial dental caries
b. Acute deep dental caries
c. Chronic deep dental caries
d. Dental caries at the stage of white spot lesions
e. Chronic superficial dental caries
66. A patient has markedly dilated subcutaneous veins in the area of the anterior abdominal wall around the umbilical region. In what vessel would there be elevated blood pressure, contributing to these symptoms?
a. V. mesenterica superior
b. V. cava inferior
c. V. cava superior

d. V. mesenterica inferior
e. V. portae hepatis
67. Bacterioscopy of a swab from the patient's urethra detected gonorrhea. Since fluoroquinolones are the drugs of choice for the treatment of gonorrhea, this patient must be prescribed:
a. Furazolidone
b. Ciprofloxacin
c. Cefazolin
d. Urosulfan (Sulfacarbamide)
e. Fluorouracil
68. Autopsy of a 2-year-old child, who died of meningitis, shows absence of thymus and T-dependent areas in the peripheral lymphoid tissue. What immunodeficiency syndrome can be characterized by these changes?
a. Deficiency syndrome of monocytic phagocytes
b. Humoral immunodeficiency syndrome
c. Combined immunodeficiency syndrome
d. Cellular immunodeficiency syndrome
e. Secondary immunodeficiency syndrome
69. Prior to tooth extraction under a local anesthesia, the patient was tested for novocaine allergy. The test result was positive. What substance can be used to administer anesthesia in this case?
a. Procainamide
b. Analgin (Metamizole)
c. Acetylsalicylic acid
d. Lidocaine
e. Sodium valproate
70. A patient has been hospitalized in a severe general condition, with high temperature and difficulty breathing. Bacterioscopy of the material obtained from the patient's pharynx and airways allowed provisionally diagnosing the patient with diphtheritic croup. What staining technique was used in this case?
a. Ozheshko stain
b. Ziehl-Neelsen stain
c. Neisser stain
d. Peshkov stain
e. Burri-Gins stain
71. A 34-year-old woman has a gastric ulcer. To describe the location of the ulcer, the doctor must know, into what parts the stomach can be divided:
a. Anterior and posterior stomach walls, pyloric stomach and cardiac stomach
b. Body and fundus of the stomach, greater and lesser curvatures of stomach
c. Body and fundus of the stomach, pyloric stomach and cardiac stomach
d. Fundus of the stomach, greater and lesser curvatures of stomach, cardiac stomach
e. Fundus and fornix of the stomach, pyloric stomach, pyloric antrum, cardiac stomach
72. A patient with acne is prescribed doxycycline hydrochloride. What should the patient be warned against, regarding administration of this drug?
a. Course of treatment should not exceed 1 day
b. Take before eating
c. Take with large amount of liquid, preferably milk
d. Do not take with vitamin preparations
e. Avoid prolonged exposure to the sun
73. During experiment the processes of food and water hydrolysis products absorption were studied. It was determined that these processes mainly occur in the following gastrointestinal segment:
a. Small intestine
b. Oral cavity
c. Stomach
d. Large intestine
e. Rectum
74. People with diseases of internal organs often assume forced positions (e.g. with lower limbs flexed

and pressed to the abdomen) due to the following reflex response:
a. Dermatovisceral
b. Viscerodermal
c. Visceromotor
d. Motor-visceral
e. Viscero-visceral
75. A man, who accidentally rinsed his mouth with vinegar essence instead of chlorhexidine solution, was brought to a dental clinic. He complains of burning pain during eating. Examination revealed a dense whitish-gray film on his oral mucosa. What keratoplastic drug was prescribed by the dentist in the course of treatment in this case?
a. Sodium bicarbonate
b. Magnesia
c. Diazolin (Mebhydrolin)
d. Vinylin (Polyvinox)
e. Anaesthesin (Benzocaine)
76. During a sea trip, a man developed signs of motion sickness: pallor, sweating, dizziness, nausea, rapid breathing, and decreased blood pressure. What causes this condition in this case?
a. Overstimulation of the visceroreceptors in the abdominal cavity
b. Discoordination between the visual and motor systems
c. Activation of the sympathetic part of the autonomic nervous system
d. Activation of the parasympathetic part of the autonomic nervous system
e. Overstimulation of the vestibular apparatus
77. A child is diagnosed with a helminthic invasion. What changes in the leukogram should be expected in this case?
a. Increased number of lymphocytes
b. Increased number of monocytes
c. Increased number of erythrocytes
d. Increased number of neutrophils
e. Increased number of eosinophils
78. A child presents with caries development and disturbed osteogenesis due to an insufficient intake of a certain microelement. Name this microelement:
a. Fluorine
b. Iodine
c. Cobalt
d. Iron
e. Potassium
79. Nitrogen(II) oxide is an unstable molecule that takes part in vasodilation, immune processes, and neurotransmission. What enzyme participates in formation of nitrogen(II) oxide from arginine?
a. Ornithine carbamoyl transferase
b. Argininosuccinate synthetase
c. Argininosuccinate lyase
d. NO-synthase
e. Arginase
80. A 5-year-old child has suffered a helminthic invasion, which resulted in sensibilization of the body. What parameters of the leukogram can confirm this process?
a. Decreased basophil count
b. Increased neutrophil count
c. Increased basophil count
d. Decreased eosinophil count
e. Increased eosinophil count
81. A patient diagnosed with chronic myelogenous leukemia developed signs of necrotizing ulcerative stomatitis. Mucosal biopsy detected leukemic cells. In this case, oral cavity damage is associated with a certain link of tumor pathogenesis. Name this link.
a. Epigenomic mechanism of transformation
b. Mutational mechanism of transformation

c. Initiation
d. Tumor progression
e. Promotion
82. An acute blood loss has caused a decrease in the systemic blood pressure. This situation can be stabilized with the intensified secretion of a certain hormone. Name this hormone:
a. Renin
b. Glucagon
c. Gastrin
d. Insulin
e. Testosterone
83. During a regular check-up with the dentist, a patient diagnosed with chronic gingivitis presents with no inflammatory changes in the gingival mucosa. This condition of the patient can be characterized as:
a. Complication
b. Recurrence
c. Pathologic process
d. Remission
e. Pathologic reaction
84. Before a maxillofacial surgery, the patient received a drug that is a natural anticoagulant that directly affects blood coagulation factors. It is rapidly acting, if administered intravenously. In dental practice, it is used for prevention of thromboembolic complications during extensive maxillofacial surgery. Name this drug:
a. Neodicoumarin
b. Contrykal (Aprotinin)
c. Phenylin (Phenindione)
d. Aminocapronic acid
e. Heparin
85. A patient is diagnosed with deformed posterior portion of the nasal septum. What bone is deformed?
a. Medial pterygoid plate
b. Lateral pterygoid plate
c. Vomer
d. Perpendicular plate of ethmoid bone
e. Vertical plate of palatine bone
86. During DNA sequencing and biochemical analysis of a polypeptide, it was determined that the linear sequence of nucleotide triplets corresponds with the amino acid sequence in the polypeptide chain. What characteristic of the genetic code was determined?
a. Nonoverlapping
b. Universality
c. Degeneracy
d. Triplet nature
e. Collinearity
87. A patient with peptic ulcer disease of the stomach is prescribed a drug that blocks histamine H2 receptors. Select this drug from the list:
a. Bisacodyl
b. Famotidine
c. Omeprazole
d. Dithylin (Suxamethonium)
e. Atropine sulfate
88. A certain embryonic organ is being studied. In this organ the first blood corpuscles that make up blood as a tissue are being formed. Name this organ:
a. Thymus
b. Red bone marrow
c. Spleen
d. Yolk sac

e. Liver

89. After a cerebral hemorrhage, the patient developed a significant loss of gustatory sensitivity. What cerebral structure is likely to be damaged in this case?

a. Hippocampus
b. Substantia nigra
c. Hypothalamus
d. Amygdala
e. Postcentral gyrus

90. Examination of a 15-year-old patient shows that after a maxillofacial trauma he is unable to move his lower jaw downward. This pathology is likely to be caused by a damaged muscle. What muscle is damaged?

a. Geniohyoid muscle
b. Temporal muscle
c. Medial pterygoid muscle
d. Lateral pterygoid muscle
e. Masseter

91. 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. Biliverdin
b. Verdoglobin
c. Unconjugated bilirubin
d. Bilirubin monoglucuronide
e. Stercobilin

92. A 40-year-old woman was diagnosed with bronchial asthma that manifests as periodic asthma attacks. What type of respiratory failure is observed in the woman during the asthma attack?

a. Pulmonary restrictive
b. Extrapulmonary
c. Hypoxemic
d. Obstructive
e. Dysregulatory

93. 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. Down syndrome
c. Patau syndrome
d. Klinefelter syndrome
e. Trisomy X

94. Broad-spectrum antibiotics can cause various complications, including intestinal candidiasis. What drug is used for treatment of this complication?

a. Nystatin
b. Gramicidin
c. Undecyne
d. Griseofulvin
e. Amphotericin B

95. Formation of dental bone tissue requires calcium. The active form of vitamin D plays a large role in calcium metabolism and is produced in:

a. Intestine and liver
b. Kidneys and liver
c. Stomach and heart
d. Kidneys and heart
e. Liver and muscles

96. In an experimental model, a morphological disturbance was induced in rats in the epithelial cells of the distal parts of the nephron. What functional processes in the kidneys become weakened in this case?

a. Reabsorption of sodium and glucose
b. Reabsorption of proteins
c. Filtration
d. Reabsorption of glucose
e. Reabsorption of electrolytes and water
97. The autposy of the body of a 4-year-old girl, who was ill for a long time and died of confluent pneumonia, showed that the weight of her thymus was 2 grams. Thymus histology revealed sharp decrease in lymphocyte levels, collapse of the thymic stroma, and a small number of calcified, cystically dilated Hassall's corpuscles. What patological process developed in the thymus?
a. Thymic hyperplasia
b. Thymomegaly
c. -
d. Thymic atrophy
e. Thymic dysplasia
98. 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. Serotonin
c. GABA
d. Acetylcholine
e. Dopamine
99. What is the heart rate of a patient diagnosed with paroxysmal tachycardia?
a. 90-100/min.
b. <140/min.
c. 100-110/min.
d. 110-120/min.
e. 120-130/min.
100. Autopsy of the body of a 43-year-old man, who died of cardiopulmonary failure, shows a cavity 3 cm in diameter, filled with viscous green-gray content, in the lower lobe of the right lung. Histology shows that the wall of this structure is made of connective tissue and immature granulation tissue, while the lumen contains neutrophilic leukocytes and products of their breakdown. What type of inflammation is it?
a. Empyema
b. Carbuncle
c. Chronic abscess
d. Acute abscess
e. Furuncle
101. Alkaline phosphatase is an important enzyme contained in saliva. It belongs to the following class of enzymes:
a. Hydrolases
b. Lyases
c. Transferases
d. Oxidoreductases
e. Ligases
102. Most epithelial cells sampled from the oral mucosa of a man contained one X chromatin body. It is characteristic of:
a. Triple X syndrome
b. Turner syndrome
c. Triple Y syndrome
d. Down syndrome
e. Klinefelter syndrome
103. The process of aging in humans is associated with decreased synthesis and secretion of pancreatic juice and its lower trypsin content. It results in disturbed breakdown of:
a. Polysaccharides

b. Phospholipids
c. Lipids
d. Nucleic acids
e. Proteins
104. The patient is in the state of cardiogenic shock, he needs to be given a non-glycoside cardiotonic drug. What will be the drug of choice in this case?
a. Amrinone
b. Caffeine
c. Ethimizol
d. Cordiamin (Nikethamide)
e. Dobutamine
105. Analysis of sputum taken from a patient with suspected pneumonia revealed slightly elongated gram-positive diplococci with tapered opposite ends. What microorganisms were revealed in the sputum?
a. Klebsiella pneumoniae
b. Neisseria meningitidis
c. Neisseria gonorrhoeae
d. Streptococcus pneumoniae
e. Staphylococcus aureus
106. A histological specimen of decalcified lower jaw shows bundles of thick collagen fibers around the root of a tooth. Between these fibers, loose fibrous connective tissue with blood vessels can be identified. What structure is it?
a. Gums
b. Cellular cementum
c. Dentin
d. Dental alveolus
e. Periodontium
107. A microspecimen of heart shows rectangular cells from 50 to 120 micrometer in size with central position of nucleus and developed myofibrils. The cells are connected by intercalated discs. These cells are responsible for the following function:
a. Regeneratory
b. Endocrine
c. Function of heart contractions
d. Function of impulse conduction
e. Protective
108. 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. Genealogical
c. Biochemical
d. Cytological
e. Cytogenetic
109. In some diseases of the large intestine, the quantitative ratio of various mucosal epithelial cells may change. What type of cells is normally predominant in the epithelium of the crypts of the large intestine?
a. Goblet cells
b. Poorly differentiated cells
c. Columnar villous epitheliocytes
d. Endocrinocytes
e. Cells with acidophilic granules
110. Autopsy of the body of a man, who died during an abdominal surgery, revealed numerous thrombi in the veins of the lesser pelvis. Clinically, thromboembolic syndrome was detected. Where should the doctor search for the embolus?
a. Brain

b. Veins of the lower extremities
c. Portal vein
d. Left ventricle of heart
e. Pulmonary arteries
111. Macroscopic examination of lung tissue revealed areas of high airiness with small bubbles. Histological examination revealed thinning and rupture of alveolar septa accompanied by formation of large diversiform cavities. What disease was revealed in the lung?
a. Fibrosing alveolitis
b. Cavernous tuberculosis
c. Pulmonary emphysema
d. Multiple bronchiectasis
e. Chronic bronchitis
112. 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. Salmonella
b. Staphylococci
c. Escherichia
d. Shigella
e. Streptococci
113. A patient delivered to the neurological department presents with increased inhibition processes in the central nervous system. What neurotransmitter can cause this condition, when in excess?
a. Noradrenaline
b. Adrenaline
c. GABA
d. Acetylcholine
e. Dopamine
114. During analysis of a blood sample, the laboratory assistant additionally noted that this sample belongs to a female patient. Such conclusion can be made based on the stuctural characteristics of certain blood corpuscles. Name this type of corpuscles:
a. Monocytes
b. Neutrophils
c. Lymphocytes
d. Basocytes
e. Erythrocytes
115. The microslide of a parenchymatous organ shows hexagonal lobules with blurry margins and a vein in the center of each lobule. In the interlobular connective tissue there are triads, consisting of an artery, a vein, and an excretory duct. What organ is it?
a. Pancreas
b. Thyroid
c. Spleen
d. Thymus
e. Liver
116. During the appendectomy, the patient's a. appendicularis was ligated. This vessel is a branch of the following artery:
a. sigmoidea
b. ileocolica
c. colica dextra
d. colica media
e. mesenterica inferior
117. During oral examination, a dentist noted that the patient's tongue has a whitish coat. What histological structures take part in the formation of this coat?
a. Epithelium of circumvallate papillae
b. Lingual tonsil
c. Epithelium of filiform papillae

d. Epithelium of fungiform papillae
e. Epithelium of foliate papillae
118. A lancelet embryo is at the developmental stage during which its cells multiply, while its general volume remains practically unchanged. What developmental stage is it?
a. Histogenesis
b. Cleavage
c. Organogenesis
d. Gastrulation
e. Neurulation
119. Dopamine precursor - dioxyphenylalanine (DOPA) - is used in treatment of Parkinson's disease. This active substance is produced from the following amino acid:
a. Alanine
b. Cysteine
c. Tyrosine
d. Histidine
e. Tryptophan
120. 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. Lymphocytosis
d. Neutrophilic leukocytosis
e. Leukopenia
121. 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. Reduced hemoglobin
b. Carboxyhemoglobin
c. Methemoglobin
d. Carbhemoglobin
e. Oxyhemoglobin
122. 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. Folate
c. Vallate
d. Filiform
e. Conoid
123. Heart auscultation detected a systolic murmur in the II intercostal space on the left parasternal line. In this case, the doctor was able to auscultate a pathology of the:
a. Aortic valve
b. Bicuspid valve
c. Valve of the pulmonary trunk
d. Valve of the superior vena cava
e. Tricuspid valve
124. The patient was prescribed Vicasol (Menadione) several days before the elective surgery for peptic ulcer disease of the stomach. What is the mechanism of action of this drug?
a. Decreases vascular permeability
b. Suppresses fibrinolysis
c. Suppresses platelet aggregation
d. Increases blood coagulability via intensified prothrombin synthesis
e. Binds free calcium ions, removing calcium from coagulation reaction
125. A 52-year-old woman was injected with a local anesthetic before the tooth extraction. What mechanism of action underlies the analgesic effect of this drug?
a. Disrupted anatomical intactness of the nerve fibers

b. Disrupted isolated conduction of excitation in the nerve fibers
c. Disrupted functioning of microtubules in the nerve fibers
d. Disrupted axonal transport in the nerve fibers
e. Disrupted physiological intactness of the nerve fibers

126. To speed up the healing process in a wound located on the patient's oral mucosa, the patient was prescribed a medicine that is a thermostable protein. This protein can be found in human tears, saliva, and breastmilk and it can be detected in freshly laid eggs. It is known as a factor of the body's natural resistance. Name this protein:
a. Complement
b. Interferon
c. Imanin
d. Interleukin
e. Lysozyme

127. A patient with a many-year-long history of mandibular osteomyelitis developed edema, massive proteinuria, and hyperlipidemia. What condition is the most likely in this patient?
a. Urolithiasis
b. Nephrotic syndrome
c. Pyelonephritis
d. Nephritis
e. Chronic kidney disease

128. According to the data collected by WHO researchers, every year there are approximately 250 millon malaria cases occur in the world. This disease can be encountered predominantly in tropical and subtropical areas. The spread of this disease matches the natural habitat of the following genus of mosquitoes:
a. Aedes
b. Anopheles
c. Culiseta
d. Culex
e. Mansonia

129. A 22-year-old man was brought into the inpatient department with complaints of fever and weakness. One of his enlarged cervical lymph nodes was excised for histological analysis. In the tissues of the lymph node there are necrotic foci surrounded with epithelioid cells, Langhans multinucleated giant cells, and lymphocytes. What disease can be suspected in this case?
a. Syphilis
b. Sarcoidosis
c. Lymphogranulomatosis
d. Lymphatic leukemia
e. Tuberculosis

130. 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. Heparin
b. Hyaluronic acid
c. Collagen
d. Glycogen
e. Albumin

131. A 45-year-old man with a history of left-sided croupous pneumonia died of multiple traumas received as the result of a car accident. On autopsy in the lower lobe of his left lung its posterolateral wall is attached to the chest wall with fibrous adhesions. The lobe is diminished, dense, fleshy on section, grayish-pink in color; its pieces sink, when placed in water. Histological analysis reveals diffuse excessive growth of fibrous connective tissue in these areas. Name this complication of croupous pneumonia:
a. Abscess
b. Gangrene
c. Emphysema
d. Carneous degeneration

e. Atelectasis

132. Lately, the laboratory diagnostics of hepatitis B includes detecting the presence of viral DNA in the patient's blood. What reaction is used to determine it?

a. Indirect hemagglutination reaction
b. Hemagglutination inhibition reaction
c. Polymerase chain reaction
d. Enzyme-linked immunosorbent assay
e. Complement fixation reaction

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

134. To terminate hypertensive crisis the patient was administered solution of magnesium sulfate. What route of drug administration should be chosen?

a. Duodenal
b. Rectal
c. Intra-arterial
d. Intravenous
e. Oral

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

a. Caries
b. Scurvy
c. Gout
d. Pellagra
e. Rickets

136. At a certain stage of human ontogenesis, physiological bond occurs between circulatory systems of the mother and the fetus. This function is being carried out by the following provisory organ:

a. Placenta
b. Yolk sac
c. Serous tunic
d. Amnion
e. Allantois

137. The patient's salivary porphyrin concentration allowed diagnosisng him with porphyria. This disease leads to disturbed synthesis of the following compound:

a. Uric acid
b. Glycogen
c. Creatine
d. Phospholipids
e. Heme

138. Examination of a 32-year-od man shows disproportional skeletal structure and enlargement of the supraorbital ridge, nose, lips, tongue, jawbones, and feet. What is the likely cause of these disturbances?

a. Increased concentration of glucagon
b. Increased levels of somatotropin
c. Increased levels of catecholamines
d. Increased levels of thyroxine
e. Decreased concentration of insulin

139. Due to sustained trauma the patient presents with unevenly dilated pupils (anisocoria). What muscle is blocked?

a. Musculus ciliaris

b. Musculus sphincter pupillae
c. Musculus rectus inferior
d. Musculus rectus lateralis
e. Musculus rectus superior
140. After the tooth extraction, the patient was prescribed ibuprofen for pain relief. What enzyme does it inhibit?
a. Phospholipase A2
b. Lipoxygenase
c. Phosphodiesterase
d. Phospholipase C
e. Cyclooxygenase
141. Examination of a fetus shows cleft upper lip. What congenital facial malformation is it?
a. Cheiloschisis
b. Hypertelorism
c. Palatoschisis
d. Micrognathia
e. Macrostomia
142. A 60-year-old man with heart failure developed hypoxia. What type of hypoxia is primary in this case?
a. Hemic hypoxia
b. Respiratory hypoxia
c. Hypoxic hypoxia
d. Circulatory hypoxia
e. Tissue hypoxia
143. Blood test for diabetes mellitus shows lactic acid levels of 2.5 mmol/L. What complication is it?
a. Hyperosmolar coma
b. Hypoglycemic coma
c. Hyperketonemic coma
d. Lactacidemic coma
e. Hyperglycemic coma
144. 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. High humidity
b. Overexposure to cold
c. High temperature
d. Light
e. Ultrasound
145. On clinical examination a woman presents with excessive sweating, tachycardia, loss of weight, and tremor. What endocrine pathology can cause these signs?
a. Hypothyroidism
b. Hypoaldosteronism
c. Hyperthyroidism
d. Hypogonadism
e. Hypergonadism
146. A man developed a malignant neoplasm in his tongue. What characteristics of this tumor allow identifying it as malignant?
a. Anaplasia
b. Expansive growth
c. Increased number of mitotic cells
d. Positive Pasteur effect
e. Infiltrating growth
147. A 5-year-old boy complains of intense headache and vomiting. Objectively, he has nuchal rigidity, vomiting without nausea, herpes rash on his face, and fever. What pathologic material should

be obtained for bacteriology, to confirm the diagnosis of cerebrospinal meningitis?
a. Fecal culture of N.Meningitidis
b. Urine culture of N.Meningitidis
c. Vomit content analysis
d. Spinal tap
e. A sample of N.Meningitidis bacteria from urogenital mucosa
148. A patient was diagnosed with thrombosis of the inferior mesenteric artery. What part of the intestine is affected in this case?
a. Sigmoid colon
b. Ileum
c. Jejunum
d. Vermiform appendix
e. Duodenum
149. During an appointment with the dentist, a patient developed hypersalivation. What group of drugs can decrease this phenomenon?
a. Cholinergic agonists
b. Cholinergic antagonists
c. Adrenergic antagonist
d. Adrenergic agonist
e. Astringent agents
150. 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 overdosage?
a. Calcium chloride
b. Potassium permanganate
c. Activated charcoal
d. Sodium chloride
e. Potassium chloride
151. A woman was diagnosed with purulent stomatitis. What complete blood count finding is characteristic of this disease?
a. Anemia
b. Monocytosis
c. Leukocytosis
d. Thrombocytosis
e. Lymphocytosis
152. A man after a traffic accident was brought in a severe condition to the intensive care unit. The patient's condition can be described as a severe pathologic process accompanied by exhaustion of vital functions that brings the body to the brink of death due to critical decrease of capillary circulation in the affected organs. Name the patient's condition:
a. Shock
b. Agony
c. Collapse
d. Coma
e. Preagony
153. After a cold the patient developed impaired perception of pain and thermal stimuli in the front 2/3 of the tongue. What nerve was damaged in this case?
a. Vagus
b. Trigeminal
c. Phrenic
d. Hypoglossal
e. Chorda tympani
154. During a surgery on the right side of the neck, excursion of the right diaphragmatic dome was disturbed. This disturbance occurred because of the damage to the following nerve:
a. Left phrenic nerve

b. Supraclavicular nerve
c. Right phrenic nerve
d. Right transverse cervical nerve
e. Left transverse cervical nerve
155. An AIDS patient presents with revertase enzyme activity in the cells affected by HIV infection. This enzyme takes part in the synthesis of the following nucleic acid:
a. tRNA
b. rRNA
c. mRNA
d. Pre-mRNA
e. DNA
156. A child presents with dry cough. What non-narcotic antitussive drug can relieve the patient's condition?
a. Glaucine hydrochloride
b. Morphine hydrochloride
c. Potassium iodide
d. Codeine phosphate
e. Althaea officinalis roots
157. In an adult person, mitosis is not observed in certain cells throughout life and the quantity of DNA in them remains constant. What are these cells called?
a. Smooth muscle cell
b. Endothelial cells
c. Neurons
d. Epidermal cells
e. Hematopoietic cells
158. In 8 days after a surgery the patient developed tetanus. The surgeon suspects this condition to be caused by suture material contaminated by tetanus agent. The material is delivered to a bacteriological laboratory. What nutrient medium is required for primary inoculation of the suture material?
a. Sabouraud agar
b. Hiss medium
c. Kitt-Tarozzi medium
d. Egg-yolk salt agar
e. Endo agar
159. 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. A
b. B_2
c. D
d. E
e. K
160. Laboratory analysis revealed UDP-glucuronyl transferase deficiency in the patient. What blood values can confirm this enzymopathy?
a. Phenylketonuria
b. Ketoacidosis
c. Hyperbilirubinemia
d. Uremia
e. Indicanuria
161. Differentiation of B-lymphocytes into plasma cells leads to synthesis of immunoglobulins that ensure specific immune response of the body. Differentiation of B-lymphocytes takes place in the following organ of immune system:
a. Thymus
b. Tonsils
c. Red bone marrow
d. Thyroid gland

e. Liver

162. A person in a hot weather for a long time had no water, which resulted in a severe thirst. What indicator of blood homeostasis was affected, leading to the development of this sensation?

a. pH

b. Plasma oncotic pressure

c. Plasma osmotic pressure

d. Hematocrit

e. Glucose level

163. An autopsy of a 42-year-old man, who suffered from chronic diffuse bronchitis and died of cardiopulmonary failure, shows large hyperinflated lungs that cover mediastinum with their edges. The lungs do not deflate, are colored pale gray, crunch on section; lung surface does not straighten out when pressed with a finger, resulting in a permanent depression. Mucopurulent exudate is produced from the bronchial lumen. What is the most likely diagnosis?

a. Vicarious compensatory emphysema

b. Chronic diffuse obstructive emphysema

c. Chronic focal emphysema

d. Primary idiopathic emphysema

e. Interstitial emphysema

164. After the water supply system had been put into operation in a new residential area, the medical officers of sanitary and epidemiological station measured total microbial number in the water. Name the maximum permissible value of this indicator for potable water:

a. 400

b. 1000

c. 500

d. 10

e. 100

165. During acute inflammation of parotid gland, there is damage to the cells of secretory segments observed. What cells are damaged in this case?

a. Serous cells, cells with basal striation, stellate cells

b. Seromucous cells

c. Brush-bordered epithelial cells, cells with basal striation

d. Serous cells, myoepithelial cells

e. Albuminous cells, serous cells, mucous cells

166. Histology of the heart valves of a patient who died of acute heart failure revealed mucoid edema, fibrinoid changes, sclerosis, and fresh and old thrombi on the obturating edge of the valve. What form of endocarditis is observed in the deceased?

a. Polypous ulcerative endocarditis

b. -

c. Fibroplastic endocarditis

d. Recurrent verrucous endocarditis

e. Diffuse endocarditis

167. A hospitalized person needs catheterization of the subclavian vein. In what topographical anatomical region must the puncture be performed for this purpose?

a. Trigonum omotracheale

b. Spatium antescalenum

c. Trigonum caroticum

d. Incisura jugularis

e. Spatium interscalenum

168. A 55-year-old man with radiation sickness was brought into the hospital with signs of hemorrhagic syndrome. What changes in his blood are the most important in the pathogenesis of this syndrome?

a. Lymphopenia

b. Neutropenia

c. Immune tolerance

d. Thrombocytopenia

e. Eosinopenia

169. Examination of the oral cavity shows that gingival mucosa of the upper jaw is reddish, has signs of edema, and slightly bleeds, with the damage localized primarily at the interdental areas. What diagnosis is likely in this case?

a. Parodontosis

b. Catarrhal gingivitis

c. Hypertrophic gingivitis

d. Local parodontitis

e. Ulcerative gingivitis

170. A smear specimen of human red bone marrow shows, among myeloid cells and adipocytes, certain stellate cells with oxyphilic cytoplasm that are connected with their cellular processes. Name these cells:

a. Macrophages

b. Fibroblasts

c. Dendritic cells

d. Reticular cells

e. Osteocytes

171. A surgeon must amputate the damaged part of the patient's foot along the line of Lisfranc joint. What ligament must be cut in this case?

a. Medial interosseous tarsometatarsal ligament

b. Talonavicular ligament

c. Bifurcated ligament

d. Calcaneonavicular ligament

e. Talocalcaneal ligament

172. A newborn failed to take his first breath. Autopsy revealed that despite unobstructed airways the lungs of the newborn were unable to stretch. What is the most likely cause of this condition?

a. Bronchial narrowing

b. Absence of surfactant

c. Alveolar enlargement

d. Bronchial rupture

e. Pleural thickening

173. On an electronic microphotograph of epithelial tissue a certain structure can be identified. The structure is located under the epithelial cells and shaped like a three-dimensional reticulum. Name this structure:

a. Cytolemma

b. Basement membrane

c. Hemidesmosome

d. Desmosome

e. Lamina propria

174. Increased aortic blood pressure created an overload of the cardiac muscle. In what cardiac structure does the muscle wall respond to the irritation in this case?

a. Right atrium

b. Left atrium

c. Venous sinus

d. Left ventricle

e. Right ventricle

175. Examination of a tooth shows that there is a large cavity in its crown. The floor of the cavity consists of thin layer of softened dentin that separates the cavity from the pulp. What is the most likely diagnosis?

a. Pulpitis

b. Median caries

c. Superficial caries

d. Deep caries

e. Periodontitis

176. 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 thromboplastin formation
b. Intensified fibrinolysis
c. Decreased thrombin formation
d. Decreased fibrin formation
e. Increased fibrinogen synthesis
177. 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. Incus
b. Processus mastoideus
c. Malleus
d. Squama os temporale
e. Stapes
178. In COVID-19 patients, type II pneumocytes in the lungs are the target cells for coronavirus SarsCov-2. What function of the alveolar epithelium primarily becomes impaired as a result of viral damage to these cells?
a. Mucus production
b. Additional air purification in the alveoli
c. Surfactant synthesis
d. Surfactant dissolution
e. Gas exchange
179. In some Ukrainian regions, local cases of malaria were detected. What insects take part in such outbreaks?
a. Flies of Simulium genus
b. Mosquitoes of Phlebotomus genus
c. Gadflies of Tabanidae family
d. Mosquitoes of Anofeles genus
e. Flies of Ceratopogonidae family
180. An inoculation of intestinal microorganisms on the Endo medium results in the growth of colonies that can be either colored or colorless. This process is based on the fermentation of a certain carbohydrate. Name this carbohydrate:
a. Sucrose
b. Lactose
c. Maltose
d. Arabinose
e. Glucose
181. Ultrasound of a 1.5-year-old child showed a non-union of the foramen ovale. Where in the heart is this anatomic structure located?
a. -
b. Left ventricular wall
c. Interatrial septum
d. Right ventricular wall
e. Interventricular septum
182. When determining comparative tissue radiosensitivity, it was revealed that different tissues have different level of sensitivity toward ionizing radiation. What tissue of those listed below is the most radiosensitive?
a. Cartilaginous
b. Nerve
c. Muscular
d. Hematopoietic
e. Bone
183. What receptors respond to the gas composition of the blood that enters the brain?
a. Nociceptors
b. Mechanoreceptors

c. Aortic receptors
d. Carotid sinus receptors
e. Bulbar receptors
184. Some mRNA triplets (UAA, UAG, UGA) code no amino acids and terminate the information readout instead, i.e., they can stop the process of transcription. These triplets are called:
a. Anticodons
b. Stop codons
c. Operators
d. Exons
e. Introns
185. Premature newborns have impaired surfactant synthesis. What is the function of a surfactant in the lungs?
a. Inhibits O_2 diffusion through the blood-air barrier
b. Facilitates diaphragmatic excursion
c. Increases airway resistance
d. Reduces alveolar surface tension
e. Increases alveolar surface tension
186. A person complains that lifting the lower jaw is problematic because of an incised wound in the area of the gonial angle. What muscle is likely to be damaged in this case?
a. M. masseter
b. M. temporalis
c. M. pterigoideus medialis
d. M. pterigoideus lateralis
e. M. orbicularis oris
187. Examination revealed the patient to have decreased secretory function of the nasal cavity glands.What nerve provides parasympathetic innervation of these glands?
a. N. petrosus minor
b. N. petrosus profundus
c. N. maxillaris
d. N. petrosus major
e. N. chorda tympani
188. Intensive physical work leads to accumulation of lactic acid in muscles. What enzyme enables formation of lactic acid from pyruvate in the process of anaerobic glycolysis?
a. Pyruvate carboxylase
b. Pyruvate dehydrogenase
c. Aldolase
d. Phosphofructokinase
e. Lactate dehydrogenase
189. 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. Ketoconazole
b. Oxacillin
c. Ampicillin
d. Furadonin (Nitrofurantoin)
e. Acyclovir
190. A patient presents with acute onset of the disease: high fever and enlarged painful spleen. On the 10th day since the onset the patient developed a maculopapular rash on the abdomen. On the 21st day the patient died of peritonitis. Postmortem study of the body shows deep ulcers in the area of necrotic aggregate lymphoid follicles (Peyer's patches) in the ileum of the deceased. One of the ulcers is perforated and diffuse fibrinopurulent peritonitis is observed. What disease can be suspected in this case?
a. Typhoid fever
b. Dysentery
c. Cholera
d. Salmonellosis

e. Intestinal amebiasis

191. Correllation between one nerve fiber and all the muscle fibers it innervates is called a motor unit. What body part has the smallest number of muscle fibers innervated by one nerve fiber?

a. Back

b. Eye

c. Shoulder

d. Palm

e. Shin

192. A 28-year-old patient complains of frequent gingival hemorrhages. Blood test revealed the clotting factor II (prothrombin) deficiency. What phase of blood coagulation is impaired in this patient?

a. -

b. Thrombin generation

c. Fibrinolysis

d. Vascular-platelet haemostasis

e. Clot retraction

193. A patient presents with aspermia. What organ is functionally disturbed?

a. Testicle

b. Prostate

c. Seminal vesicles

d. -

e. Epididymis

194. A patient with bronchial asthma developed acute respiratory insufficiency. What type of respiratory insufficiency develops in such cases?

a. Obstructive disturbance of alveolar ventilation

b. Perfusion insufficiency

c. Dysregulatory disturbance of alveolar ventilation

d. Diffusion insufficiency

e. Restrictive disturbance of alveolar ventilation

195. A patient was diagnosed with a genetic disorder leading to lipoprotein lipase deficiency. What finding will be characteristic of biochemical blood analysis in this case?

a. Hypochylomicronemia

b. Hypoglycemia

c. Hypotriacylglycerolemia

d. Hypertriacylglycerolemia

e. Hyperglycemia

196. A patient has suffered a head injury. On examination there is a subcutaneous hematoma in the temporal area. What vessel was damaged, thus resulting in the hematoma development?

a. A. occipitalis

b. A. auricularis posterior

c. A. temporalis superficialis

d. A. buccalis

e. A. maxillaris

197. Erythrocytes of the patient with hemolytic anemia present with significant decrease of pyruvate kinase activity. What methabolic process is disturbed in this case?

a. Glycolysis

b. Gluconeogenesis

c. Glycogen synthesis

d. Glycogenolysis

e. Pentose-phosphate pathway of glucose oxidation

198. 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. Atropine

b. Platyphylline

c. Tropicamide

d. Mesaton (Phenylephrine)

e. Homatropine

199. A patient with hypersensitivity to sulfonamides needs conduction anesthesia for a tooth extraction. What drug should be used in this case?

a. Novocaine (Procaine)
b. Anaesthesin (Benzocaine)
c. Dicain (Tetracaine)
d. Cocaine
e. Lidocaine

200. A 72-year-old man with hepatocirrhosis developed hepatic coma. Its development is caused by the substances, that are being neutralized in the liver, entering into general circulation through portacaval shunts (portal hypertension syndrome) and necrosis of hepatic cells. What type of hepatic coma is characterized by these presentations?

a. Ketoacidotic
b. Mixed
c. Hepatocellular
d. Shunt
e. Parenchymatous

201. What bioactive substance stimulates the release of bicarbonate ions by the cells of the pancreatic ducts?

a. Cholecystokinin-pancreozymin (CCK-PZ)
b. -
c. Histamine
d. Gastrin
e. Secretin

202. A patient with streptococcal pneumonia was prescribed an antimicrobial agent that disrupts microbial membranes. Name this drug:

a. Azithromycin
b. Erythromycin
c. Doxycycline hydrochloride
d. Benzylpenicillin sodium salt
e. Gentamicin sulfate

203. A sick child has gingivitis caused by anaerobic infection. The child needs to be prescribed an antimicrobial drug that belongs to the following class:

a. Nitrofurans
b. Polymyxins
c. Sulfonamides
d. Aminoglycosides
e. Nitroimidazoles

204. Every diet includes products with dietary fiber. These fibers cannot be digested by gastrointestinal enzymes and cannot be absorbed by the body. What is the role of dietary fiber?

a. Inhibits secretory function of alimentary tract
b. Inhibits secretion of enzymes in digestive juices
c. Inhibits absorptive function of alimentary tract
d. Inhibits motor function of alimentary tract
e. Stimulates motor function of alimentary tract

205. Examination of a hematopoietic organ reveals lobules formed by a lymphoid tissue with stroma that consists of epithelioreticular cells. What organ is being studied?

a. Spleen
b. Red bone marrow
c. Thymus
d. Lymph node
e. Palatine tonsil

206. Cells of sensory spinal ganglions are a part of reflex arches. What type of neurons are these cells?

a. Pseudounipolar

b. Multipolar
c. Bipolar
d. Unipolar
e. -
207. The most common cause of incomplete lipid digestion in the digestive tract and an increase in the levels of neutral fats in the feces is a deficiency of a certain enzyme. Name this enzyme:
a. Phospholipase
b. Intestinal lipase
c. Enterokinase
d. Gastric lipase
e. Pancreatic lipase
208. During the oral cavity examination, the dentist detected an inflammation of the tissues that surround the tooth. What anatomical structure is inflamed in this case?
a. Gingiva
b. -
c. Alveola dentalis
d. Paradontium
e. Cementum
209. What is the mechanism of ESR acceleration in pregnant women?
a. Increased blood volume
b. Increased fibrinogen levels
c. Intensified function of the bone marrow
d. Increased erythrocyte count
e. Increased albumin levels
210. Some unicellular organisms, i.e. amoebae, feed via phagocytosis. What cells of the human body use this method not as a means of feeding, but as a defensive mechanism against foreign bodies (microorganisms, dust, etc.)?
a. Myocytes
b. Erythrocytes
c. Platelets
d. Leucocytes
e. Epithelial cells
211. Serological diagnostics of infectious diseases is based on specific interaction between antibodies and antigens. When an antigen is sedimented from a solution, using an immune serum and an electrolyte, this reaction is called:
a. Precipitation reaction
b. Neutralization reaction
c. Complement binding reaction
d. -
e. Hemadsorption reaction
212. After an exposure to radiation, the patient is recommended to include more vegetable oils in his diet as they are a source of polyene fatty acids. Name the acid that has three double bonds:
a. Palmitic acid
b. Oleic acid
c. Stearic acid
d. Linolenic acid
e. Arachidonic acid
213. 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. Ziehl-Neelsen stain
c. Aujeszky stain
d. Burri stain
e. Loeffler stain

214. Autopsy of a man, who died suddenly with signs of acutely disturbed cerebral circulation, revealed aneurysm rupture of the medial cerebral artery and a round cavity 4 cm in diameter filled with blood in his frontal lobe. Name this type of hemorrhage:
a. -
b. Petechiae
c. Contusion
d. Hematoma
e. Hemorrhagic infiltration
215. A patient has high body temperature, increased basal metabolic rate, and tachycardia at rest, which can be caused by hyperfunction of the:
a. Thyroid gland
b. Adrenal cortex
c. Neurohypophysis
d. Gonads
e. Pancreas
216. During ultrasound a patient with atherosclerosis was diagnosed with bilateral stenosis of the renal arteries. Specify the bioactive substance that is the key pathogenetic link in the development of arterial hypertension in this case:
a. Renin
b. Adrenaline
c. Thyroxin
d. Cortisol
e. Vasopressin
217. A man came to a dentist with complaints of pain, redness, and swelling of the gums. He was provisionally diagnosed with herpetic gingivostomatitis. What virus can cause this disease?
a. Cytomegalovirus
b. Epstein-Barr virus
c. Herpes zoster virus
d. Herpes simplex virus, type 1
e. Herpes simplex virus, type 2
218. 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 B_1
b. Vitamin A
c. Vitamin B_2
d. Vitamin PP
e. Vitamin C
219. In the patient's blood there is a C-reactive protein that chemically can be classified as a glycoprotein. It indicates the following pathology:
a. Rheumatism
b. Anemia
c. Porphyria
d. Leucopenia
e. Thrombocytopenia
220. 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) occipitalis
b. A) auricularis posterior
c. A) temporalis superficialis
d. A) maxillaris
e. A) facialis
221. Examination of a patient shows base metabolism increased by 50%. This change is caused by increased secretion of the following hormone:
a. Thyroxine
b. Parathormone

c. Prolactin
d. Growth hormone
e. Insulin
222. During examination of the patient's oral cavity a dentist noticed deformation of the teeth and a crescent indentation on the upper right inscisor. The teeth are undersized, barrel-shaped - tooth cervix is wider than its edge. The patient uses a hearing aid, suffers from visual impairment. What type of syphilis affects teeth in such a way?
a. Neurosyphilis
b. Primary
c. Secondary
d. Late congenital
e. Early congenital
223. Often the cause of secondary immunodeficiency is an infectious affection of an organism, when agents reproduce directly in the cells of immune system and destroy them. Specify the diseases, during which the described above occurs:
a. Tuberculosis, mycobacteriosis
b. Poliomyelitis, viral hepatitis type A
c. Q fever, typhus
d. Infectious mononucleosis, AIDS
e. Dysentery, cholera
224. A 50-year-old patient suddenly developed headache, dizziness, and nausea. Blood pressure --- 220/110 mm Hg. After intravenous administration of a 0.1% hygronium solution, the patient's condition improved. What is the mechanism of action of this drug?
a. Angiotensin-converting enzyme blockade
b. Blockade of Ca^++ channels
c. Blockade of nicotinic acetylcholine ganglion receptors
d. Activation of alpha_2-adrenoceptors
e. Blockade of beta_1-adrenoceptors
225. What structure in the cell becomes the main target, when exposed to ionizing radiation?
a. Ribosomes
b. DNA
c. Cytoplasmic membrane
d. Mitochondria
e. Sarcoplasmic reticulum
226. Acetylsalicylic acid was prescribed to reduce the fever caused by an acute respiratory viral infection. What type of therapy is it?
a. Stimulating therapy
b. Preventive therapy
c. Symptomatic therapy
d. Etiotropic therapy
e. Replacement therapy
227. After a collision of two cars, one of the drivers presents with a deformity in the middle third of the left shin. The driver feels extreme pain that exacerbates on attempts to move it. The ends of a broken bone protrude from the open wound, the bone is triangular on section, movements cause the bleeding to intensify. What bone was damaged?
a. Femur
b. Fibula
c. Tibia
d. Patella
e. Talus
228. In an experiment, cerebral neurons of a test animal were electrostimulated, which resulted in hypophagia (refusal to eat food). Where in the brain were the electrodes placed?
a. Neurohypophysis
b. Thalamus
c. Hypothalamus

d. Adenohypophysis
e. Red nucleus
229. A patient diagnosed with atherosclerosis, ischemic heart disease, and rest angina pectoris was hospitalized into the cardiology department. Laboratory analysis shows high lipid levels in his blood plasma. What class of plasma lipids plays the main role in pathogenesis of atherosclerosis?
a. High-density lipoproteins
b. Fatty acid-albumin complexes
c. Chylomicrons
d. Low-density lipoproteins
e. alpha-lipoproteins
230. A patient complains of pain in the eyeballs. Examination detects an increase in the intraocular pressure. This condition has been caused by impaired outflow of a certain fluid. What fluid is it?
a. Endolymph
b. Aqueous humour
c. Perilymph
d. Lymph
e. Tears
231. A child was hospitalized with diagnosis of diphtheria. What should be given to this child for specific therapy?
a. Codivac vaccine, sulfanilamides
b. Diphtheria antitoxin serum, antibiotics
c. Diphtheria bacteriophage
d. Diphtheria vaccines: DPT, DT, diphtheria vaccine
e. Diphtheria anatoxin, antibiotics
232. A 58-year-old man with acute heart failure developed decreased daily diuresis - oliguria. What is the mechanism of this phenomenon?
a. Decreased oncotic blood pressure
b. Decreased glomerular filtration
c. Decreased number of functional glomeruli
d. Decreased permeability of membrane glomeruli
e. Increased hydrostatic pressure on the capillary wall
233. A patient has a parotid gland inflammation. What nerve is involved in the inflammatory process in this case?
a. N. maxillaris
b. N. mandibularis
c. N. tympanicus
d. N. facialis
e. N. linqualis
234. Contractions of the respiratory muscles completely stop, if:
a. Spinal cord transection at the level of upper cervical segments
b. Bilateral vagal transection
c. -
d. Spinal cord transection at the level of lower cervical segments
e. Separation of pons cerebelli from medulla oblongata
235. A 40-year-old woman is being treated at the therapeutics department. Her temperature chart shows cyclic fevers alternating with periods of temperature normalization that last for several days. What type of temperature profile is it?
a. Febris intermittent
b. -
c. Febris recurrens
d. Febris remittens
e. Febris continua
236. 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. Right and left superior nasal meatus
c. Left middle nasal meatus
d. Right middle nasal meatus
e. Left inferior nasal meatus
237. 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. Sulfhemoglobin
b. Carbhemoglobin
c. Carboxyhemoglobin
d. Oxyhemoglobin
e. Methemoglobin
238. It is known that calcium ions, along with other factors, enable contraction of the muscle tissue. In the process of muscle contraction, calcium interacts with the following structures:
a. Actin protein of thin fibrils
b. Troponin protein of thin fibrils
c. Myosin protein of thick fibrils
d. Calsequestrin protein
e. Actomyosin complex of sarcolemma
239. A 58-year-old man has a clinical presentation of acute pancreatitis. This diagnosis can be confirmed, if urine levels of a certain substance are elevated. Name this substance:
a. Amylase
b. UreaD) Albumin
c. Residual nitrogen
d. Uric acid
240. A patient with signs of anxiety, fear, uncertainty, and mental strain was prescribed diazepam. What mechanism of tranquilizing action can be observed in this case?
a. Interaction with cholinergic receptors
b. Interaction with dopamine receptors
c. Interaction with benzodiazepine receptors
d. Interaction with serotonin receptors
e. Interaction with adrenergic receptors
241. A patient with a severe toothache that lasted for several days made no appointment with a doctor and engaged in self-treatment instead. As a result, his tooth needs to be extracted. What analgesic increases the probability of a hemorrhage developing after the tooth is extracted?
a. Acetylsalicylic acid
b. Dimedrol (Diphenhydramine)
c. Paracetamol
d. Analgin (Metamizole)
e. Codeine phosphate
242. In an experiment, ribosomes were destroyed in polychromatophilic erythroblasts of human red bone marrow. In this case, the synthesis of a certain specific protein will be disturbed. Name this protein.
a. Collagen
b. Laminin
c. Fibrinogen
d. Globin
e. Elastin
243. After a traffic accident a man presents with severe blood loss, consciousness disturbance, low blood pressure, as well as compensatory activation of the renin-angiotensin system, which results in:
a. Increased blood coagulation
b. Intensification of erythropoiesis
c. Intensification of heart contractions
d. Hyperproduction of aldosterone
e. Hyperproduction of vasopressin
244. A patient with essential hypertension presents with significant increase in left ventricular

myocardial mass. It is likely to be caused by:
a. Increased number of cardiomyocytes
b. Increased volume of cardiomyocytes
c. Proliferation of connective tissue
d. Myocardial fluid retention
e. Fatty infiltration of the myocardium
245. A patient with malignant tumor was prescribed a narcotic analgesic to relieve the unbearable pain. What is the mechanism of analgesic action of such drugs?
a. Activation of opiate receptors
b. Inhibition of cholinergic receptors
c. Activation of D2 dopamine receptors
d. Inhibition of serotonin receptors
e. Inhibition of histamine receptors
246. During examination of the oral cavity at the vestibular surface of the lower right incisor there was detected a rounded growth on the thin pedicle. Histologically: in the connective tissue there are numerous thin-walled sinusoids, hemorrhage areas, hemosiderin foci, and giant cells resembling osteoclasts. Make the diagnosis:
a. Angiomatous epulis
b. Granular cell ameloblastoma
c. Giant cell epulis
d. Cavernous hemangioma
e. Gingival fibromatosis
247. A patient needs to be prescribed a broad-spectrum fluoroquinolone. Select such drug from the list below:
a. Ciprofloxacin
b. Chinoxydin
c. Carbenicillin
d. Amoxicillin
e. Azlocillin
248. After a tooth extraction, the patient developed bleeding. Blood test revealed a decrease in the prothrombin index. What vitamin deficiency can be the cause of this condition?
a. B
b. C
c. K
d. A
e. D
249. A patient was hospitalized on the fifth day after the onset of the disease that manifests as jaundice, muscle pain, chills, and nosebleeds. During laboratory diagnostics, dark-field microscopy of a drop of the patient's blood was performed. Name the causative agents of this disease.
a. Bartonella bacilliformis
b. Calymmatobacterium granulomatis
c. Rickettsia mooseri
d. Borrelia duttonii
e. Leptospira interrogans
250. A patient was delivered into the admission room. He has the signs of acute heart failure: pallor, acrocyanosis, frequent and shallow respirations. What medicine of those listed below is indicated in this case?
a. Cordiamin (Nikethamide)
b. Digitoxin
c. Adrenaline hydrochloride
d. Corglycon (Convallatoxin)
e. Nitroglycerine
251. Various substances can be used as anticoagulants. Among them there is a certain naturally derived polysaccharide. Name this polysaccharide:
a. Hyaluronic acid

b. Dextran
c. Dermatan sulfate
d. Chondroitin sulfate
e. Heparin
252. A traumatologist has diagnosed a patient with a fracture in the area of the canine fossa. This fossa is located on the:
a. Frontal bone
b. Maxilla
c. Mandible
d. Zygomatic bone
e. Palatine bone
253. A patient has been diagnosed with Vaquez disease (polycythemia vera). What is the cause of this pathology?
a. Hereditary defect
b. Tumor damage to the progenitor cells of myelopoiesis
c. Redistribution of erythrocytes
d. Local renal hypoxia
e. Increased erythropoietin production
254. A patient with a basilar skull fracture presents with damage to the hook-like process of the medial pterygoid plate of the sphenoid bone. What muscle of the soft palate will become dysfunctional in this case?
a. Tensor veli palatini muscle
b. Musculus uvulae
c. Palatoglossus muscle
d. Palatopharyngeus muscle
e. Levator veli palatini muscle
255. A patient, who works in underground mining, developed pulmonary fibrosis. In this case spirometry shows the following:
a. Increased vital capacity of lungs
b. Increased airway resistance
c. Decreased airway resistance
d. Decreased vital capacity of lungs
e. Normal airway resistance
256. After spinal trauma the patient presents with absence of voluntary movements and tendon reflexes; sensitivity is retained only in the lower extremities. What is the mechanism of these disturbances and what part of the spine was injured?
a. Spinal shock, thoracic spine
b. Spinal shock, cervical spine
c. Central paralysis, coccyx
d. Peripheral paralysis, cervical spine
e. -
257. 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. N. transversus colli
c. Nn. supraclaviculares
d. N. occipitalis minor
e. N. auricularis magnus
258. Mitochondrial respiratory chain contains complex cytochrome proteins in its structure. What type of reactions do they catalyze?
a. Hydration
b. Transamination
c. Decarboxylation
d. Redox

e. Deamination

259. The patient exhausted by starvation presents with intensification of the following process in the liver and kidneys:

a. Gluconeogenesis

b. Bilirubin synthesis

c. Urea synthesis

d. Hippuric acid synthesis

e. Uric acid synthesis

260. Rectal microscopy shows large necrotic foci on the mucosa. Necrotic masses are saturated with fibrin, forming a film. Mucosa and submucosa on the periphery of the necrotic foci are hyperemic, swollen, and have hemorrhages and leukocyte infiltrations. What disease can be suspected?

a. Amebiasis

b. Dysentery

c. Salmonellosis

d. Cholera

e. Typhoid fever

261. A dentist was hospitalized into the infectious diseases unit with complaints of nausea, appetite loss, icteric sclerae, and subcostal pain on the right. Laboratory analysis confirmed the diagnosis of viral hepatitis, type B) What infection transmission route is the most likely in this case?

a. Parenteral

b. Vector-borne

c. Airborne dust particles

d. Alimentary

e. Airborne droplets

262. A structural gene - a DNA molecule segment - was damaged. However, it did not result in amino acid replacement in the protein, because after a time this damage was corrected with specific enzymes. Name this DNA ability:

a. Transcription

b. Reverse transcription

c. Replication

d. Repair

e. Mutation

263. A woman gave birth to a child with toxoplasmosis. The woman thinks that she contracted toxoplasma from her friend, who recently gave birth to a child with the same disease. A human \textbfCANNOT be infected with toxoplasma through the following route:

a. Drinking water, contaminated with oocytes

b. Contact with a cat

c. Contact with a sick person

d. Eating undercooked meat of an infected domesticated animal

e. Eating unwashed vegetables

264. After a family quarrel, a 70-year-old man was hospitalized with the diagnosis of ischemic heart disease, preinfarction state. What substance can cause a coronary angiospasm in the patient?

a. Nitrous oxide

b. Adenosine

c. Thromboxane A2

d. Potassium ions

e. Prostacyclin

265. After a craniocerebral injury, a 45-year-old woman was diagnosed with superior orbital fissure syndrome (Rochon–Duvigneaud syndrome). It is a complex of symptoms resulting from damage to certain pairs of cranial nerves that pass through the fissure of the same name. What pairs of nerves are affected in this case?

a. N. vestibulocochlearis, n. glossopharyngeus

b. N. facialis, n. trochlearis, n. abducens

c. N. vagus, n. accessorius, n. hypoglossus

d. N. oculomotorius, n. trochlearis, n. abducens, r. ophthalmicus n. trigemini

e. N. olfactorius, n. opticus

266. A man, who for a long time has been suffering from chronic mandibular osteomyelitis, died of renal failure. Autopsy shows enlarged yellow-white kidneys that are extremely dense and have a waxy sheen. Light microscopy detected deposits of homogeneous pink masses in the glomerular capillary loops, walls of arterioles and arteries, canalicular basement membrane, and stroma. These deposits color brick-red when stained with Congo red. What process developed in the kidneys?

a. General hyalinosis

b. Secondary amyloidosis

c. Fibrinoid necrosis

d. Primary amyloidosis

e. Local hyalinosis

267. A child was born with numerous maldevelopments: cleft lip and palate, microphthalmia, syndactyly, heart and kidney diseases. The child died at the age of one month. The child's karyotype was 47, 13+. What type of mutation caused this condition?

a. Polyploidy

b. Trisomy

c. Translocation

d. Duplication

e. Inversion

268. A patient came to a dentist complaining of fever and characteristic small vesicles on the buccal, palatal, and lingual mucosa. The dentist suspects herpetic stomatitis. What additional test is necessary to confirm the diagnosis?

a. Inoculation on medium 199 with addition of bovine serum

b. Inoculation on Eagle medium

c. Precipitation reaction

d. Inoculation of chick chorioallantoic membrane or brain tissue of white mice

e. Inoculation on Rappaport medium

269. While waiting for tooth extraction, a patient developed a bronchial asthma attack. To stop the bronchospasm, the patient needs to be prescribed a drug that belongs to the following pharmacological group:

a. Analgesics

b. Muscarinic agonists

c. Psychostimulants

d. beta_2-adrenergic agonists

e. Analeptics

270. Fetal malformations can be caused by such maternal diseases as rubella, syphilis, toxoplasmosis, cytomegaly, herpes, and chlamydiosis. These malformations belong to the following type of variability:

a. Combinative

b. Modification

c. Mutational

d. Genomic imprinting

e. Epimutational

271. Some infectious diseases can be prevented by undergoing vaccination. Against what protozoan disease can vaccination be used as a preventive measure?

a. Urogenital trichomoniasis

b. Trypanosomiasis

c. Cutaneous leishmaniasis

d. Toxoplasmosis

e. Malaria

272. A 30-year-old woman has developed signs of virilism (body hair growth, balding temples, disturbed menstrual cycle). This condition can be caused by hyperproduction of the following hormone:

a. Oxytocin

b. Estriol

c. Prolactin
d. Testosterone
e. Relaxin
273. A 38-year-old woman developed an attack of bronchial asthma. What bronchial spasmolytic for emergency medical aid is a beta-2-adrenergic agonist?
a. Adrenaline
b. Atropine
c. Ipratropium bromide
d. Salbutamol
e. Platyphyllin
274. An electrician accidentally touched an exposed electrical wire with both hands and died. What process caused death in this case?
a. Atrial and ventricular fibrillation
b. Decreased contractility of the myocardium
c. Inhibition of the sinoatrial node automaticity
d. Complete atrioventricular block
e. Impaired vagal heart rate control
275. A patient was hospitalized with the signs of acute blood loss. What is the leading component in the pathogenesis of posthemorrhagic shock?
a. Decreased vascular tone
b. Decreased cardiac output
c. Hypoxia
d. Anemia
e. Hypovolemia
276. 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. Golgi apparatus
b. Ribosomes
c. Endoplasmic reticulum
d. Microtubules
e. Lysosomes
277. A histology slide of the heading end of an embryo at 5 weeks of gestation shows pharyngeal arches. What develops from the first pair of these structures?
a. Mandibular and maxillary processes
b. Mandibular processes
c. Maxillary processes
d. Thyroid cartilage
e. External auditory meatus
278. In an experiment, the oxygen supply to an isolated mammalian nerve cell was completely stopped. How will the resting potential change in this case?
a. Significantly increase
b. Slightly increase
c. Remain unchanged
d. Significantly decrease
e. Disappear
279. A dental patient was prescribed a psychosedative for his fear of pain. What drug would be the most effective in this case?
a. Diazepam
b. Sodium bromide
c. Lithium carbonate
d. Aminazine
e. Valerian tincture
280. A patient loses his equilibrium, when in an upright position with his eyes closed. What brain structures are the most likely to be damaged in this patient?
a. Basal ganglia

b. Thalamus
c. Cerebellum
d. Limbic system
e. Precentral gyrus of the cerebral cortex
281. Microscopy of a plaque-like structure extracted from the lateral surface of the tongue of a man with dentures revealed significant thickening of the epithelial layer along with processes of parakeratosis, hyperkeratosis, and acanthosis; in the connective tissue there are small round cell infiltrations. Make the diagnosis of the given pathological state:
a. Leukoplakia
b. Atrophic (Hunter's) glossitis
c. Chronic glossitis
d. Chronic stomatitis
e. Ichthyosis
282. 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. Metaphysis of the ulna
c. Diaphysis of the ulna
d. Epiphysis of the ulna
e. Epiphysis of the radius
283. With age a person develops wrinkled skin. This condition is predominantly caused by changes in certain skin structures. Name these structures:
a. Amorphous substance
b. Epidermis
c. Elastic fiber
d. Subcutaneous fat
e. Collagen fibers
284. 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. vagus
c. N. hypoglossus
d. N. facialis
e. N. olfactorius
285. No nitrogenous base of a DNA codon can be a component of another codon. What characteristic of the genetic code is it?
a. Non-overlapping
b. Collinearity
c. Triplet structure
d. Universality
e. Specificity
286. A patient consulted a doctor about an increased pain sensitivity of the ear skin and ear canal. Palpation behind the sternocleidomastoid muscle was painful. Such clinical presentations are typical of the irritation of the following nerve:
a. N. vagus
b. N. transversus colli
c. N. occipitalis minor
d. Nn. supraclaviculares
e. N. auricularis magnus
287. A patient presents with high content of vasopressin (antidiuretic hormone) in the blood. What changes in the patient's diuresis will occur?
a. Glycosuria
b. Natriuria
c. Polyuria

d. Anuria
e. Oliguria
288. A patient with an angina pectoris attack was brought into the intensive care unit. What drug must be administered in this case to stop the angina pectoris attack?
a. Nitroglycerin
b. Heparin
c. Calcium chloride
d. Vicasolum (Menadione)
e. Furosemide
289. A man uses dentures. The dentist has noticed mucosal lesions with a white coating in his oral cavity. Microscopy of the coating detected large oval Gram-positive cells. What microorganisms have caused stomatitis in the patient?
a. Oral spirochetes
b. Actinomycetes
c. Oral trichomonas
d. Yeast-like fungi of Candida genus
e. Streptococci
290. Autopsy of the body of a 62-year-old man, who died with progressing signs of heart failure, revealed enlarged heart. The heart is flaccid and its chambers are distended. The myocardium is dull and clay-yellow on section. The endocardium has yellow-white stripes that is especially marked in the papillary muscles. What pathological process is the most likely?
a. Myomalacia
b. Fatty heart
c. Cardiosclerosis
d. Fatty degeneration of the myocardium
e. Dilated cardiomyopathy
291. A patient complaining of polydipsia, polyphagia, and polyuria excretes glucose with urine. What disease can be suspected?
a. Acromegalia
b. Diabetes insipidus
c. Insulinoma
d. Addison disease
e. Diabetes mellitus
292. 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 the embryonic stage
b. At the age of 1 to 3 years
c. During pregnancy
d. At the age of under 1 year
e. At middle age
293. Autopsy of an 86-year-old woman, who suffered from cerebral atherosclerosis, shows atrophy of her cerebral cortex. Name this type of atrophy based on its cause:
a. Neurogenic
b. Insufficient blood supply
c. Caused by physico-chemical factors
d. Dysfunctional
e. Pressure-induced
294. 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. Menadione (Vicasolum)
b. Cyanocobalamin
c. Ergocalciferol
d. Retinol acetate

e. Tocopherol acetate
295. What compound is the end product of purine nucleotide catabolism in the human body?
a. Allantoin
b. Xanthine
c. Purine
d. Hypoxanthine
e. Uric acid
296. A patient has arrhythmia. What medicine needs to be prescribed in this case?
a. Imizine (Imipramine)
b. Cavinton (Vinpocetine)
c. Euphyllin (Aminophylline)
d. Amiodarone
e. Nitroglycerine
297. A dentist has found an ulcer on the oral mucosa of a 7-year-old girl. The ulcer is 1.5 cm in diameter, it has uneven edges and a gray floor. After the ulcer scrape was stained using the Ziel-Nielsen technique, thin ruby-red bacilli were detected in the slide. The bacilli are isolated or arranged in chaotic clusters. This pathogen is characteristic of the following disease:
a. Tuberculosis
b. Actinomycosis
c. Diphtheria
d. Syphilis
e. Candidiasis
298. Examination of a patient who came to the neurological department shows smoothed-out forehead wrinkles, inability to squint the eyes, drooping mouth corner. One cheek ''inflates'' along with breathing. What nerve is damaged in this case?
a. Trigeminal
b. Oculomotor
c. Accessory
d. Facial
e. Vagus
299. Membrane-acting protein/peptide hormones regulate metabolism in the cells, using intracellular mediators (messengers) for this purpose. ACTH causes intracellular effects by forming:
a. Calcium/calmodulin
b. Inositol trisphosphate
c. -
d. Cyclic guanosine monophosphate
e. Cyclic adenosine monophosphate
300. Holocrine secretion is characteristic of sebaceous glands. What structural components ensure renewal of the cells of these glands?
a. Nonstratified cuboidal epithelium of the excretory duct
b. Stratified squamous epithelium of the excretory duct
c. Sebocytes
d. Myoepithelial cells
e. Germinative layer cells
301. Two nucleotides have been lost in the sequence of DNA nucleotides due to the effect of radiation. What type of mutation occurred in the DNA strand?
a. Deletion
b. Duplication
c. Inversion
d. Replication
e. Translocation
302. Examination of the oral cavity of a patient with AIDS detected deposits of gray-white caseous inflammatory films on the oral mucosa. The films consist of microorganisms mixed with fibrinopurulent exudate. What pathological process has developed in the oral cavity of this patient?
a. Squamous cell carcinoma

b. Oral candidiasis
c. Leukoplakia
d. Ulcer
e. Gingivitis
303. 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. Golgi complex
b. Lysosome
c. Endoplasmic reticulum
d. Ribosome
e. Mitochondria
304. A 50-year-old man came to a hospital with complaints of memory disorders, painful sensations along the nerve trunks, decreased mental ability, circulatory disorders and dyspepsia. Anamnesis states excessive alcohol consumption. What vitamin deficiency can result in such symptoms?
a. Calciferol
b. Thiamine
c. Niacin
d. Riboflavin
e. Retinol
305. In the surgical department, dressing material was being sterilized in an autoclave. Because of nurse's oversight, the sterilization regimen was disturbed and temperature in the autoclave chamber reached only 100^oC instead of required 120^oC) What microorganisms could remain viable under such conditions?
a. Bacilli and clostridia
b. Staphylococci and streptococci
c. Salmonellae and klebsiellae
d. Corynebacteria and mycobacteria
e. Mold and yeast-like fungi
306. After a trauma a man is unable to extend his arm in the elbow joint. It can be caused by disturbed function of the following muscle:
a. Musculus subscapularis
b. Musculus teres major
c. Musculus infraspinatus
d. Musculus triceps brachii
e. Musculus levator scapule
307. Physiologists determined that erythrocyte blood count depends on the functional condition of red bone marrow and the life span of an erythrocyte. What is the average life span of an erythrocyte in the peripheral blood?
a. 50 days
b. 150 days
c. 120 days
d. 70 days
e. 220 days
308. Name the dental tissue that is similar to bone tissue in terms of its development source, morphological organization, and mineralization degree:
a. Periodontium
b. Acellular cementum
c. Cellular cementum
d. Enamel
e. Pulp
309. A person with trauma bleeds from a head wound. Where should the carotid artery be pressed to temporarily stop the bleeding?
a. To the anterior tubercle on the transverse process of the C5 vertebra
b. To the anterior tubercle on the transverse process of the C7 vertebra

c. To the anterior tubercle on the transverse process of the C4 vertebra
d. To the spine in the upper portion of the neck
e. To the anterior tubercle on the transverse process of the C6 vertebra
310. A patient complains of painful chewing, especially when his lower jaw moves forward and to the side. It indicates functional disorder of the following muscles:
a. Lateral pterygoid muscles
b. Mylohyoid muscles
c. Masseter muscles
d. Temporal muscles
e. Medial pterygoid muscles
311. An HIV-positive patient presents with supressed activity of the immune system. In this case, the immunodeficiency is primarily caused by the damage to a certain group of cells. What cells are damaged?
a. B lymphocytes
b. Helper T cells
c. Suppressor T cells
d. Plasma cells
e. Killer T cells
312. Dysfunction of the islets of Langerhans causes a decrease in the production of certain substances. Name these substances:
a. Parathyroid hormone and cortisone
b. Thyroxine and calcitonin
c. Glucagon and insulin
d. Insulin and adrenaline
e. Kallikrein and angiotensin
313. The dentist examines a pregnant woman. There are 3 round lesions up to 1 cm in diameter on her oral mucosa. The lesions appeared 3 days ago, they have white-gray surface and red margin. The dentist can make the following diagnosis:
a. Gangrenous stomatitis
b. Aphthous stomatitis
c. Leukoplakia
d. Catarrhal stomatitis
e. Necrotizing ulcerative stomatitis
314. A doctor has detected an inflammation of the patient's oral mucosa, accompanied by excruciating pain. What nerve is affected in this case?
a. Facial nerve
b. Glossopharyngeal nerve
c. Vagus nerve
d. Trigeminal nerve
e. Chorda tympani
315. A certain disease of infection-allergic or unknown origin leads to bilateral diffuse or focal non-suppurative inflammation of renal glomerular apparatus with characteristic renal and extrarenal signs. Name this disease:
a. Nephrosclerosis
b. Polycystic renal disease
c. Pyelonephritis
d. Glomerulonephritis
e. Nephrolithiasis
316. When studying masticatory muscles, a student discovered that only one of them does not raise the lower jaw. Name this muscle:
a. Medial bundles of the temporal muscle
b. Medial pterygoid muscle
c. Anterior bundles of the temporal muscle
d. Lateral pterygoid muscle
e. Masseter

317. A patient has an open facial wound with overhanging edges. He presents with tissue necrosis accompanied by a gradual partial gangrenous process that almost reaches the bone tissue. Live larvae were detected in the wound during a thorough examination. The patient was diagnosed with tissue myiasis, caused by larvae of a certain Diptera species. Name this species.

a. Wohlfahrtia magnifica

b. Phlebotomus pappataci

c. Musca domestica

d. Glossina palpalis

e. Stomoxys calcitrans

318. The sequence of triplets in DNA determines the sequence of amino acids in a protein molecule. What characteristic of the genetic code is it?

a. Universality

b. Degeneracy

c. Triplet structure

d. Collinearity

e. Non-overlapping

319. A victim of a traffic accident has lost thoracic respiration but retaines diaphragmal. The spinal cord is most likely to be damaged at:

a. I-II sacral segments

b. XI-XII cervical segments

c. I-II lumbar segments

d. VI-VII cervical segments

e. I-II cervical segments

320. Hyperfunction of the thyroid gland was detected in a 30-year-old patient. What is the shape of thyroid follicular cells?

a. Squamous cells

b. Prismatic cells with basally located nuclei

c. Spindle-shaped cells

d. Tall prismatic cells with apically located nuclei

e. Cuboidal cells

321. Longitudinal tooth section shoes a tissue that makes up the tooth basis and consists of collagen fibers, mineralized matrix, and tubules that hold dentinal fibers. This tissue develops from:

a. External cells of enamel organ

b. Peripheral part of dental papilla

c. Intermediate cells of enamel organ

d. Dental saccule

e. Internal cells of enamel organ

322. Due to trauma the patient's parathyroid glands have been removed, which resulted in inertness, thirst, sharp increase of neuromuscular excitability. Metabolism of the following substance is disturbed:

a. Molybdenum

b. Chlorine

c. Manganese

d. Calcium

e. Zinc

323. A patient is registered for regular check-ups. Laboratory analyses for viral hepatitis diagnostics are made. In the blood serum only antibodies to HbsAg are detected. Such result is indicative of:

a. Acute viral hepatitis type C

b. Past case of viral hepatitis type B

c. Chronic viral hepatitis type C

d. Viral hepatitis type A

e. Acute viral hepatitis type B

324. Among organic substances of a cell there is a polymer composed of dozens, hundreds, and thousands of monomers. This molecule is capable of self-reproduction and can be an information carrier. X-ray structure analysis shows this molecule to consist of two complementary spiral threads.

Name this compound:
a. Hormone
b. DNA
c. Cellulose
d. Carbohydrate
e. RNA
325. Microslide of a CNS organ impregnated with silver shows piriform cells. The cells are aligned in a row, 3-4 cellular processes branch off from the apices of the cells. These processes branch out further and form nearly two-dimensional layers. Name these cells:
a. Purkinje cells
b. Betz cells
c. Golgi cells
d. Dogiel cells
e. Martinotti cells
326. A patient with acute pancreatitis presents with significantly increased urine diastase content. What proteolysis inhibitor must be included into complex therapy of this patient?
a. Digestal
b. Pancreatine
c. Contrykal (Aprotinin)
d. Mezym forte
e. Festal
327. A patient with pulmonary tuberculosis is prescribed rifampicin that inhibits RNA-polymerase enzyme at the stage of initiation of the following process:
a. Replication
b. Transcription
c. Elongation
d. Translation
e. Termination
328. During laboratory diagnostics of hepatitis C, it is necessary to detect the presence of antibodies to hepatitis C virus in the patient's blood serum. What test should be conducted in this case?
a. Ligase chain reaction
b. Nucleic acid hybridization with signal amplification
c. Nucleic acid hybridization
d. Enzyme-linked immuno sorbent assay (ELISA)
e. DNA probe method
329. 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. Giardia
b. Entamoeba coli
c. Entamoeba gingivalis
d. Entamoeba histolytica
e. Balantidium coli
330. A child has been hospitalized with the diagnosis of staphylococcal sepsis. What nutrient medium should be used for inoculation of the patient's blood to isolate the pathogen?
a. Sugar-peptone broth
b. Meat-peptone agar
c. Ploskirev nutrient medium
d. Bile-salt agar
e. Buchin nutrient medium
331. What receptors respond to changes in gas composition of the blood that enters the brain?
a. Aortic receptors
b. All of the listed
c. Carotid sinus receptors
d. Bulbar receptors
e. -

332. During a car accident, a person received a strong blow to the epigastric region, which caused a cardiac arrest. What was the likely cause of such changes in the cardiac activity?
a. Increased tone of the sympathetic nervous system
b. Cortisol production
c. Adrenaline production
d. Aldosterone production
e. Increased vagal tone
333. During a neck surgery, the patient's sternothyroid muscle was damaged by the surgeon. What function will be impaired because of the damage to this muscle?
a. Bending the neck forwards
b. Raising of the larynx
c. Raising of the hyoid bone
d. Neck extension
e. Lowering of the larynx
334. A patient with damaged muscles of the lower limbs has been delivered to a first-aid center. What cells enable reparative regeneration of muscle fibers and restoration of muscle function?
a. Myosatellitocytes
b. Fibroblasts
c. Endotheliocytes
d. Adipocytes
e. Plasmocytes
335. Glucosuria develops because of impaired renal function. What pathological process can cause the development of glucosuria?
a. Decreased glucose reabsorption in the proximal tubules
b. Decreased glucose reabsorption in the distal tubules
c. Increased tubular secretion of glucose
d. Increased glucose filtration in the glomeruli
e. Decreased glucose filtration in the glomeruli
336. The third heart sound can be detected via phonocardiogram only in adult non-asthenic patients. It occurs during the following phase of a cardiac cycle:
a. Rapid ejection
b. Reduced filling
c. Isovolumetric relaxation
d. Rapid filling
e. Asynchronous contraction
337. Several patients with similar complaints came to the doctor. They all present with weakness, pain in the intestines, indigestion. Feces analysis revealed the need for urgent hospitalization of the patient, who had microbial cysts with four nuclei detected in his samples. Such cysts are characteristic of the following protozoon:
a. Entamoeba coli
b. Balantidium
c. Trichomonad
d. Lamblia
e. Entamoeba histolytica
338. Examination of the oral cavity detects enamel damage in the form of isolated and multiple erosions of various shapes and varying in color from yellow-brown to black. The teeth are fragile, some of them are destroyed. What disease corresponds with such pathological changes?
a. Enamel atrophy
b. Dental erosions
c. Deep caries
d. Fluorosis
e. Median caries
339. A patient with thrombophlebitis was prescribed an indirect anticoagulant syncoumar. Specify the time interval, after which the maximum anticoagulant effect should be expected.
a. 12-24 hours

b. 6-12 hours
c. 5-10 minutes
d. 3-6 hours
e. 24-72 hours
340. A 37-year-old patient was diagnosed with essential hypertension and prescribed lisinopril. What is the mechanism of action of this drug?
a. Binds angiotensin-converting enzyme and blocks the conversion of angiotensin I into angiotensin II
b. Blocks calcium channels
c. Blocks angiotensin receptors in blood vessels
d. Stimulates imidazoline receptors
e. Blocks potassium channels
341. A 23-year-old man developed a perforation in his hard palate, a dense formation with clear margins was detected in this area. After a surgery, microscopy of the excised formation shows there a large focus of caseous necrosis surrounded with a granulation tissue with endovasculitis and a cellular infiltration consisting of lymphocytes and epithelioid cells with predominance of plasma cells. What is the most likely disease in this case?
a. Leprosy
b. Tuberculosis
c. Syphilis
d. Scleroma
e. Sarcoma
342. A doctor discusses with colleagues a new antiepileptic drug --- sodium valproate. What is the likely mechanism of action of this drug?
a. Inhibition of GABA transferase enzyme activity
b. Stimulation of GABA transferase enzyme activity
c. Stimulation of Ca^2+ -dependent ATPase activity
d. Inhibition of monoamine oxidase
e. Inhibition of Ca^2+ -dependent ATPase activity
343. What drug is a beta-lactam antibiotic?
a. Ofloxacin
b. Tetracycline
c. Benzylpenicillin
d. Erythromycin
e. Biseptol (Co-trimoxazole)
344. To treat osteomyelitis, a patient was prescribed an antibiotic that easily penetrates into bone tissue. Name this drug:
a. Lincomycin hydrochloride
b. Polymyxin B
c. Cefazolin
d. Streptomycin sulfate
e. Amphotericin B
345. A patient is diagnosed with pneumonia of mycoplasmal etiology. What antibiotics, based on their mechanism of action, \textbfSHOULD NOT be used in the course of the treatment?
a. Antibiotics that inhibit the synthesis of cell wall components
b. Antibiotics that disturb the permeability of cytoplasmic membrane
c. Antibiotics that disturb oxidative phosphorylation processes
d. Antibiotics that disturb the synthesis of nucleic acids
e. Antibiotics that disturb the protein synthesis
346. A patient presents with damaged fibers of the ninth pair of cranial nerves (glossopharyngeal nerve). What gustatory sensation will be disturbed in this case?
a. All gustatory sensations
b. Bitterness
c. Sweetness
d. Saltiness
e. Sourness

347. A 59-year-old man has a nervous system disorder (chorea) that manifests as involuntary rapid movements and grimacing. This nervous system disorder occurs because of damage to a certain brain structure. What structure is damaged in this case, causing this disorder?
a. Claustrum
b. Amygdala
c. Darkschewitsch nuclei
d. Corpus striatum
e. Thalamus
348. A 63-year-old man was diagnosed with deep vein thrombophlebitis of the lower leg. What layer of these vessels is damaged in this case?
a. Subendothelial layer
b. Connective tissue layer
c. Endothelial layer
d. Layer of elastic fibers
e. Layer of smooth muscle cells
349. A patient with megaloblastic anemia was taking a water-soluble vitamin. Name this substance:
a. Ascorbic acid
b. Thiamine chloride
c. Tocopherol acetate
d. Pyridoxine
e. Cyanocobalamin
350. The terminal segments of apocrine sweat glands contain myoepithelial cells. What is the function of these cells?
a. Regenerative function
b. Secretory function
c. Protective function
d. Supporting function
e. Contractile function
351. Mucin aggregates retain water, which results in their viscosity and protective action. It is possible because mucin structure contains:
a. Homopolysaccharides
b. Glucose
c. Glycosaminoglycans
d. Oligosaccharides
e. Disaccharides
352. Light microscopy was used to study the morphology of human Y chromosome. Centromere is located close to one of the ends of the chromosome. Name the type of the chromosome:
a. Telocentric
b. Metacentric
c. Submetacentric
d. Acrocentric
e. Polytene
353. Histology of the internal organs of a deceased woman, who in life was diagnosed with systemic collagenosis, revealed widespread vascular damage in the form of mucoid and fibrinoid swelling, fibrinoid necrosis of arteriolar walls, and perivascular lymphoplasmacytic infiltrations. What type of inflammation can be characterized by these symptoms?
a. Granulomatous inflammation
b. Chronic immune inflammation
c. Acute immune inflammation
d. Interstitial diffuse inflammation
e. -
354. Combined therapy of chronic heart failure with digitoxin and furosemide resulted in acute muscle weakness in the patient. What electrolyte imbalance can be detected in the patient's blood?
a. Hypercalcemia
b. Hypokalemia

c. Hyperkalemia
d. Hypocalcemia
e. -

355. What immunoglobulins produced in salivary glands ensure local immunity of oral mucosa?
a. IgA
b. IgM
c. IgE
d. IgD
e. IgG

356. Oxidative decarboxylation of pyruvic acid is catalyzed by a multienzyme complex with several functionally linked coenzymes. Name this complex:
a. Coenzyme A (CoASH), flavin adenine dinucleotide (FAD), pyridoxal-5-phosphate, tetrahydrofolic acid, carnitine
b. Flavin adenine dinucleotide (FAD), tetrahydrofolic acid, pyridoxal-5-phosphate, thymidine diphosphate (TDP), choline
c. Thymidine diphosphate (TDP), flavin adenine dinucleotide (FAD), coenzyme A (CoASH), nicotine amide adenine dinucleotide (NAD), lipoic acid
d. Lipoic acid, tetrahydrofolic acid, pyridoxal-5-phosphate, methylcobalamin
e. Nicotine amide adenine dinucleotide (NAD), pyridoxal-5-phosphate, thymidine diphosphate (TDP), methylcobalamin, biotin

357. In a car accident, a driver has received multiple traumas to the side of his head, including a zygomatic arch fracture. What muscle will be functionally impaired in this case?
a. M. orbicularis oris
b. M. buccinator
c. M. masseter
d. M. procerus
e. M. risorius

358. During their expedition to the Middle East, the students found a 7-centimeter-long arthropod. Its body consists of cephalothorax with 4 pairs of ambulatory legs and segmented abdomen with two venom glands in its last segment. The gland openings are located on the tip of the hook-shaped sting. The animal was identified as a nocturnal predator, its venom is dangerous for humans. It belongs to the following order:
a. Aranei
b. Aphaniptera
c. Scorpiones
d. Solpugae
e. Acarina

359. Ossification of the annular stapedial ligament occurred in a patient with hearing impairment. What is this type of connection called?
a. Synostosis
b. Gomphosis
c. Synchondrosis
d. Hemiarthrosis
e. Syndesmosis

360. A histology slide with a section of a dental crown shows a small number of radially positioned collagen fibers (Korff fibers) in the intercellular substance of dentin. What layer of dentin is it?
a. Interglobular dentin
b. Mantle dentin
c. Granular layer
d. Parapulpar dentin
e. Predentin

361. A slide mount of an ovary presents a rounded structure with glandular cells that contain lipid droplets. Name this structure:
a. Corpus luteum
b. Primary ovarian follicle

c. Corpus albicans
d. Primordial ovarian follicle
e. Mature ovarian follicle
362. A child presents with delayed mental development, delayed growth and formation of the teeth, late development of ossification foci, and low basal metabolic rate. What endocrine gland is functionally insufficient, causing this condition?
a. Pancreas
b. Gonads
c. Thyroid gland
d. Neurohypophysis
e. Adrenal glands
363. Indirect calorimetry shows that the basal metabolic rate of a person is 40% lower than the norm. What endocrine gland does not function properly in this person, causing this condition?
a. Adrenal glands
b. Pineal gland
c. Thymus
d. Pancreas
e. Thyroid gland
364. To improve digestion of fatty food, the patient was prescribed a bile-containing preparation. What components of this preparation take part in emulsification of fats?
a. Cholesterol and its ethers
b. Bilirubin glucuronides
c. Higher fatty acids
d. Bile acids
e. Diglycerides
365. 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. Cytoplasm, organelles, nucleus
c. Hyaloplasm, plasmalemma, nucleus
d. Cell membrane (plasmalemma), cytoplasm, nucleus
e. Cell membrane (plasmalemma), inclusions, organelles
366. A 55-year-old man was diagnosed with acute glomerulonephritis. Name the main mechanism of anemia development in this case:
a. Decreased synthesis of renal prostaglandins
b. Decreased tubular reabsorption
c. Decreased erythropoietin synthesis
d. Decreased glomerular filtration
e. Renal azotemia
367. A 26-year-old man presents with anemia against the background of chronic gastritis with intrinsic Castle factor deficiency. What type of anemia is characteristic of such cases?
a. Thalassemia
b. Iron-deficiency
c. B_12 and folate deficiency
d. Hypoplastic
e. Chronic posthemorrhagic
368. A patient with ischemic heart disease presents with increased blood plasma content of triglycerides and very low-density lipoproteins. What drug should be prescribed?
a. Dobutamine
b. Amiodarone
c. Fenofibrate
d. Famotidine
e. Lisinopril
369. A patient developed a seizure attack during a tooth extraction. What first aid medicine must be

used in this case?
a. Sibazon (Diazepam)
b. Corvalol
c. Dimedrol (Diphenhydramine)
d. Phenobarbital
e. Valerian tincture
370. A 36-year-old man was hospitalized into the infectious diseases hospital with profuse diarrhea, signs of exicosis, and low body temperature. He died of uremia. Autopsy revealed a colorless liquid resembling rice water in the lumen of the small intestine; mucosa is edematous. Microscopy of the small intestine shows plethoric vessels, focal hemorrhages, enterocyte desquamation, hypersecretion of goblet cells, and lympholeukocytic infiltration of mucosal stroma. Make the diagnosis:
a. Dysentery
b. Crohn disease
c. Salmonellosis
d. Typhoid fever
e. Cholera
371. A 25-year-old man has lost all sensitivity due to damage of his peripheral nerves. Name this disorder:
a. -
b. Anesthesia
c. Ataxia
d. Hyperesthesia
e. Hypoesthesia
372. A patient presents with osteoporosis; hypercalcemia and hypophosphatemia are observed in the patient's blood. What is the cause of this condition?
a. Increased corticosteroid secretion
b. Inhibited parathormone secretion
c. Increased thyroxin secretion
d. Increased parathormone secretion
e. Inhibited corticosteroid secretion
373. The investigation of the imprints obtained from the epidermal ridges on the fingers (dactyloscopy) is used by criminologists to identify people, as well as for diagnostics of a number of genetic anomalies, e.g., Down syndrome. What skin layer determines the uniqueness of the imprints?
a. Reticular layer
b. Papillary layer
c. Basal layer
d. Cornified layer
e. Translucent layer
374. To clarify the diagnosis of a 15-year-old patient, it is necessary to perform a sialography of the parotid gland. Where is the opening, through which a radiocontrast agent will be introduced in this case?
a. On the cheek, opposite of the 2nd upper premolar
b. On the cheek, opposite of the 2nd upper molar
c. -
d. On the cheek, opposite of the 2nd lower molar
e. On the cheek, opposite of the 2nd lower premolar
375. A 38-year-old patient complains of a constant joint pain. Laboratory studies detect increased levels of proline and oxyproline in the patient's urine, which indicates problems with the metabolism of the following compound:
a. Heparin
b. Chondroitin sulfate
c. Collagen
d. Hyaluronic acid
e. Elastin
376. A child presents with hepatomegaly, hypoglycemia, and convulsions that occur predominantly

during fasting or in stress-inducing situations. The child is diagnosed with von Gierke disease (glycogen storage disease type I). What enzyme is affected by the genetic defect that is the cause of this disease?

a. Glucose 6-phosphatase

b. Amylo-1,6-glycosidase

c. Glucokinase

d. Phosphoglucomutase

e. Glycogen phosphorylase

377. To improve tooth mineralization, dentists prescribe Ca^2+ preparations. This substance \textbfHAS NO EFFECT on the following processes in an organism:

a. Synaptic transmission of excitation

b. Oncotic pressure generation

c. Muscle contraction

d. Hemostasis

e. Development of myocardial depolarization

378. Biochemical analysis of amino acid contents of freshly synthesized polypeptides shows that in the process of their translation the first amino acid in each of these proteins will be the same. Name this amino acid:

a. Serine

b. Isoleucine

c. Histidine

d. Phenylalanine

e. Methionine

379. A proteolytic enzyme was prescribed for the treatment of abscessing parodontosis. Name this drug:

a. Actilyse (Alteplase)

b. Contrykal (Aprotinin)

c. Crystalline trypsin

d. Streptoliase

e. Lidase

380. 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. Antibiotic sensitivity testing

b. Repeated inoculations

c. Phage typing of the obtained cultures

d. Sero-identification

e. Biochemical profiles

381. What drug belongs to the pharmacotherapeutic group of angiotensin-converting enzyme inhibitors?

a. Reserpine

b. Pentamin (Azamethonium bromide)

c. Anaprilin (Propranolol)

d. Verapamil

e. Enalapril

382. 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. Valerian extract

b. Aminazine (Chlorpromazine)

c. Diphenin (Phenytoin)

d. Sodium bromide

e. Galantamine hydrobromide

383. A patient was diagnosed with a damaged intervertebral disk in the lumbar spine. What type of joint is it?

a. Synostosis
b. Syndesmosis
c. Symphisis
d. Synchondrosis
e. Diarthrosis
384. Because of a trauma, a patient developed a skin defect. To remove the defect, the surgeons replaced this patch of skin with a skin patch taken from other body part of the same patient. What type of transplantation is it?
a. Explantation
b. Homotransplantation
c. Autotransplantation
d. Allotransplantation
e. Xenotransplantation
385. A patient with a hemorrhage into the anterior hypothalamus developed polyuria. What hormone is in this case insufficient, leading to the decreased water reabsorption in the renal tubules?
a. Vasopressin
b. Aldosterone
c. Calcitonin
d. Adrenaline
e. Oxytocin
386. 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. -
c. Endocytosis
d. Osmosis
e. Exocytosis
387. A patient with knife wound of the neck presents with hemorrhage. Initial wound management revealed damage to the vessel that is located along the lateral edge of the sternocleidomastoid muscle. Name this vessel:
a. V. jugularis anterior
b. A) carotis externa
c. V. jugularis externa
d. V. jugularis interna
e. A) carotis interna
388. What drug that can penetrate into bone tissue and bone marrow is advisable for the treatment of skeletal system infections (osteomyelitis, osteitis)?
a. Benzylpenicillin
b. Bicillin-3
c. Lincomycin
d. Gentamicin
e. Synthomycin (D,L-chloramphenicol)
389. 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. Adrenal glands
b. Thyroid gland
c. Gonads
d. Parathyroid gland
e. Pituitary gland
390. A 49-year-old man presents with facial edema, significant proteinuria, hypoproteinemia, dysproteinemia, and hyperlipidemia. What provisional diagnosis can be made?
a. Cystitis

b. Pyelonephritis
c. Urolithiasis
d. Nephrotic syndrome
e. Prostatitis
391. Chronic overdosage of glucocorticoids leads to the development of hyperglycemia. What process of carbohydrate metabolism is responsible for this effect?
a. Pentose-phosphate cycle
b. Glycogenolysis
c. Aerobic glycolisis
d. Glycogenesis
e. Gluconeogenesis
392. A patient diagnosed with chronic renal failure developed anorexia, dyspepsia, heart rhythm disturbances, and skin itching. What is the main mechanism of development of these disorders?
a. Changes in carbohydrate metabolism
b. Accumulation of nitrogen metabolism products in the blood
c. Lipid metabolism disorders
d. Water-electrolyte imbalance
e. Renal acidosis
393. A 30-year-old breastfeeding woman keeps to the diet that daily provides her with 1000 mg of calcium, 1300 mg of phosphorus, and 20 mg of iron. How should the daily dosages of minerals in this diet be adjusted?
a. Increase iron intake
b. Decrease fluorine intake
c. Decrease iron intake
d. Increase calcium intake
e. Increase phosphorus intake
394. 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. Aminazine (Chlorpromazine)
b. Loratadine
c. Adrenaline hydrochloride
d. Cromolyn sodium (Cromoglicic acid)
395. A 40-year-old patient with a poisoning caused by the chlorophos (metrifonate) insecticide was hospitalized into the toxicology department. What drug that blocks peripheral muscarinic acetylcholine receptors would be most effective in treatment of such poisoning?
a. Benzohexonium (Hexamethonium)
b. Platyphylline
c. Atropine sulfate
d. Amizylum (Benactyzine)
e. Scopolamine
396. A child asked you to blow a balloon as much as you can in one exhale. What air volume will you use for this purpose?
a. Total lung capacity
b. Vital capacity
c. Inspiratory reserve volume
d. Inspiratory capacity
e. Functional residual lung capacity
397. To determine functional state of the patient's liver, the analysis of animal indican excreted with urine was conducted. This substance is produced in the process of detoxification of putrefaction products of a certain amino acid, which takes place in the large intestine. Name this amino acid:
a. Cysteine
b. Tryptophan
c. Valine
d. Serine
e. Glycine

398. Examination of a child detected dense painless nodules 5--7 mm in size within the skin of the occipital region. Similar formations were detected around the knee joints and along the tendons of the lower limbs. Pathohistological conclusion of the biopsy material studies: macrophage granuloma. Clinical diagnosis: rheumatism. Specify the clinical and morphological form of rheumatism observed in this case.

a. Cardiovascular rheumatism
b. Cerebral rheumatism
c. Polyarthritic rheumatism
d. Erythema nodosum
e. Muscular rheumatism

399. Autopsy of the body of a woman who died of uremia revealed the kidneys 7x3.5x2 cm in size, with an evenly fine-grained surface and a pale medullary layer thinned down to 0.3 cm. Histology shows sclerosis and hyalinosis of the majority of glomeruli, hyalinosis of the arterioles, sclerosis of artery walls with concentric narrowing of the lumen, and atrophic changes in the tubules. What pathology can be characterized by such macro- and microscopic changes in the kidneys?

a. Secondary contracted kidney
b. Atherosclerotic nephrosclerosis
c. Primary contracted kidney
d. Amyloid contracted kidney
e. Pyelonephritic contracted kidney

400. A 35-year-old man came to a hospital with complaints of pain in the right lower jaw, fever, chills, and a swelling. Examination detects detachment of the periosteum with accumulation of inflammatory exudate between the periosteum and the bone, perifocal edema of soft tissues, and partial liquefaction of the periosteum. What diagnosis can be suspected in this case?

a. Granulating periodontitis
b. Local parodontitis
c. Parodontosis
d. -
e. Purulent periostitis

401. To treat ischemic heart disease, a patient was prescribed a beta-adrenergic blocking agent. After a time he developed a cough and bronchospasm. What drug can cause these side effects?

a. Atenolol
b. Talinolol
c. Phenihidine (Nifedipine)
d. Metoprolol
e. Anaprilin (Propranolol)

402. What organelles in muscle tissue take part in the intensive aerobic process of energy accumulation in the form of macroergic bonds of ATP?

a. Granular endoplasmic reticulum
b. Lysosomes
c. Mitochondria
d. Smooth endoplasmic reticulum
e. Centrosome

403. Autopsy of a patient, who died of heart failure, shows yellow spots and streaks in the the aortic and coronary intima, as well as gray-yellow plaque, protruding from the intima surface. The plaque is focally ulcerated and presents with hemorrhages, thrombi, and calcified foci. Such vascular alterations are characteristic of:

a. -
b. Syphilitic mesaortitis
c. Periarteritis nodosa
d. Atherosclerosis
e. Essential hypertension

404. A patient complains of severe rhinitis and total loss of olfactory perception. Receptors of the olfactory analyzer are damaged in this patient. Where in the nasal cavity are these receptors located?

a. Inferior nasal meatus

b. Middle nasal meatus
c. Choanae
d. Superior nasal meatus
e. Common nasal meatus
405. 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. Butadion (Phenylbutazone)
b. Paracetamol
c. Acetylsalicylic acid
d. Analgin (Metamizole sodium)
e. Ibuprofen
406. A 6-month-old child has a flat node on the skin of the back. The node is 3 cm in diameter, red, but becomes pale when pressed. What is the most likely diagnosis?
a. Melanoma
b. Lymphangioma
c. Pigmented nevus
d. Leiomyoma
e. Hemangioma
407. A man has developed downturning mouth and smoothed out nasolabial fold due to influenza complication. What nerve is damaged?
a. Facial nerve
b. Maxillary nerve
c. Trochlear nerve
d. Mandibular nerve
e. Oculomotor nerve
408. A patient with essential hypertension was prescribed captopril. In this case, formation of a certain substance will decrease. Name this substance.
a. Histamine
b. Bradykinin
c. Serotonin
d. Angiotensin II
e. Renin
409. A patient suffers from disturbed ocular accommodation. What muscle is damaged?
a. Musculus ciliaris
b. Musculus sphincter pupillae
c. Musculus rectus inferior
d. Musculus dilatator pupillae
e. Musculus rectus superior
410. 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 gastroepiploic artery
c. Right gastric artery
d. Splenic artery
e. Superior pancreaticoduodenal artery
411. Contraction of cross-striated muscles is impossible without calcium. What do calcium ions bind to, when forming the actin-myosin cross-bridges?
a. Histamine receptors
b. Cholinergic receptors
c. Troponin
d. Adrenoceptors
e. Serotonin receptors
412. Autopsy of a 72-year-old man with recurrent transmural myocardial infarction revealed his

epicardium and pericardium membranes to be swollen, thickened, coarce, as if covered in hair. Name the type of inflammation that occurred in the cardiac membranes:
a. Catarrhal
b. Serous
c. Suppurative
d. Croupous
e. Diphtheritic
413. 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. Radicular cyst of the jaw
c. Simple granuloma
d. Follicular cyst of the jaw
e. Cystogranuloma
414. To take a sample of cerebrospinal fluid for analysis, a doctor makes a puncture into subarachnoid space. To prevent damage to the spinal cord, the needle must be inserted between the two following vertebrae:
a. XI and XII thoracic
b. III and IV lumbar
c. XII thoracic and I lumbar
d. IV and V thoracic
e. I and II lumbar
415. Villikinin synthesis is impaired in a patient. What motor function of the small intestine will be disturbed in this case?
a. Tonic contractions
b. Peristaltic contractions
c. Microvillar contractions
d. Pendulum contractions
e. Rhythmic segmentation
416. Increased stumulation rate of isolated heart of a rabbit leads to incomplete relaxation of the heart ventricles due to:
a. Increased potassium content in cardiomyocytes
b. Calcium accumulation in cardiomyocytes
c. Increased sodium content in cardiomyocytes
d. Increased potassium content in the interstitial tissue
e. Inhibition of K-Na pump
417. 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. Metronidazole
b. Lincomycin hydrochloride
c. Ceftriaxone
d. Tetracycline
e. Levomycetin (Chloramphenicol)
418. The pediatrician examines a one-year-old child. The child has 4 teeth in the oral cavity. How many milk teeth should the child have at this age?
a. 14
b. 10
c. 8
d. 20
e. 12
419. 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. Porphyry spleen
b. Septic spleen
c. Sago spleen
d. Lardaceous spleen
e. Miliary tuberculosis of the spleen
420. In an experiment, a test animal had a part of its brain destroyed, which caused the animal to change from a homeothermic to a poikilothermic state. What part of the brain was destroyed in this case?
a. Mesencephalon
b. Hypothalamus
c. Pineal gland
d. Pituitary
e. Medulla oblongata
421. Microscopy of an extracted tooth detected destruction of enamel and dentinoenamel junction; dentinal tubules are wide and filled with microbial masses. Odontoblastic processes are dystrophic and necrotic. There are foci of dentin demineralization. What is the most likely diagnosis?
a. Fluorosis
b. Cemental caries
c. Median caries
d. Deep caries
e. Superficial caries
422. A cessation of morphine administration after its long-term use leads to the development of severe mental, neurological, and somatic disorders. Name this condition:
a. Tolerance
b. Sensitization
c. Idiosyncrasy
d. Withdrawal
e. Cumulation
423. Cancer cells form in the human body due to the effect of environmental factors. What cells provide antitumor protection?
a. Lymphocytes
b. Platelets
c. Erythrocytes
d. Neurocytes
e. Epitheliocytes
424. When preparing a dental plaque smear and staining it according to the Gram method, a student during microscopy detected there various violet and pink microorganisms. What structural component of microorganisms causes different response to stains?
a. Cytoplasm
b. Cytoplasmic membrane
c. Outer membrane
d. Cell wall
e. Internal periplasmic space
425. A patient has been diagnosed with mucopolysaccharidosis. What substances are typically deposited in various tissues of the body in this disease?
a. Glycogen
b. Triglycerides
c. Fatty acids
d. Fructose
e. Glycosaminoglycans
426. A 23-year-old man with a cerebrocranial trauma was hospitalized in a severe condition. His respiration has a characteristically labored spasmodic inspiration that does not stop and only rarely is interrupted by an expiration. What type of respiration is it characteristic of?

a. Biot respiration
b. Apneustic respiration
c. Kussmaul respiration
d. Gasping respiration
e. Cheyne-Stokes respiration
427. In an experiment the vagus is being stimulated, which results in increased acetylcholine entry to the synaptic cleft, and that in turn results in the decresed heart rate due to the following mechanism:
a. Depolarization of cardiomyocyte membrane
b. Increase in AV nodal conduction velocity
c. Hyperpolarization of cardiomyocyte membrane
d. Decrease of action potential duration
e. Increase of action potential duration
428. A 20-year-old woman came to the doctor with complaints of general weight loss, loss of appetite, weakness, skin discoloration resembling bronze tan. In addtition to hyperpigmentation, examination in the hospital revealed bilateral adrenal tuberculosis. What substance leads to skin hyperpigmentation, when accumulated excessively?
a. Melanin
b. Hemozoin
c. Bilirubin
d. Adrenochrome
e. Lipofuscin
429. A patient presents with dysfunction of the cerebral cortex accompanied by epileptic seizures. He has been administered a biogenic amine synthetized from glutamate and responsible for central inhibition. What substance is it?
a. Serotonin
b. Acetylcholine
c. \gamma-aminobutyric acid
d. Dopamine
e. Histamine
430. A man is waiting to be invited into the dentist's office. While waiting, he developed palpitations caused by nervousness. What heart rate is normal for a healthy adult?
a. 150-160/min.
b. 40-60/min.
c. 60-80/min.
d. 90-110/min.
e. 110-120/min.
431. Basement membrane consisting of three layers is an important component of renal filtration barrier. Its electron-dense middle layer has specialized reticular structure. This membrane is located in:
a. Renal corpuscle
b. Capillaries of peritubular capillary network
c. Thin tubule
d. Proximal tubule
e. Distal straight tubule
432. Microscopy of an extracted tooth shows decreased count and size of odontoblasts and other cells of the dental pulp, with characteristically sclerotic connective tissue that makes up the pulp. What general pathology can be suspected in the dental pulp?
a. Pulpal hyperplasia
b. Hyalinosis
c. Amyloidosis
d. Fatty degeneration
e. Reticular atrophy of the pulp
433. To model a stomach ulcer, atophan (cinchophen) had been administered into the gastric arteries of a test animal, which caused their sclerosing. What mechanism of gastric mucosa damage is leading in this experiment?

a. Neurodystrophic
b. Hypoxic
c. Disregulatory
d. Mechanical
e. Neurohumoral
434. A pregnant woman developed severe toxemia with exhausting recurrent vomiting throughout a day. By the end of the day she developed tetanic convulsions and dehydration. The described changes were caused by the following type of acid-base imbalance:
a. Nongaseous excretory alkalosis
b. Gaseous acidosis
c. Nongaseous excretory acidosis
d. Gaseous alkalosis
e. Nongaseous metabolic acidosis
435. 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. Cefazolin
b. Doxycycline
c. Ampicillin
d. Streptomycin sulfate
e. Erythromycin
436. The patient's blood pressure was measured by auscultation of the vascular sounds. What is the name of the researcher who proposed this method of blood pressure measuring?
a. Korotkov
b. Siechenov
c. Ludwig
d. Goltz
e. Riva-Rocci
437. A patient with acute appendicitis presents with increasing leukocyte blood count. What type of leukocytosis can be observed in the patients diagnosed with this condition?
a. Monocytosis
b. Eosinophilic
c. Neutrophilic
d. Basophilic
e. Lymphocytosis
438. A patient with osteomyelitis of the mandible developed sepsis. Blood culture microbiology detects Gram-positive and catalase-positive cocci capable of growing in the presence of NaCl. What microorganisms are the likely cause of this disease?
a. Sarcinae
b. Streptococci
c. Escherichia
d. Corynebacteria
e. Staphylococci
439. Bacteria that enter the body are being phagocytized by macrophages. What is the role of macrophages in cooperation of immunocompetent cells during the first phase of immune response?
a. Ensure antigen processing and presentation to T helper cells
b. Produce immunoglobulins
c. Activate NK cells
d. Ensure antigen processing and presentation to T killer cells
e. Activate T killer cells
440. Because cutaneous leishmaniasis in the urban areas can be characterized by a cyclic course, a physician suspects that the patient has been ill for approximately 3-6 months. What pathological anatomical changes allow making this conclusion, if they appear?
a. Nosular stage
b. Ulcerative stage

c. Scar stage
d. Tuberculoid form
e. Primary leishmanioma
441. 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 hystiocytes?
a. Hydropic
b. Ballooning
c. Fatty
d. Hyaline droplet
e. Carbohydrate
442. A patient with leukemia was prescribed 5-fluorouracil. What effect does this drug have?
a. It inhibits DNA synthesis
b. It accelerates replication
c. It stimulates DNase
d. It inhibits transcription
e. It inhibits translation
443. It is necessary to decrease pumping ability of the patient's heart. What membrane cytoreceptors must be blocked to achieve this effect?
a. Muscarinic acetylcholine receptors
b. beta-adrenergic receptors
c. Nicotinic acetylcholine receptors
d. alpha- and beta-adrenergic receptors
e. alpha-adrenergic receptors
444. Iron is released in the process of hemoglobin catabolism. Then, as a part of a special transport protein, it arrives into the bone marrow and is used again for hemoglobin synthesis. Name this transport protein:
a. Ceruloplasmin
b. Transferrin
c. Haptoglobin
d. Transcobalamin
e. Albumin
445. An 8-year-old child presents with frequent severe subcutaneous hemorrhages. Prescription of Vicasol, synthetic analogue of vitamin K, had a positive effect. This vitamin participates in gamma-carboxylation of glutamic acid in a certain blood-clotting protein. Name this protein:
a. Proconvertin
b. Rosenthal factor
c. Prothrombin
d. Fibrinogen
e. Hageman factor
446. A dental plaque swab was stained using the Burri-Gins technique. Microscopy of the swab revealed red cells of microorganisms against a dark brown background, with some of the bacteria surrounded by a light halo. What structure of the microorganisms was detected?
a. Capsule
b. Peptidoglycan layer
c. Outer membrane
d. Exoenzymes attached to the cell wall
e. Protoplast
447. During cell analysis, their cytoplasm was determined to have high content of aminoacyl tRNA synthetase. This enzyme ensures the following process:
a. Elongation
b. Repair
c. Amino acid activation
d. Transcription

e. Replication

448. After administration of eyedrops, the patient developed mydriasis and paralysis of accommodation. What group of drugs can cause this effect?

a. Muscarinic antagonists

b. Muscarinic agonists

c. Anticholinesterase drugs

d. alpha-adrenergic blockers

e. beta-adrenergic agonists

449. After a psychological trauma, the patient constantly feels agitation, anxiety, and fear. What drug that is a benzodiazepine derivative was prescribed to this patient?

a. Diazepam

b. Bisacodyl

c. Analgin (Metamizole)

d. Heparin

e. Metoclopramide

450. An enzyme, connected to substrate, interacts with it only with a part of its molecule. Name this part:

a. Active center

b. Cofactor

c. Polypeptide chain portion

d. Coenzyme

e. Allosteric center

451. Gastroscopy of a patient revealed the lack of mucus in the coating of the mucous membrane. This can be caused by the dysfunction of the following cells of the gastric wall:

a. Cells of prismatic glandular epithelium

b. Parietal cells of gastric glands

c. Endocrinocytes

d. Cervical cells

e. Main exocrinocytes

452. Rotenone is known to inhibit respiratory chain. What complex of mitochondrial respiratory chain is inhibited by this substance?

a. NADH-coenzyme Q reductase

b. Adenosine triphosphate synthetase

c. Coenzyme Q - cytochrome c reductase

d. Cytochrome oxidase

e. Succinate-coenzyme Q reductase

453. What hormone stimulates the inclusion of calcium into the osteoblasts of dental bone tissues?

a. Calcitonin

b. Parathyroid hormone

c. Thyroxine

d. Insulin

e. Cortisol

454. A woman presents with edemas. In her urine there is a large amount of protein excreted. What nephron segment is functionally disturbed in this case?

a. Descending limb of loop of Henle

b. Proximal convoluted tubule

c. Renal corpuscle

d. Ascending limb of loop of Henle

e. Distal convoluted tubule

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

a. Kallikrein

b. Urokinase

c. Kininase

d. Cyclooxygenase

e. Angiotensin converting enzyme

456. Two years after a tooth extraction, the patient presents with a decrease in the volume of the tooth socket. What pathological process does it indicate?

a. Atrophy caused by insufficient blood circulation

b. Neurotic atrophy

c. Atrophy caused by physical factors

d. Dysfunctional atrophy

e. Pressure-induced atrophy

457. In a closed community it is necessary to determine community members immunity to diphtheria and verify the need for their vaccination. What investigation is necessary in this case?

a. Determine diphtheria antibody titer

b. Determine antitoxin titer by means of indirect hemagglutination assay

c. Determine community members immunity to diphtheria bacillus

d. Check medical records for vaccination

e. Test community members for diphtheria bacillus carriage

458. Mother with a 12-year-old child came to the gastroenterologist. She complains of loss of appetite and meteorism in her child. Endoscopically the child was diagnosed with biliary dyskinesia, in the duodenal contents there were pear-shaped protozoa with two nuclei and multiple flagella. What disease is the most likely in this child?

a. Lambliasis

b. Trichomoniasis

c. Amebiasis

d. Toxoplasmosis

e. Balantidiasis

459. A patient has been administered conduction anesthesia with novocaine in preparation for tooth extraction. After the anesthesia administration the patient developed swelling and hyperemy around the injection site, skin itch, general fatigue, motor agitation. Name the developed complication:

a. Drug dependence

b. Tachyphylaxis

c. Allergy

d. Inflammation

e. Idiosyncrasy

460. During examination the doctor performs auscultation to assess the functioning of the patient's mitral valve. Where can the sound of this valve be auscultated?

a. At the apex of the heart

b. At the edge of the sternum in the 2nd intercostal space on the right

c. At the edge of the sternum in the 2nd intercostal space on the left

d. At the edge of the sternum over the 5th costal cartilage on the left

e. At the edge of the sternum over the 5th costal cartilage on the right

461. 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. Chingamin (Chloroquine)

b. Benzylpenicillin sodium salt

c. Isoniazid

d. Rifampicin

e. Metronidazole

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

a. Muscular vein

b. Aorta

c. Heart

d. Muscular artery

e. Mixed type artery

463. During pregnancy, specific proteins that can destroy rhesus-positive erythrocytes of the fetus

were detected in the blood of a rhesus-negative mother. Name this defensive component of the mother's body:
a. Enzyme
b. Serum
c. Antigen
d. Antibody
e. Hormone
464. A patient underwent a glucose tolerance test that confirmed the absence of diabetes mellitus in this person. When, after a sugar load, a healthy person will have the highest glucose levels?
a. 30-60 minutes
b. 10-20 minutes
c. 120 minutes
d. 90 minutes
e. 150 minutes
465. 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. Hop preparations
b. Adaptogens
c. Bromine salts
d. Motherwort preparations
e. Valerian preparations
466. A dentist used a solution of potassium permanganate as an antiseptic. This preparation has a bactericidal effect because of:
a. Potassium hydroxide
b. Potassium
c. Atomic oxygen
d. Potassium oxide
e. Manganese oxide
467. 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. Hemomelanin (hemozoin)
b. Hemosiderin
c. Hematoporphyrin
d. Melanin
e. Lipofuscin
468. A shepherd tended to the sheep with the help of his dogs. Gradually he developed pain in his chest and started coughing blood. X-ray shows a spherical structure inhis lungs. Immunology testing confirmed the provisional diagnosis. What helminth is the likely cause of this condition?
a. Liver fluke
b. Diphyllobothrium latum
c. Echinococcus
d. Taenia solium
e. Hymenolepis nana
469. A patient with chronic caries of tooth 36 did not visit a dentist for a long time. The patient developed a sharp pain in the lower jaw and a cheek swelling. His body temperature increased up to 38^oC) What changes in the blood test findings should be expected in this case?
a. Monocytosis
b. Anemia
c. Leukopenia
d. Neutrophilia
e. Eosinophilia
470. 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. Metabolic alkalosis
c. -
d. Respiratory acidosis
e. Respiratory alkalosis
471. During heart ultrasound a 1.5-year-old child presents with non-closure of the foramen ovale, which is clinically confirmed. Where in the heart is this defect located?
a. Interventricular septum
b. Left atrioventricular valve
c. Interatrial septum
d. Right atrioventricular valve
e. Cardiac apex
472. After the extraction of upper tooth number 7, air appeared in the tooth socket. The wall of what paranasal sinus is most likely to be breached in this case?
a. Frontal sinus
b. Middle air cells of the ethmoid sinus
c. Sphenoid sinus
d. Posterior air cells of the ethmoid sinus
e. Maxillary sinus
473. A human embryo unattached to the endometrium was detected in the uterine cavity. What stage of embryo development is it?
a. Gastrula
b. Morula
c. Zygote
d. Blastocyst
e. Neurula
474. A dental surgeon has diagnosed a 24-year-old woman with suppurative inflammation of the sphenoidal sinus. All possible measures are taken to prevent the artery wall from being involved in this process. The artery is located in the cavernous sinus and its involvement can cause fatal hemorrhage. Name this artery:
a. A) ophthalmica
b. A) carotis externa
c. A) carotis interna
d. F. supraorbitalis
e. A) infraraorbitalis
475. Vitamin D_3 in the human body undergoes a number of biochemical transformations with formation of its most bioactive derivative - calcitriol. What hormone is needed to activate the enzymatic reactions of oxidative hydroxylation of this vitamin in the kidneys?
a. Thyroxine
b. Calcitonin
c. Cortisol
d. Aldosterone
e. Parathyroid hormone
476. The doctor stated the absence of respiration and cardiac activity in a traffic accident victim. This condition lasts for 1 minute already. This clinical presentation corresponds with the following terminal state:
a. Traumatic shock, erectile phase
b. Traumatic shock, torpid phase
c. Clinical death
d. Preagony
e. Agony
477. After a total gastric resection the patient developed severe B12-deficient anemia with disturbed hematopoiesis. Changed erythrocytes appeared in the patient's blood. One of the signs of this anemia is the presence of the following in blood:
a. Elliptocytes

b. Microcytes
c. Normocytes
d. Megalocytes
e. Anulocytes
478. In an experiment a peripheral segment of the sympathetic nerve that innervates the sublingual gland is being stimulated. In this case this gland will produce:
a. A small amount of viscous saliva
b. No saliva
c. A large amount of viscous saliva
d. A small amount of non-viscous saliva
e. A large amount of non-viscous saliva
479. A patient suffers from angina pectoris. What antianginal drug is this patient \textbfCONTRAINDICATED if he is allergic to iodine?
a. Nitrosorbide (Isosorbide dinitrate)
b. Amiodarone
c. Verapamil
d. Drotaverine
e. Nitroglycerine
480. A 30-year-old woman complains of intense thirst and dryness of the mouth that developed after a severe emotional shock. Laboratory analysis revealed increase of the patient's blood sugar level up to 10 mmol/L. What endocrine gland is affected in the patient?
a. Pancreas
b. Gonads
c. Pineal gland
d. Thyroid gland
e. Adrenal glands
481. At the cementoenamel junction there are non-calcified areas, through which infection often penetrates into the tooth. Name these structures:
a. Odontoblasts
b. Enamel tufts
c. Tomes' dentinal fiber
d. Enamel prisms
e. Ameloblasts
482. Examination of the femur detected suppurative inflammation of compact bone substance and bone marrow with formation of sequestra. What disease causes such changes?
a. Multiple myeloma
b. Giant cell tumor of bone
c. Osteomyelitis
d. Reticulosarcoma
e. Periostitis
483. A 12-year-old child complains of difficulty breathing through the nose. Examination revealed that this condition had been caused by persistent hypertrophy of the lymphoid tissue. What tonsil is likely to be enlarged in this case, as indicated by these pathological changes?
a. Lingual tonsil
b. Palatine tonsil
c. Pharyngeal tonsil
d. Left tubal tonsil
e. Right tubal tonsil
484. To treat tuberculosis, an antibiotic that colors urine red is prescribed. Name this antibiotic:
a. Rifampicin
b. Amoxicillin
c. Nitroxoline
d. Cefotaxime
e. Erythromycin
485. One of the listed amino acids with a hydroxyl group plays the largest role in the formation of the

structure of collagen and organic matrix of the tooth. What amino acid is it?
a. Serine
b. Tyrosine
c. Threonine
d. Homoserine
e. Oxyproline
486. A dentist prescribed the patient with maxillofacial arthritis diclofenac sodium. What is the mechanism of action of this drug?
a. Catalase inhibition
b. Cyclooxygenase-2 inhibition
c. Phosphodiesterase activation
d. Opiate receptors activation
e. Opiate receptors block
487. 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. Polycythemic hypovolemia
b. Normocythemic hypovolemia
c. Oligocythemic hypovolemia
d. Hypervolemia
e. No disturbances in blood volume
488. 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. Suppurative inflammation
b. Serous inflammation
c. Catarrhal inflammation
d. Proliferative inflammation
e. Fibrinous inflammation
489. A histological specimen shows terminal secretory parts of glands made of conic cells with basophilic cytoplasm and a roundish nucleus in the centre. Specify the type of terminal secretory parts by the type of secretion:
a. Mucous
b. Serous
c. Combined
d. Sebaceous
e. Seromucous
490. Microscopy of a sputum sample obtained from a patient who has been suffering from pneumonia for a week detected helminth larvae. Eosinophilia is observed in the patient's blood. What diagnosis can be suspected in this case?
a. Echinococcosis
b. Taeniasis
c. Ascariasis
d. Paragonimiasis
e. Fasciolasis
491. A 30-year-old patient has markedly positive Wassermann reaction (++++). What infectious disease can be diagnosed, using the Wassermann reaction?
a. Influenza
b. Syphilis
c. Poliomyelitis
d. Tuberculosis
e. Brucellosis
492. 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. Ribosomes
b. Lysosomes

c. Peroxisomes
d. Mitochondria
e. -

493. This extremely dangerous disease can be transmitted from a sick animal to a human via a flea bite. It exhibits characteristic lymphogenic spread of the causative agent with hemorrhagic inflammation of the regional lymph nodes. Name this disease:

a. Plague
b. Anthrax
c. Cholera
d. Tuberculosis
e. Tularemia

494. What types of excretory ducts are distinguished in the large salivary glands?

a. Intralobular and extraglandular ducts
b. Intralobular ducts, striated ducts, and the common duct
c. Intercalated ducts, striated ducts, and the common duct
d. Intralobular and interlobular ducts
e. Intralobular ducts, interlobular ducts, and the primary duct of the gland

495. Examination of histological specimen of oral mucosa reveals non-keratinized stratified squamous epithelium with lymphocyte infiltrations. What structure of oral cavity is the most likely to be represented by this mucosa specimen?

a. Lip
b. Hard palate
c. Gums
d. Cheek
e. Tonsil

496. In an experiment, the development of mesenchymal cells was completely inhibited. What type of muscle tissue will be maldeveloped as a result?

a. Muscle tissue of epidermal origin
b. Cardiac muscle tissue
c. Smooth muscle tissue
d. Muscle tissue of neural origin
e. Skeletal muscle tissue

497. During experiment, the myotome was destroyed in the rabbit fetus. This manipulation will result in malformation of the following structure:

a. Axial skeleton
b. Skeletal muscles
c. Serous membranes
d. Smooth muscles
e. Dermal connective tissue

498. Mother of a 4-year-old child complains that the child developed elevated body temperature, tenesmus, diarrhea, and abdominal pain attacks. The child attends a preschool facility. Laboratory analysis detected mucus and blood admixtures in the child's feces. Name the changes that occur in the gastrointestinal tract during dysentery:

a. Gastroenteritis
b. Colitis
c. Enteritis
d. Enterocolitis
e. Gastritis

499. Aortic stenosis was detected in a young woman, but no circulatory disorders were observed in the patient. What immediate mechanism ensures cardiac compensation in such cases?

a. Homeometric
b. Heterometric
c. Myogenic dilation
d. Increased blood pressure
e. Decreased heart weight

500. To study the blood flow, a doctor placed the sensor in the area of the sulcus bicipitalis medialis. What vessel is being studied by the doctor?
a. A) axillaris
b. A) profunda brahii
c. A) radialis
d. A) ulnaris
e. A) brachialis
501. A patient is diagnosed with parathyroid tumor. He presents with generalized fibrous osteodystrophy and periodical renal colic attacks. US detects small nephroliths in the kidneys. What is the most likely cause of nephrolithiasis in this case?
a. Hypercholesterolemia
b. Hypocalcemia
c. Hyperphosphatemia
d. Hypercalcemia
e. Hyperuricemia
502. A patient came to the traumatologist with complaints of developing difficulties during active extension of elbow. What muscle is the most likely to be damaged?
a. M. pectoralis minor
b. M. deltoideus
c. M. latissimus dorsi
d. M. triceps brachii
e. M. coracobrachialis
503. To stimulate the labor activity of a woman, the doctor prescribed her prostaglandin E_2. What acid is used to synthesize this compound?
a. Arachidonic
b. Palmitic
c. Phosphatidic
d. Stearic
e. Glutamic
504. 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. Serous pulpitis
b. Suppurative pulpitis
c. Gangrenous pulpitis
d. Fibrous pulpitis
e. Granulating pulpitis
505. An athlete overexerted himself during a training and developed a muscle contracture. In such cases the muscle loses its flexibility and gradually becomes rigid due to its inability to relax. What is the likely cause of the contracture in this case?
a. Increased blood levels of K^+
b. Decreased blood levels of Ca^++
c. Tropomyosin structural changes
d. Increased blood levels of lactic acid
e. ATP deficiency
506. 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. Normocytes
b. Macrocytes
c. Poikilocytes
d. Reticulocytes
e. Annulocytes
507. A scar made up of connective tissue has formed at the site of a healed wound. What substance is the main component of this type of connective tissue?
a. Chondroitin sulfate

b. Collagen
c. Hyaluronic acid
d. Elastin
e. Keratan sulfate
508. During microscopy of an embryo material, a yolk sac is visible in the microslide. What is the main function of this organ in the human body?
a. Protective
b. Excretory
c. Trophic
d. Amniotic fluid production
e. Hemopoietic
509. An odontogenic cyst, connectd to the second premolar, was removed from the patient's maxillary alveolar process. Histologically, the cystic wall is lined with stratified squamous epithelium and a hard structure resembling a rudimentary tooth is located in the cystic cavity. Make the diagnosis:
a. Dermoid cyst
b. Follicular cyst
c. Primordial cyst
d. Radicular cyst
e. Teratoma
510. Fibrocartilaginous layer of trachea consists of C-shaped hyaline cartilage rings, with their open ends facing posteriorly. What tissue connects these open ends?
a. Smooth muscular tissue
b. Striated muscular tissue
c. Adipose connective tissue
d. Dense unformed connective tissue
e. Loose fibrous connective tissue
511. Examination of a patient detects an anomaly of enamel development. What structural components of the tooth bud were damaged, causing this condition?
a. Stratum intermedium
b. Cervical loop
c. Inner enamel epithelium
d. Stellate reticulum
e. Outer enamel epithelium
512. An athlete before a sports contest presents with elevated blood pressure and heart rate. What part of the CNS induces these changes?
a. Medulla oblongata
b. Cerebral cortex
c. Mesencephalon
d. Hypothalamus
e. Diencephalon
513. Patients with ischemic heart disease are prescribed small doses of aspirin that inhibits the synthesis of platelet aggregation activator thromboxane A2. What substance is thromboxane A2 made of?
a. Homogentisic acid
b. Arachidonic acid
c. Glutamic acid
d. Malonic acid
e. Acetic acid
514. 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 · 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. Disturbed porphyrin synthesis
c. Vitamin B_12 deficiency

d. Erythrocyte hemolysis
e. Iron deficiency
515. 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. Filariasis
b. Cysticercosis
c. Taenia saginata invasion
d. Trichinosis
e. Taenia solium invasion
516. A 50-year-old patient was diagnosed with myxedema. The development of this pathology is caused by disturbed production of certain hormones. Name these hormones.
a. Oxytocin and vasopressin
b. Insulin and glucagon
c. Thyroxine and triiodothyronine
d. ACTH and growth hormone
e. Cortisol and aldosterone
517. Examination of a patient detects calcinosis cutis, Raynaud syndrome, esophageal motility disorder, sclerodactyly, and telangiectasia. These changes are called CREST syndrome. What disease can be characterized by the described changes?
a. Gouty arthritis
b. Rheumatoid arthritis
c. Dermatomyositis
d. Systemic lupus erythematosus
e. Systemic scleroderma
518. A deciduous second molar was extracted in a 13-year-old child. What permanent tooth will replace the extracted one?
a. Second premolar
b. Second molar
c. Third molar
d. First premolar
e. First molar
519. A patient died in the intensive care unit of multiple organ dysfunction syndrome. The patient had a history of surgery for acute purulent periostitis. Histology of necrobiopsy materials detects hyperplasia of tonsillar lymphoid tissue, diffuse neutrophil infiltration of the necrotically changed alveolar process of the jaw, regional purulent lymphadenitis, phlegmon of the soft tissues of the neck, bilateral polysegmental purulent pneumonia, splenomegaly, and irreversible changes in cardiomyocytes and epithelium of renal tubules. Postmortem bacteriology detected Staphylococcus aureus in the blood of the deceased. What type of sepsis is likely in the deceased patient?
a. Therapeutic
b. Tonsilogenic
c. Odontogenic
d. Surgical
e. Cryptogenic
520. Neutrophils were detected in the histoslides of connective tissue. What function do these cells perform when they migrate from the blood to the tissues?
a. Blood vessel dilation
b. Trophic function
c. Phagocytosis of microorganisms
d. Support function
e. Regulation of contraction of smooth myocytes
521. A patient has a history of trauma followed by hemorrhagic bursitis of the left knee joint. During an examination 3 months later, limited mobility is observed in this joint because of scar formation. What inflammation component is the basis for the development of this complication?
a. Primary alteration

b. Exudation
c. Disturbed microcirculation
d. Proliferation
e. Secondary alteration
522. A 62-year-old woman has insomnia. What medicine should she be prescribed?
a. Nitrazepam
b. Piracetam
c. Caffeine and sodium benzoate
d. Droperidol
e. Dimedrol (Diphenhydramine)
523. A man came to a doctor with complaints of excessive thirst (polydipsia) and frequent urination with a large amount of urine (polyuria). The patient's history states that 4 weeks ago he was diagnosed with necrosis of the posterior lobe of the pituitary gland caused by a craniocerebral injury. What pathology is observed in the patient?
a. Diabetes insipidus
b. Cushing disease
c. Cushing syndrome
d. Diabetes mellitus
e. Acromegaly
524. A patient has high levels of blood aldosterone. What physiologically active substance is likely to have contributed to this condition?
a. Cyclic adenosine monophosphate
b. Prostaglandin E2
c. Cyclic guanosine monophosphate
d. Angiotensin II
e. Natriuretic factor
525. Examination revealed a carious cavity on the masticatory surface of the patient's first upper left molar. The cavity has a conic shape, with its apex pointing towards the dental root. Between the cavity and the pulp there are areas of softened, transparent, and replacement dentin. What stage of caries was detected in the patient?
a. Initial caries
b. Acute superficial caries
c. Acute deep caries
d. Chronic superficial caries
e. Acute median caries
526. In an experiment, the internal layer of the enamel organ epithelium was destroyed in the tooth germ of a lab animal. It will disrupt the development of the following dental tissue:
a. Enamel
b. Dentin
c. Periodontium
d. Pulp
e. Cement
527. A patient with alcoholism has hepatic cirrhosis. Within the last half a year he developed varicose abdominal veins, splenomegaly, and ascites (portal hypertension syndrome). What complication is the most likely cause of the patient's death?
a. Hypoproteinemia
b. Hepatolienal syndrome
c. Hemorrhage from the gastrointestinal varices
d. Accelerated hemolysis
e. Hepatic encephalopathy
528. A 43-year-old man complains of sudden skin edema and redness with vesicles and itching. He developed these signs after eating shrimps. Such local signs are characteristic of the following type of hypersensitivity:
a. Local signs of type II hypersensitivity
b. Type III hypersensitivity reaction

c. -
d. Local signs of type IV hypersensitivity
e. Local signs of type I hypersensitivity
529. A man came to the dentofacial orthopedist to have dentures made for him. The doctor determined that all the teeth without second antagonists need dentures. Name these teeth:
a. Lower second premolars
b. Upper third molars
c. Lower second molars
d. Upper second molars
e. Lower first molars
530. A person develops alimentary (nutritional) hyperglycemia after eating, which stimulates secretion of the following hormone:
a. Insulin
b. Noradrenaline
c. Adrenaline
d. Glucagon
e. Cortisol
531. During preventive examination a man presents with enlarged thyroid gland, exophthalmia, body temperature of 37.3^oC, tachycardia, and trembling fingers. What pathology of the thyroid gland did the patient develop?
a. Endemic goiter
b. Sporadic cretinism
c. Myxedema
d. Graves' disease
e. Thyroid adenoma
532. A 61-year-old patient died in the intensive care unit due to multiple organ dysfunction syndrome. Previously, the patient underwent a surgery for acute purulent periostitis. Histology of necropsy materials revealed hyperplasia of the lymphoid tissue of the tonsils, diffuse neutrophilic infiltration of the necrotically changed alveolar process of the jaw, regional purulent lymphadenitis, soft tissue phlegmon of the neck, bilateral polysegmental purulent pneumonia, splenomegaly, irreversible changes in cardiomyocytes and epithelium of the renal tubules. Postmortem bacteriology detected Staphylococcus aureus in the blood. What disease is the cause of these pathological manifestations?
a. Odontogenic sepsis
b. Surgical sepsis
c. Treatment-induced sepsis
d. Tonsilogenic sepsis
e. Cryptogenic sepsis
533. In a 46-year-old man, examination revealed the processes of cartilaginous tissue destruction in the knee joints. What are the specific features of cartilaginous tissue in this location?
a. It has no perichondrium
b. It has perichondrium
c. It has osteoblasts
d. It has no isogenic groups of osteocytes
e. It has isogenic groups of osteocytes
534. A person bitten by a stray dog came to the surgeon's office. Wide lacerated wounds are localized on the patient's face. What rabies-prevention aid should be provided to this person?
a. Immediately administer normal gamma globulin
b. Prescribe combined vitamin therapy
c. Immediately administer DPT vaccine
d. Begin immunization with antirabic vaccine
e. Hospitalize the patient and continue to monitor his condition
535. A 43-year-old woman against the background of septic shock presents with thrombocytopenia, decreased fibrinogen levels, fibrin degradation products appearing in the blood, and petechial hemorrhages. Specify the cause of these changes:
a. Disseminated intravascular coagulation

b. Disturbed platelet production
c. Autoimmune thrombocytopenia
d. Hemorrhagic diathesis
e. Exogenous intoxication
536. During examination a neurologist taps the tendon under the patient's kneecap with a reflex hammer to evaluate reflex extension of the knee. This response is provoked by stimulation of the following receptors:
a. Articular receptors
b. Tactile receptors
c. Muscle spindles
d. Golgi tendon organ
e. Nociceptors
537. A man cannot lift his drooping lower jaw. What muscles of the head \textbfDO NOT function properly in this case?
a. Superior auricular
b. Masseters
c. Buccinators
d. Zygomaticus minor
e. Zygomaticus major
538. Histological examination of the mandibular bone shows a tumor consisting of fibrous tissue that surrounds basophilic cement-like foci of varying size. Make the diagnosis, what kind of tumor it is:
a. Cementoma
b. Cementoblastoma
c. Cemento-ossifying fibroma
d. Giant cementoma
e. Odontogenic fibroma
539. 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. Systemic lupus erythematosus
b. Dermatomyositis
c. Systemic scleroderma
d. Gouty arthritis
e. Rheumatoid arthritis
540. The sequence of DNA triplets determines the arrangement of amino acids in a protein molecule. This characteristic of the genetic code is called:
a. Universality
b. Triplet code
c. Non-overlapping
d. Redundancy
e. Colinearity
541. A patient, who was taking a blood pressure-lowering drug, complains of dry mouth. What antihypertensive agent has such a side effect?
a. Adelphane (Reserpine + Dihydralazine)
b. Dibazol (Bendazol)
c. Clophelin (Clonidine)
d. Anaprilin (Propranolol)
e. Verapamil
542. During an exacerbation of rheumatoid arthritis, the patient with a history of concomitant chronic gastritis was prescribed celecoxib. What decreases the digestive tract side effects of this drug?
a. Predominant stimulation of adenylate cyclase
b. Predominant inhibition of cyclooxygenase-2
c. Phosphodiesterase inhibition
d. Predominant inhibition of cyclooxygenase-1
e. Phospholipase A2 inhibition

543. The presence of an allosteric center is a structural feature of regulatory enzymes. What is its role?
a. Binds the regulatory effector
b. Binds the coenzyme
c. Promotes the coenzyme dissociation
d. Binds the substrate
e. Changes the structure of the substrate
544. A 32-year-old woman underwent removal of a brown fungiform gingival neoplasm. Microscopically, it consists of connective tissue with numerous sinusoidal vessels, large multinucleated cells, and small mononuclear cells. There are small hemorrhages and hemosiderin deposits, as well. What type of neoplasm is it?
a. Giant-cell epulis
b. Angiomatous epulis
c. Hypertrophic gingivitis
d. Gingival fibromatosis
e. Fibromatous epulis
545. A histological specimen of the heart wall shows large cells with light-colored cytoplasm and an eccentric nucleus, located between the endocardium and the myocardium. What cardiac cells have such morphological features?
a. Purkinje cells
b. Endocrine cells
c. Pacemaker cells
d. Contractile cardiomyocytes
e. Lipocytes
546. Fluorination is one of the main methods for improvement of enamel resistance. The mechanism of fluorine anti-caries action is based on:
a. -
b. Fluorapatite synthesis
c. Chlorapatite synthesis
d. Tooth demineralization
e. Hydroxyapatite synthesis
547. Global warming is one of the most concerning ecological problems for the humanity. One of the causes of climate change is the greenhouse effect, which is associated with:
a. Decreased oxygen levels in the atmosphere
b. Increased levels of sulfur oxides in the atmosphere
c. Decreased carbon dioxide levels in the atmosphere
d. Increased carbon dioxide levels in the atmosphere
e. Development of ozone holes
548. An electron micrograph shows a fibroblast that produces components of the intercellular substance. What organelles take part in this process?
a. Granular endoplasmic reticulum and Golgi complex
b. Granular and agranular endoplasmic reticula
c. Golgi complex and lysosomes
d. Golgi complex and mitochondria
e. Agranular endoplasmic reticulum and Golgi complex
549. In an experiment, a dog was trained to develop a conditioned reflex in response to a flash of light. For this reflex to occur, a certain part of the cerebral cortex must be intact. What part of the cerebral cortex is it?
a. Occipital lobe
b. Frontal lobe
c. Temporal lobe
d. Precentral gyrus
e. Postcentral gyrus
550. A patient developed a tender red nodule in the lower jaw area. Histologically there is accumulation of purulent exudate in several hair follicles. What clinicopathological type of

inflammation is observed?
a. Abscess
b. Hypostatic abscess
c. Phlegmon
d. Carbuncle
e. Furuncle
551. A 3-year-old child presents with facial deformation that was gradually developing over the course of 6 months and manifests as symmetrical enlargement of both mandibular angles. Microscopy shows the space between the bone trabeculae to be filled with connective tissue that contains numerous blood vessels and smaller primitive bone trabeculae. What disease is the most likely in this case?
a. Eosinophilic granuloma
b. Giant-cell tumor of the bone
c. Fibroma
d. Cherubism
e. Osteosarcoma
552. Dependence of blood pressure from vascular resistance was studied in an experiment on a test animal. In what vessel will the resistance be the highest?
a. Aorta
b. Arteries
c. Capillaries
d. Arterioles
e. Veins
553. 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. Lamblia
c. Pentatrichomonas hominis
d. Entamoeba histolytica
e. Balantidium
554. A 3-year-old child was given strawberries. Soon after that, rashes appeared on the child's skin. What changes will be detected in the child's leukogram in this case?
a. Lymphocytosis
b. Eosinophilia
c. Neutrophilic leukocytosis
d. Lymphocytopenia
e. Monocytosis
555. What nerves must be anesthetized for extraction of an upper third molar?
a. Anterior superior alveolar nerves
b. Posterior superior alveolar nerves
c. Middle superior alveolar nerves
d. Greater palatine nerve
e. Posterior superior nasal nerves
556. A patient suffering from ciliary arrhythmia with anamnesis of bronchial asthma should be prescribed an antiarrhythmic drug. What antiarrhythmic drug is \textbfCONTRAINDICATED in this case?
a. Ajmaline
b. Novocainamide (Procainamide)
c. Anaprilin (Propranolol)
d. Nifedipine
e. Verapamil
557. In a 65-year-old man with portal hypertension, the substances that are being neutralized in the liver enter his general bloodstream through portocaval anastomoses. What type of hepatic coma will develop in the patient in this case?
a. Mixed

b. Ketoacidotic
c. Hepatocellular
d. Shunt
e. Parenchymatous
558. In the process of tooth extraction, the connection between the tooth cement and tooth socket is being destroyed. Name this connecting structure:
a. Enamel
b. Dentin
c. Gums
d. Cement
e. Periodontium
559. In an experiment, the common bile duct of a test animal was diverted outwards. What digestive processes become disturbed as a result?
a. Hydrolysis and absorption of carbohydrates
b. Hydrolysis and absorption of proteins
c. Hydrolysis and absorption of fats, proteins, and carbohydrates
d. Water absorption
e. Hydrolysis and absorption of fats
560. 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. Congenital thymomegaly
c. Thymoma
d. Thymic dysplasia
e. Thymic agenesis
561. 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 artery
b. Elastic artery
c. Blood capillary
d. Muscular vein
e. Mixed type artery
562. Chronic inflammation of gingiva resulted in excessive growth of connective tissue fibers. What cell elements are leading in the development of this condition?
a. Macrophages
b. Osteoblasts
c. Fibrocytes
d. Osteoclasts
e. Fibroblasts
563. What condition can develop as a result of infusing large volumes of isotonic solutions?
a. Oligocythemic hypovolemia
b. Simple hypervolemia
c. Polycythemic hypervolemia
d. Polycythemic hypovolemia
e. Oligocythemic hypervolemia
564. Erythrocyte needs energy in the form of ATP for its vital functions. What process supplies erythrocytes with necessary amount of ATP?
a. Tricarboxylic acid cycle
b. Anaerobic glycolysis
c. Aerobic oxidation of glucose
d. Pentose phosphate pathway
e. beta-oxidation of fatty acids
565. A patient with chronic hypoacid gastritis has hypochromic anemia. Blood smear test revealed

codocytes (target cells), microanisocytosis, and poikilocytosis. What type of anemia is observed in the patient?
a. Thalassemia
b. Pernicious anemia
c. Acute posthemorrhagic anemia
d. Sickle cell anemia
e. Iron deficiency anemia
566. An experiment was conducted to measure the threshold of tactile receptors stimulation with various stimuli. What stimulus will have the lowest threshold?
a. Cold stimulus
b. Photic stimulus
c. Chemical stimulus
d. Heat stimulus
e. Mechanical stimulus
567. Disturbed endoderm differentiation was detected in an embryo material. This process can lead to developmental changes in the following organs:
a. Aorta
b. Stomach
c. Heart
d. Salivary glands
e. Kidneys
568. Some drugs can be classifed as enzymes. Select one such enzyme drug among the listed compounds.
a. Pepsin
b. Glucokinase
c. Insulin
d. Glucose oxidase
e. Hydrocortisone
569. After the eruption of the permanent teeth, their dentin was involved into a pathological process. In the affected areas, the following can be detected: uneven mineralization, absent or distorted dentinal tubules, certain inclusions. How is this dentin called?
a. Predentin
b. Demineralized
c. Tertiary
d. Primary
e. Secondary
570. What artery can be damaged when conduction anesthesia is being administered to the area of mandibular foramen?
a. Middle meningeal artery
b. Pterygoid branches of the maxillary artery
c. Buccal artery
d. Inferior alveolar artery
e. Lingual artery
571. A 6-year-old girl exhibits marked signs of hemolytic anemia. Biochemical anlysis 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. Tissue respiration
b. Anaerobic glycolysis
c. Pentose-phosphate pathway
d. Oxidative phosphorylation
e. Gluconeogenesis
572. Trying to lose weight, a woman has limited the amount of products in her diet. Three months later she developed edema and increased urine output, which indicates that her diet is low on the following type of nutrients:
a. Lipids

b. Minerals
c. Vitamins
d. Proteins
e. Carbohydrates
573. An outbreak of intestinal infection was registered at a kindergarten. Bacteriology of the patient's feces detected no pathogenic bacteria. Electron microscopy revealed round formations with clear margins and a thick sleeve, resembling a wheel. What is the most likely causative agent of this infection?
a. Rotavirus
b. Coxsackievirus
c. E) coli
d. Adenovirus
e. P. vulgaris
574. A patient undergoes a surgery for a knee joint injury. The surgical incision reveals formations that improve the congruence of articular surfaces. What are these formations called?
a. Ligaments
b. Menisci
c. Folds
d. Labia
e. Discs
575. Thirty minutes after drinking mango juice, a child suddenly developed a limited swelling on the soft palate that hindered swallowing and later breathing. The mucosa in the area of the swelling is hyperemic and painless. Blood test detected eosinophilia. The child's body temperature is normal. From the family history it is known that the child's older sister had bronchial asthma attacks. What type of edema did this child most likely develop?
a. Cardiac
b. Inflammatory
c. Hepatic
d. Alimentary
e. Allergic
576. For a rapid relief of hypertensive crisis, a 65-year-old man was prescribed a drug that suppresses the reabsorption of sodium chloride in the thick segment of the ascending limb of the loop of Henle and has marked diuretic effect. Name this drug:
a. Spironolactone
b. Furosemide
c. Hydrochlorothiazide
d. Mannitol
e. Triamterene
577. A 20-year-old young man was preventively given an anatoxin. It was an immunization against the following disease:
a. Scarlet fever
b. Tuberculosis
c. Diphtheria
d. Pertussis
e. Meningitis
578. A patient has been hospitalized with a rectal prolapse. Examination of the rectum detected small helminths detected attached to the mucosa. They resemble small whips with varying diameter of the body. Stool test revealed barrel-shaped eggs with bipolar plugs. What is the most likely causative agent of the disease?
a. Lamblia intestinalis
b. Enterobius vermicularis
c. Ascaris lumbricoides
d. Entamoeba histolytica
e. Trichuris trichiura
579. To prevent an increase in hepatitis B morbidity in the city hospitals, it is necessary to vaccinate

the medical personnel. What should be used for immunization in this case?
a. Recombinant vaccine
b. Interferon
c. Live attenuated vaccine
d. Inactivated vaccine
e. Arbidol (Umifenovir)
580. A patient with heatstroke was delivered to the admission room. What compensatory reactions develop in the patient's body in such case?
a. Increased heart rate
b. Peripheral vasoconstriction
c. Peripherial vasodilatation
d. Persistent hyperglycemia
e. Coronary vasospasm
581. Examination of a woman detects neck thickening, exophthalmos, and the pulse of 110/min. What additional tests are necessary to make the diagnosis in this case?
a. Glucose challenge test
b. Ultrasound of the ovaries
c. Measuring the levels of T3 and T4
d. Tomography of the adrenal glands
e. Measuring the blood catecholamine levels
582. A urine sample was taken via a catheter from the urinary bladder of a 17-year-old young man. Microscopy of the urine precipitate in this case can detect cells of the epithelium that lines the urinary bladder. What epithelium is it?
a. Non-stratified cuboidal epithelium
b. Transitional epithelium
c. Keratinized stratified epithelium
d. Non-keratinized stratified epithelium
e. Non-stratified columnar epithelium
583. During teeth examination on the lateral surface of the first upper molar there was detected a cone-shaped carious cavity with base oriented towards the tooth surface and apex - towards the tooth center. Softened dentin is visible at the floor of the carious cavity. Make the diagnosis:
a. -
b. Dentin caries
c. Cement caries
d. Tooth erosion
e. Enamel caries
584. A patient suffers from disturbed blood supply of superior lateral surface of the cerebral hemispheres. What blood vessel is damaged?
a. Posterior cerebral artery
b. Anterior communicating artery
c. Posterior communicating artery
d. Anterior cerebral artery
e. Medial cerebral artery
585. Examination of the oral cavity revealed dark yellow and brown spots on the labial and lingual surfaces of the teeth. The spots cover more than half of the dental surface. Dentin and enamel are destroyed. What is the most likely diagnosis?
a. Fluorosis
b. Cuneiform defects
c. Caries of enamel
d. Dental erosion
e. Deep caries
586. A woman came to a dental clinic with complaints of severe toothache and extreme sensitivity to sweet and sour foods and thermal stimuli. She has a history of frequent maxillary sinusitis on the right. Examination of her oral cavity detected a carious tooth - the maxillary right first premolar. The doctor suggested anesthetizing the tooth for further treatment. What nerve innervates this tooth?

a. N. infraorbitalis
b. N. incisivus
c. N. mandibularis
d. N. petrosus major
e. N. alveolaris superior medius
587. After extraction of a tooth on the lower jaw, a 30-year-old woman developed an increase in temperature and later a swelling in her neck region. A dissection of the skin of her neck revealed that the subcutaneous fatty tissue was soaked through with a foul-smelling opaque yellow-green liquid. What process developed in the fatty tissue in this case?
a. Fibrinous inflammation
b. Phlegmon
c. Serous inflammation
d. Abscess
e. Hemorrhagic inflammation
588. The costal margin is an important topographic landmark of the human body. It is formed by the cartilage of the following vertebrae:
a. From 7 to 10
b. From 1 to 12
c. From 1 to 7
d. From 11 to 12
e. Only 12
589. A patient was diagnosed with caries complicated by chronic pulpitis. During an examination, the dentist found a proliferation of soft bright-pink tissue in the form of a polyp over the preserved part of the patient's dental crown. What disease can be characterized by these signs?
a. Fibrous pulpitis
b. Serous pulpitis
c. Diffuse purulent pulpitis
d. Granulating pulpitis
e. Gangrenous pulpitis
590. What microflora predominates at the beginning of dental plaque formation on the tooth surface?
a. Fusobacteria
b. Streptococci, Veillonella
c. Bacteroids, Candida
d. Leptotrichia
e. Obligate anaerobes
591. Breakdown of cyclic adenosine monophosphate (cAMP) and cyclic guanosine monophosphate (cGMP) into simple, non-cyclic nucleoside monophosphates is catalyzed by the following enzyme:
a. Protein kinase
b. Adenylate cyclase
c. Phosphodiesterase
d. Glucose 6-phosphatase
e. Glycogen phosphorylase
592. In the microslide of a human embryo obtained from a spontaneous miscarriage, an embryonic shield is visible and has two cellular layers: endoderm and ectoderm. This embryo was at the following developmental stage:
a. Gastrulation
b. Histogenesis
c. Neurulation
d. Organogenesis
e. Progenesis
593. A doctor has made a diagnosis of gingivitis and recommended the patient to rinse the oral cavity with an oxidizing agent. Specify this agent:
a. Hydrogen peroxide
b. Brilliant green
c. Phenol

d. Boric acid
e. Salicylic acid
594. During tooth development, dentin is the first tissue to be laid down. What is the source of its development?
a. Inner enamel epithelium
b. Dental lamina
c. Outer enamel epithelium
d. Dental papilla
e. Dental follicle
595. A man came to the virology laboratory of an infectious diseases hospital. He needs to be examined for HIV infection. What methods of laboratory diagnostics for HIV infection and AIDS are currently used in Ukraine?
a. Allergological
b. Virological
c. Bacteriological
d. Biological
e. Serological
596. During an appointment, a patient developed atrioventricular block. What medicinal substance can be used as an emergency aid in this case?
a. Platyphyllin
b. Atropine
c. Anaprilin (Propranolol)
d. Pirenzepine
e. Atenolol
597. During oral cavity examination a dentist noticed eruption of the permanent canines in a child. The child grows and develops normally. Determine the child's age:
a. 9-10 years
b. 6-7 years
c. 8-9 years
d. 13-16 years
e. 11-13 years
598. Pediatric examination of a 10-year-old child detected numerous petechiae on the skin, bleeding gums, and low levels of vitamin C in urine. What process is disturbed in this case?
a. Proteoglycan breakdown
b. Collagen breakdown
c. Collagen synthesis
d. Hyaluronidase activation
e. Proteoglycan synthesis
599. Biopsy material of oral mucosa demonstrates morphological signs of gums. What structural characteristics of the gingival mucosa can normally be observed?
a. Tightly attached to the periosteum, lamina propria forms tall papillae, no muscular layer
b. Loosely attached to the periosteum, well-defined muscular layer
c. No lamina propria or muscular layer
d. No muscular layer, well developed submucous layer
e. Contains numerous small salivary glands
600. A woman is diagnosed with a hemorrage into the posterior horns of the spinal cord. What is their function?
a. Sensory
b. Parasympathetic
c. -
d. Motor
e. Sympathetic
601. After facial trauma the patient developed a buccal hematoma. What salivatory gland has its outflow blocked by the hematoma?
a. Parotid

b. Sublingual
c. Submandibular
d. Buccal
e. Lingual

602. 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. Renin
d. Adrenaline
e. Thymosin

603. In the course of a surgery, the fibers of the 12th pair of cranial nerves were damaged. This damage manifested as:
a. Disturbed contraction of the muscles that elevate the hyoid bone
b. Disturbed contraction of the laryngeal muscles
c. Disturbed contraction of the pharyngeal muscles
d. Disturbed function of the lingual muscles
e. Disturbed contraction of the muscles of the soft palate

604. A man presents with impaired pupillary reflex. His pupils are narrowed and he poorly orients in a dark room. What eyeball muscle is dysfunctional in this case?
a. M. obliquus superior
b. M. sphincter pupillae
c. M. ciliaris
d. M. obliquus inferior
e. M. dilatator pupillae

605. A patient needs his tongue to be amputated due to a malignant tumor located there. Where can one easily find the lingual artery and ligate it?
a. Pirogov triangle
b. Omotrapezoid triangle
c. Omoclavicular triangle
d. Carotid triangle
e. Omotracheal triangle

606. A patient is diagnosed with stomatitis caused by herpes simplex virus,type 1 and 2.What medicine that is an analogue of nucleosides and is converted by thymidine kinase can provide highly effective selective antiviral therapy?
a. Rimantadine
b. Oxolin (Dioxotetrahydrooxytetrahydro-naphthaline)
c. Acetylcysteine
d. Laferon (recombinant human interferon alpha-2b)
e. Acyclovir

607. A man with mandibular sarcoma presents with metaplasia in his biopsy material. Describe this phenomenon:
a. Tumor tissue assumes the properties of other tissue
b. Cells lose their ability to differentiate
c. Tumor progression
d. Intensified mitosis of tumor cells
e. Tumor cells revert to their normal condition

608. A sample obtained from the patient's thyroid gland was processed with silver salts, which revealed large argyrophilic cells in the follicular walls. What hormone is being secreted by these cells?
a. Parathyrin
b. Adrenaline
c. Aldosterone
d. Thyroxine
e. Calcitonin

609. Examination of the patient's oral cavity shows a contact between the cutting edges of the upper

and lower incisors. This type of teeth placement is characteristic of:
a. Orthognathia
b. Progenia
c. Biprognathic occlusion
d. Orthogenic occlusion
e. Closed occlusion
610. A patient complains of productive cough and general weakness. Laboratory analysis of sputum revealed larvae. It is a characteristic sign of:
a. Cysticercosis
b. Enterobiasis
c. Taeniasis
d. Ascariasis
e. Opisthorchiasis
611. Dental implants were installed in a patient. Three weeks later, implant rejection occurred. What blood cells play the largest role in this pathological process?
a. Plasmacytes
b. T lymphocytes
c. B lymphocytes
d. Immunoglobulins E
e. Immunoglobulins M
612. Genetic defects of certain urea-biosynthesis enzymes cause accumulation of free ammonia in the blood and tissues. What organ is most sensitive to hyperammonemia?
a. Kidneys
b. Liver
c. Intestine
d. Heart
e. Brain
613. During emotional stress, a hormone-sensitive enzyme triglyceride lipase activates in the adipose tissue. What second messenger takes part in activation of this enzyme?
a. Inositol triphosphate
b. Diacylglycerol
c. Ca^2+
d. cAMP
e. cGMP
614. A patient was prescribed oral irrigation with hydrogen peroxide solution. It belongs to the following group of antiseptics:
a. Dyes
b. Nitrofurans
c. Oxidants
d. Alcohols
e. Detergents
615. A patient suffers from meningitis. He is prescribed a subarachnoid space puncture. Where is this space located?
a. -
b. Between periosteum and arachnoid mater
c. Between dura mater and arachnoid mater
d. Between arachnoid mater and pia mater
e. Between periosteum and dura mater
616. Erythrocytes of a person with fourth blood group (genotype IAIB) contain both antigen A controlled by allele IA and antigen B that is the product of allele IB expression. What type of gene interaction is demonstrated by this phenomenon?
a. Codominance
b. Epistasis
c. Polymery
d. Semidominance

e. Complementarity
617. A patient was diagnosed with Klinefelter's syndrome. The patient with this disease will have the karyotype (47, XXY). How many sex chromosomes are in this complement?
a. One
b. Three
c. Two
d. Zero
e. Forty four
618. What diuretic will produce no effect in a patient with Addison disease?
a. Triamterene
b. Spironolactone
c. Furosemide
d. Ethacrynic acid
e. Hydrochlorothiazide
619. A patient developed hypersalivation during dental manipulations. What group of drugs can inhibit saliva production?
a. Adrenergic agonists
b. Astringents
c. Adrenergic antagonists
d. Cholinergic antagonists
e. Cholinergic agonists
620. After a tooth extraction, the patient developed acute heart failure. What drug should be prescribed in this case?
a. Convallaria majalis tincture
b. Strophanthin
c. Digitoxin
d. Cordigitum
e. Adonisid
621. An 8-year-old girl against the background of a suspected viral infection developed body temperature of 39^oC. What medicine should she be prescribed to lower her temperature?
a. Paracetamol
b. Pentazocine
c. Nicotinamide
d. Diphenine (Phenytoin)
e. Codeine
622. A woman complains of impaired gustatory sensitivity of her tongue. This disturbance can be caused by the damage to a certain nucleus of the medulla oblongata. Name this nucleus:
a. Hypoglossal nucleus
b. Inferior salivatory nucleus
c. Solitary nucleus
d. Nucleus ambiguus
e. Dorsal nucleus of vagus nerve
623. After entering the body, bacteria undergo phagocytosis by macrophages. What role do macrophages play in the cooperation of immunocompetent cells at the first stage of immune response formation?
a. They activate T-killers
b. They process antigens and present them to T-killers
c. They process antigens and present them to T-helpers
d. They activate NK-cells
e. They produce immunoglobulins
624. A patient with electrical injury to the neck area developed pathologic fixed sideways flexion of the head towards the injured area, while the face is fixed away from the injury. What neck muscle sustained scarring?
a. Trapezius muscle
b. Sternocleidomastoid muscle

c. Anterior scalene muscle
d. Omohyoid muscle
e. Digastric muscle
625. During a surgery, a patient with acute appendicitis developed a cardiac arrest. What signs are characteristic of clinical death?
a. Apneustic respiration, no cardiac activity
b. Rapid respiration, weak heart sounds
c. No respiration, thready pulse
d. No respiration, no cardiac activity
e. Kussmaul respiration, no cardiac activity
626. A patient with diabetes mellitus developed acidosis because of ketone bodies accumulation in the blood. What changes will be observed in the respiratory system in this case?
a. Pulmonary ventilation decreases
b. Breath holding occurs
c. Cheyne-Stokes respiration is observed
d. Bronchial spasms occur periodically
e. Pulmonary ventilation increases
627. 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. Adrenal glands
b. Thyroid gland
c. Thymus gland
d. Parathyroid gland
e. Pineal glands
628. A man, his son, and his daughter have no premolars. The same anomaly was observed in the patrilineal grandfather. What pattern of inheritance is likely in this anomaly?
a. Y-linked
b. X-linked dominant
c. X-linked recessive
d. Autosomal dominant
e. Autosomal recessive
629. During a prolonged starvation, glucocorticoid secretion by the adrenal cortex increases. Glucocorticoids increase the synthesis of gluconeogenetic enzymes in the liver. Name the terminal enzyme of this process:
a. Glucose-1-phosphatase
b. Fructose-2,6-bisphosphatase
c. Glucose-6-phosphatase
d. Fructose-1,6-bisphosphatase
e. Fructose-6-phosphatase
630. A teenager with impaired visual acuity came to an ophthalmologist. The doctor explained that this condition was caused by a spasm of accommodation. What component of an eyeball is a part of accommodation apparatus?
a. Ciliary muscle
b. Vitreous body
c. Sclera
d. Retina
e. Cornea
631. A 12-year-old girl has an ulcer 5 mm in diameter at the bottom of her oral cavity. The ulcer is surrounded with a bright red tissue that pales when pressed. An ulcer biopsy was performed. Microscopy revealed a tumor composed of numerous blood-filled cavities. The cavities are lined with a single layer of endothelial cells. Between them there is stroma, made up of loose connective tissue. What type of tumor can be characterized by such clinical and laboratory findings?
a. Ulcerated melanoblastoma
b. Rhabdomyosarcoma with secondary changes

c. Ulcerated cavernous hemangioma
d. Giant cell tumor of bone
e. Non-keratinizing squamous cell carcinoma
632. Condition of a patient with thoracic trauma deteriorates quickly: he develops increasing asphyxiation, facial pallor, tachycardia. What is the likely cause of these developments?
a. Pneumothorax
b. Rib fracture
c. Thoracic contusion
d. Fright
e. Response to pain stimulus
633. 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. Epidermis
b. Neurons
c. Endothelium
d. Hematopoietic
e. Muscle (smooth)
634. Bacteriology of dental plaque from the oral cavity of a 10-year-old child detects numerous Streptococcus mutans. This microorganism plays the leading role in the development of:
a. Vesicular stomatitis
b. Caries
c. Parodontosis
d. Ulcerative gangrenous stomatitis
e. Chronic pulpitis
635. At the end of winter a student, who had been lately in the state of nervous tension, developed a case of URTI after overexposure to cold. What is the case of this disease?
a. Nervous stress
b. Improper diet
c. Pathogenic agent
d. Overexposure to cold
e. Hypovitaminosis
636. 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. Adrenal glands
c. Lungs
d. Heart
e. Kidneys
637. A 42-year-old man fell ill one week after he had been preparing a fox pelt. The disease manifested as nervous excitement, hydrophobia, and convulsions. Autopsy of the man's body detected encephalitis with damage to the brain stem, walls of the third ventricle, and hippocampus. Signs of encephalitis included accumulation of lymphocytes and microglial cells around dead neurons and blood vessels. Eosinophilic inclusions (Babesh-Negri bodies) were detected in the hippocampal neurons. What disease was diagnosed in the deceased man?
a. Anthrax
b. Plague
c. Rabies
d. Tularemia
e. Brucellosis
638. A patient developed a keloid scar in the area of a purulent skin inflammation (carbuncle). At what stage of inflammation does it occur?
a. -
b. Secondary alteration
c. Exudation
d. Primary alteration

e. Proliferation

639. Autopsy of a 46-year-old man, who had untreated enteric infection and died of sepsis, revealed the following: perirectal phlegmon, multiple ulcers of the rectum and sigmoid colon, some of which are perforated; mucosa of these intestinal segments is thickened and covered with firmly attached grayish films. What is the most likely disease in this case?

a. Typhoid fever
b. Cholera
c. Dysentery
d. Amebiasis
e. Tuberculosis

640. 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. 4-5
d. 6-7
e. 10-11

641. A histological specimen shows three neurons: pseudounipolar, bipolar, and multipolar. How many axons will each of these cell have?

a. None
b. One
c. Many
d. Three
e. Two

642. A topical anesthetic was applied to the tongue apex of an experiment participant. The resulting gustatory loss will make this person unable to feel the following taste:

a. Salty
b. Sour and salty
c. Sweet
d. Sour
e. Bitter

643. During a visit to the dentist, the patient developed bronchospasm. What medicine must be used in this case?

a. Analgin (Metamizole)
b. Salbutamol
c. Atenolol
d. Naphthyzin (Naphazoline)
e. Anaprilin (Propranolol)

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

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

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

646. Before extracting a tooth, the dentist recommended the patient a drug that should be taken to prevent bleeding. Name this drug:

a. Heparin
b. Magnesium sulfate
c. Vicasol (Menadione)
d. Asparcam (potassium aspartate and magnesium aspartate)
e. Dimedrol (Diphenhydramine)
647. Prior to tooth extraction the patient was given a local anesthetic, lidocaine. What is the mechanism of anesthetic action of this drug?
a. Block of \beta_2-adrenergic receptors
b. Sodium channels block
c. Stimulation of muscarinic acetylcholine receptors
d. Block of H1-histamine receptors
e. Stimulation of GABA receptors
648. 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. Biotin
b. Pantothenic acid
c. Cobalamin
d. Niacin
e. Vitamin A
649. Examination of a patient detects neck thickening, exophthalmos, fever, and a pulse of 110/min. What hormone levels must be measured in the patient's blood?
a. Thyroxine
b. Cortisol
c. Sex hormones
d. Catecholamines
e. Insulin
650. What serological reaction requires 5 ingredients: antigen, antibody, and complement (the first system) and sheep erythrocytes and hemolytic serum (the second system)?
a. Precipitation
b. Passive (indirect) hemagglutination
c. Neutralization
d. Complement fixation
e. Hemagglutination inhibition
651. Fatigability of masticatory muscles can result in their abnormally slow relaxation, which impairs mechanical processing of food. Name this condition:
a. Hypodynamia
b. Contracture
c. Tetanus
d. Galvanism
e. Galvanization
652. A person came to the admission room with complaints of dry mouth, photophobia, and visual disturbances. Objective examination detected dry hyperemic skin, dilated pupils, and tachycardia. This person was diagnosed with Atropa belladonna alkaloids poisoning. What medicine must be used in this case?
a. Pilocarpine
b. Aceclidine
c. Dipyroxime (Trimedoxime bromide)
d. Armin
e. Proserin (Neostigmine)
653. 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. Tubulin
b. Actin

c. Dynein
d. Vimentin
e. Myosin
654. A patient was diagnosed with caries and underwent an oropharyngeal swab. In the sample, microscopy detected unicellular organisms with wide pseudopodia; their cytoplasm is clearly divided into two layers, while the nucleus is barely visible. What protozoon was detected in the swab?
a. Lamblia intestinalis
b. Entamoeba coli
c. Entamoeba gingivalis
d. Entamoeba histolytica
e. Trichomonas hominis
655. A child has a trauma of the lower lip. What muscle is damaged in this case?
a. M. buccinator
b. M. orbicularis oris
c. M. levator anguli oris
d. M. risorius
e. M. levator labii superioris
656. During starvation, the mass of organs and tissues decreases. What organ loses the most mass during the first stage of starvation?
a. Brain
b. Muscles
c. Kidneys
d. Heart
e. Liver
657. A patient came to the dentist for tooth extraction. After the tooth had been extracted, the bleeding from the socket persisted for 15 minutes. The patient has a history of active chronic hepatitis. What is the likely cause of the prolonged bleeding time?
a. Decreased albumin blood count
b. Increased activity of anticoagulation system
c. Decreased blood level of fibrinogen
d. Thrombocytopenia
e. Hypocalcemia
658. A patient diagnosed with arthritis of the maxillofacial joint was taking a non-narcotic analgesic that is a paraaminophenol derivative. Select this drug from the list:
a. Ibuprofen
b. Analgin (Metamizole)
c. Paracetamol
d. Butadion (Phenylbutazone)
e. Diclofenac sodium
659. A histological specimen of mucous tunic of a certain organ shows stratified epithelium consisting of 20-25 cellular layers with squamous superficial cells. Name the organ from which this sample was obtained:
a. Duodenum
b. Gastric fundus
c. Large intestine
d. Esophagus
e. Small intestine
660. A man was immunized with a recombinant vaccine against hepatitis B) What serological marker was detected in the patient's blood serum?
a. HBe antigen
b. HBs antigen
c. Anti-HBs IgG
d. Anti-HBc IgM
e. Viral DNA
661. A woman underwent surgical removal of a mandibular tumor that had the appearance of a

detached dense node. The section revealed a red tumor with white spots and small cysts. Histology shows that the tumor consists of giant multinucleated and small mononucleated cells, between which bone trabeculae are formed. What tumor can be characterized by such clinical and laboratory findings?

a. Ameloblastoma

b. Giant cell tumor of bone

c. Osteoid osteoma

d. Osteosarcoma

e. Osteoma

662. A patient being treated for viral B hepatitis developed signs of hepatic failure. What changes in the blood test that indicate a protein metabolism disorder will most likely be observed in this case?

a. Blood protein composition is unchanged

b. Absolute hyperfibrinogenemia

c. Absolute hyperglobulinemia

d. Absolute hyperalbuminemia

e. Absolute hypoalbuminemia

663. During examination of the oral cavity, a dentist detected a carious cavity in the lower second premolar. The cavity is located on the crown surface that faces the first premolar. What surface of the dental crown is affected in this case?

a. Facies mesialis

b. Facies lingualis

c. Facies vestibularis

d. Facies occlusalis

e. Facies distalis

664. Resuscitation unit received a patient with acute poisoning caused by unidentified medicine. To quickly excrete the poison from the patient's body, forced diuresis was induced. What substance was used to perform this procedure?

a. Furosemide

b. Hydrochlorothiazide

c. Spironolactone

d. Dithylinum (Suxamethonium chloride)

e. Omeprazole

665. A patient has a deep incised wound on the back of his neck. What muscle is damaged in this case?

a. M. sternocleidomastoideus

b. M. mylohyoideus

c. M. trapezius

d. M. digastricus

e. M. levator scapulae

666. A boy has blood group I (I^0 I^0), while his sister has blood group IV (I^A I^B). What blood groups do their parents have?

a. I (I^0 I^0) and III (I^B I^0)

b. I (I^0 I^0) and IV (I^A I^B)

c. III (I^B I^0) and IV (I^A I^B)

d. II (I^A I^0) and III (I^B I^0)

e. II (I^A I^A) and III (I^B I^0)

667. A 1.5-year-old child on examination has deformed legs and foci of thickening in the area of the ribs and wrists. A dentist pointed out the late eruption of teeth, disturbed order of tooth eruption, uneven mineralization of the enamel and dentin, and horizontal configuration of the upper jaw that forms a high-arched palate. What disease developed in this child?

a. Osteoporosis

b. Rickets

c. Fluorosis

d. Gout

e. Sialolithiasis

668. A 65-year-old man came to the general physician. He complains of dyspnea during even slight physical exertion, cyanotic skin, and leg edemas. Prescribe him a cardiac glycoside for treatment of chronic heart failure:
a. Heparin
b. Panangin (potassium aspartate and magnesium aspartate)
c. Methyluracil
d. Metoprolol
e. Digoxin
669. 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. Na^+
c. Cl^-
d. K^+
e. HCO^3-
670. A 59-year-old man was diagnosed with a transmural left ventricular myocardial infarction. He died of a true heart rupture - cardiac tamponade. What process in the infarction site could have contributed to the cardiac rupture in this case?
a. Autolytic processes of myocardial softening (myomalacia)
b. Replacement of the infarct site with connective tissue (organization)
c. Scar formation with thinning of the left ventricular wall
d. Increased pressure in the pulmonary circulation
e. -
671. 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. Gram
b. Romanovskyi
c. Burri-Gins
d. Zdrodovskyi
e. Ziehl-Neelsen
672. A car accident victim presents with a spinal hematoma accompanied by retrosternal pain, tachycardia, and elevated blood pressure. The patient's condition results from the damage to the following segments of the spinal cord:
a. S1-S3
b. Th1-Th5
c. C6-C8
d. -
e. L1- L3
673. A newborn has well-developed jaws with tooth buds for both deciduous and permanent teeth in the each one. How many tooth buds are there in one jaw of the newborn?
a. 10 deciduous teeth and 10 permanent teeth
b. 10 deciduous teeth and 16 permanent teeth
c. 10 deciduous teeth and 8 permanent teeth
d. 20 deciduous teeth and 10 permanent teeth
e. 20 deciduous teeth
674. Detoxification of bilirubin occurs in the membranes of endoplasmic reticulum of hepatocytes. Bilirubin is secreted by hepatocytes into bile for the most part as:
a. -
b. Bilirubin diglucuronide
c. Indirect reacting bilirubin
d. Bilirubin monoglucuronide
e. Unconjugated bilirubin
675. Autopsy of a man who died of ethylene glycol poisoning revealed that his kidneys are slightly enlarged, edematic; their capsule can be easily removed. Cortical substance is broad and light gray.

Medullary substance is dark red. What pathology did this man develop?
a. Acute glomerulonephritis
b. Acute tubular-interstitial nephritis
c. Lipoid nephrosis
d. Acute pyelonephritis
e. Necrotic nephrosis
676. A patient has torticollis. What muscle of the neck is damaged?
a. M. Omohyoideus
b. M. Sternohyoideus
c. M. Platisma
d. M. Sternocleidomastoideus
e. M. Mylohyoideus
677. A patient was diagnosed with a monogenic hereditary disease. Name this disease:
a. Hemophilia
b. Peptic ulcer disease of the stomach
c. Hymenolepiasis
d. Hypertension
e. Poliomyelitis
678. 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. -
b. Transmural
c. Intramural
d. Subendocardial
e. Subepicardial
679. 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. Pendular movements of intestine
b. Nonpropulsive segmental activity
c. Tonic contraction of sphincters
d. Mastication
e. Peristalsis
680. A certain antibiotic has low toxicity, relatively rarely causes side effects, and is a reserve antibiotic from the group of macrolides. Its mechanism of action consists of protein synthesis inhibition in bacterial ribosomes by inhibiting the peptide translocase enzyme. What antibiotic is it?
a. Azithromycin
b. Ampicillin
c. Tetracycline
d. Levomycetin (Chloramphenicol)
e. Sisomicin
681. A 55-year-old man was diagnosed with purulent otitis complicated with meningitis. The posterior cranial fossa was contaminated by pus. What wall of the tympanic cavity was destroyed in this case?
a. Paries jugularis
b. Paries mastoideus
c. Paries labyrinthicus
d. Paries tegmentalis
e. Paries membranaceus
682. Examination of the patient shows that the patient's tongue cannot be moved forward (the patient cannot stick his tongue out). What muscle is damaged?
a. Longitudinal muscle of the tongue
b. Transverse muscle of the tongue

c. Hyoglossal muscle
d. Genioglossal muscle
e. Stylohyoid muscle
683. At the crown apex of the second molar, on the surface that comes into contacts with the cheek, the doctor detected a carious cavity. Name the affected crown surface:
a. Facies occlusalis
b. Facies lingualis
c. Facies distalis
d. Facies vestibularis
e. Facies mesialis
684. A patient complains that even small traumas lead to persistent hemorrhages. Laboratory analysis shows disturbed blood composition, namely a low count of the following blood corpuscles:
a. Neutrophils
b. Platelets
c. Lymphocytes
d. Monocytes
e. Erythrocytes
685. During examination of the patients, a dentist noted that many of them have dull, non-glossy enamel with porcelain-like and pigmented spots. Some patients have single or multiple enamel defects that manifest as colorless or pigmented erosions. These changes in the teeth developed in the result of the excessive intake of a certain substance by the organism. Name this substance:
a. Sodium
b. Potassium
c. Magnesium
d. Fluorine
e. Calcium
686. Autopsy of the body of a man, who died after 3 weeks of pneumonia, shows acutely enlarged lower lobe of his right lung. The lobe is dense, airless, gray, with fibrin deposits on the pleura. Microscopy shows fibrin and segmented leukocytes in all alveoles of this lobe. Make the diagnosis:
a. Influenza virus pneumonia
b. Focal bronchopneumonia
c. Fibrinous pleurisy
d. Interstitial pneumonia
e. Croupous pneumonia
687. 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. Atrophy due to inadequate blood supply
c. Hypoplasia
d. Compression atrophy
e. Dysfunctional atrophy
688. A patient was diagnosed with peptic ulcer disease of the stomach and prescribed an antibacterial treatment. This treatment will be aimed against the following causative agent:
a. Cl. trachomatis
b. Cl. perfringens
c. E) coli
d. St. aureus
e. H. pylori
689. After inhalation of dust a person develops cough, which results from stimulation of:
a. Pulmonary thermoreceptors
b. Juxtacapillary receptors
c. Irritant receptors
d. Pulmonary chemoreceptors
e. Nociceptors

690. Impaired coordination of movements and disturbed muscle tone are signs of alcohol intoxication. These changes are associated with damage to certain cells in the cerebellum. Name these cells.
a. Stellate cells of the molecular layer
b. Golgi cells of the granular layer
c. Basket cells of the granular layer
d. Purkinje cells of the molecular layer
e. Pear-shaped neurons of the Purkinje layer
691. A 45-year-old man had a cyst removed from the region of his gonial angle. The cyst was 1.5 cm in diameter and contained numerous keratinous masses. Histology shows that the cyst wall is thin and formed from mature connective tissue, cyst interior is lined with stratified squamous epithelium with marked parakeratosis and hyperkeratosis. Make the diagnosis:
a. Follicular ameloblastoma
b. Follicular cyst
c. Primordial cyst
d. Cherubism
e. Radicular cyst
692. A 45-year-old man came to the hospital complaining of sensory loss in the posterior 1/3 of his tongue. Which pair of the cranial nerves is functionally disturbed?
a. VIII
b. XII
c. IX
d. V
e. X
693. A 65-year-old woman with pathological fractures of the mandible had a 15-year-long history of chronic osteomyelitis. Against the background of deterioration of her general condition, her blood test detected hypoproteinemia and dysproteinemia, while urinalysis detected proteinuria and protein casts. The woman died of chronic kidney failure. What pathological process is most likely to be observed in the kidneys during autopsy?
a. Hydronephrosis
b. Chronic glomerulonephritis
c. Secondary amyloidosis of the kidneys
d. Primary amyloidosis of the kidneys
e. Pyelonephritis
694. A patient came to a family doctor with complaints of weakness, weight loss, and enlarged cervical lymph nodes. Microscopy of the biopsy material obtained from a lymph node shows giant multinucleated Reed-Sternberg cells, lymphocytes, plasma cells, histiocytes, eosinophils, and areas of necrosis and sclerosis. What disease can be characterized by the described changes?
a. Lymphogranulomatosis (Hodgkin lymphoma)
b. Lymphocytic leukemia
c. Lymphosarcoma
d. Tuberculosis
e. Sarcoidosis
695. A 27-year-old patient with neck wound has lost over 30% of blood volume. The patient is in severe condition: blood pressure - 60/40 mm Hg, heart rate - 140/min., respirations - 30/min., conscious. Characterize the patient's condition:
a. Hypovolemic shock
b. Arterial hypertension
c. Collapse
d. Coma
e. Cardiogenic shock
696. During an appointment with the dentist, a patient developed a bronchial asthma attack. What does this patient need to be prescribed to terminate the bronchospasm?
a. Methacin (Metocinium iodide)
b. Benzohexonium (Hexamethonium bromide)
c. Droperidol

d. Anaprilin (Propranolol)
e. Salbutamol
697. In an experiment, the vagus nerve was severed in a test animal. As the result, the animal developed elevated blood glucose due to:
a. Increased secretion of insulin
b. Increased secretion of somatostatin
c. Increased secretion of glucagon
d. Decreased secretion of glucagon
e. Decreased secretion of insulin
698. A patient has chronic multiple bronchiectasis complicated with severe nephropathy with massive edematous syndrome. Laboratory tests detect marked proteinuria, cylindruria, significant decrease of the serum protein levels, hyperlipidemia, hypokalemia, and other abnormalities. Name the primary and the most significant pathogenetic link of edema development in this patient:
a. Decrease of oncotic blood pressure
b. Increase of extracellular fluid pressure
c. Increased microvascular permeability
d. Increase of hydrostatic blood pressure
e. Blocked lymphatic efflux
699. A 14-year-old patient presents with disturbed twilight vision. What vitamin is deficient in the body of this patient?
a. C
b. B_6
c. B_1
d. A
e. B_12
700. After a glucose-lowering therapy, a patient with diabetes mellitus developed hypoglycemia. What hormone, taken in excess, could have caused this hypoglycemic condition?
a. Glucagon
b. Thyroxine
c. Adrenaline
d. Cortisol
e. Insulin
701. A woman complains of pain in her left lower jaw and lower teeth. What nerves are likely to be damaged in this case, causing these signs?
a. The VII pair of cranial nerves
b. Motor fibers of the third branch of the V pair of cranial nerves
c. The first branch of the V pair of cranial nerves
d. Sensory fibers of the third branch of the V pair of cranial nerves
e. The second branch of the V pair of cranial nerves
702. A 56-year-old man with a valvular defect complains of lower limb edemas that lately increased in frequency. Name the local pathogenetic factor of edema development in this case:
a. Decrease of hydrodynamic blood pressure
b. Decrease of vessel wall permeability
c. Increase of oncotic blood pressure
d. Increase of interstitial pressure
e. Increase of hydrodynamic blood pressure
703. A patient with glossitis presents with disappearance of lingual papillae, reddening and burning pain in the tongue. Blood test: erythrocytes - 2.2 · 10^12/l, hemoglobin - 103 g/l, color index - 1.4. What type of anemia is it?
a. beta-thalassemia
b. alpha-thalassemia
c. Iron deficiency
d. B_12 folate-deficiency
e. Iron refractory
704. Ammonia is a toxic substance that is neutralized mainly in hepatic cells in the course of a certain

cycle. What cycle is it?
a. Citric acid cycle
b. Glycogenolysis
c. Glycolysis
d. Knoop-Linen cycle
e. Ornithine cycle
705. A patient suffering from acute bronchitis with difficult expectoration was prescribed acetylcysteine. What drug action will provide curative effect?
a. Mucoproteins depolymerization
b. Reflex stimulation of bronchiolar peristalsis
c. Stimulation of the bronchial glands
d. Activation of bronchial ciliated epithelium
e. Alkalinization of sputum
706. In the periodontal tissues, electron microscopy detects fibers, one end of which is embedded into the cementum of the dental root, while the other is embedded into the periosteum of the alveolar process. Name these fibers.
a. Sharpey fibers
b. Ebner fibers
c. Purkinje fibers
d. Argyrophilic fibers
e. Korff fibers
707. A patient diagnosed with oral candidiasis was prescribed an antifungal drug. What drug was chosen for this patient?
a. Biseptol (Co-trimoxazole)
b. Ampicillin
c. Levomycetin (Chloramphenicol)
d. Fluconazole
e. Erythromycin
708. A 26-year-old woman presents with skin rashes and itching after eating citrus fruits. Prescribe her a drug that is an H1-histamine receptor antagonist:
a. Menadione (Vicasolum)
b. Paracetamol
c. Analgin (Metamizole)
d. Dimedrol (Diphenhydramine)
e. Acetylsalicylic acid
709. In a 6-year-old child, a dentist detected gray-white spots up to one millimeter in diameter on the buccal mucosa at the level of the premolars. The child was not vaccinated at the age of one year. The doctor suspects that the mucosal lesion was caused by a complex RNA virus with hemagglutinating properties. This virus has no neuraminidase activity and cannot not cultivated in chicken embryos. What pathogen caused the development of this disease?
a. Herpes simplex virus
b. Coxsackievirus A
c. Varicella-zoster virus
d. Measles virus
e. Mumps virus
710. A tourist, who had been to one of the Far East countries, was hospitalized into the therapeutics unit with suspected pneumonia. Examination of his sputum and feces detected there lung fluke eggs. What food products are the most likely cause of lung fluke infestation?
a. Insufficiently thermally processed beef
b. Raw fruits and vegetables
c. Insufficiently thermally processed eggs
d. Insufficiently thermally processed freshwater crabs
e. Insufficiently thermally processed pork
711. 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 polynucleotides
b. Secondary structure of carbohydrates
c. Primary structure of a protein
d. Primary structure of carbohydrates
e. Primary structure of lipids
712. A certain drug with potent natriuretic action is usually prescribed for dehydration therapy of cerebral and pulmonary edemas. Name this drug:
a. Spironolactone
b. Etacrynic acid
c. Furosemide
d. Mannitol
e. Theophylline
713. A diver that submerged to the depth of 75 meters detected signs of CNS functional disturbance: excitation, lapse of concentration, euphoria leading to professional errors. What substance has toxic effect on the neurons, thus leading to the development of these signs?
a. Carbon dioxide
b. Oxygen
c. Lactate
d. Ammonia
e. Nitrogen
714. Blood stains were found on the clothes of a person accused of murder. What reaction can prove that it is human blood?
a. Agglutination test
b. Precipitation reaction
c. Neutralization reaction
d. Complement fixation test
e. Immunofluorescence assay
715. A man complains to a dentist about problems with chewing and pain that occurs when he moves his jaw backwards. The doctor detected an inflammation of a certain masticatory muscle in this patient. Name this muscle:
a. Temporal muscle (anterior fibers)
b. Lateral pterygoid muscle
c. Medial pterygoid muscle
d. Masseter muscle
e. Temporal muscle (posterior fibers)
716. How does pH of venous blood differ from pH of arterial blood and why?
a. Higher, due to higher blood CO_2 levels
b. Lower, due to higher blood CO_2 levels
c. Lower, due to O_2 release from the organism
d. No difference
e. Higher, due to O_2 release from the organism
717. A patient on examination presents with prolonged I heart sound. This heart sound occurs as the result of:
a. Opening of the mitral valve
b. Closing of the aortic valve
c. Closing of the pulmonary valve
d. Closing of the atrioventricular valves
e. Opening of the tricuspid valve
718. The patient, who for a long time has been keeping to an unbalanced low-protein diet, developed fatty liver infiltration. Name the substance, absence of which in the diet can lead to this condition:
a. Arachidonic acid
b. Cholesterol
c. Biotin
d. Alanine

e. Methionine

719. Urinalysis shows glucosuria in a patient with diabetes mellitus. What is the renal threshold for glucose?

a. 8.88 mmol/L
b. 1.0 mmol/L
c. 20.0 mmol/L
d. 15.5 mmol/L
e. 5.55 mmol/L

720. A patient was diagnosed with a malignant tumor of the pineal gland. The tumor penetrates into one of the subarachnoid cisterns in the brain. To remove the tumor, a surgery must be performed in the area of the following cistern:

a. Cisterna chiasmatis
b. Cisterna ambiens
c. Cisterna interpeduncularis
d. Cisterna pericallosa
e. Cisterna quadrigeminalis

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

a. Retrovisceral space
b. Prescalene space
c. Interscalene space
d. Previsceral space
e. Suprasternal space

722. A 25-year-old patient has marked muscle weakness. What electrolytes in the blood plasma should be measured first?

a. Potassium ions
b. Sodium ions
c. Chlorine ions
d. Magnesium ions
e. Calcium ions

723. 2 days after a hunter cut a ground squirrel's body, he developed fever up to 39^oC, his lymph nodes enlarged. Later he developed pneumonia with serohemorrhagic exudate that contained egg-shaped microorganisms with bipolar staining. What provisional diagnosis can be made in this case?

a. Brucellosis
b. Pseudotuberculosis
c. Tetanus
d. Anthrax
e. Plague

724. A patient with infiltrative pulmonary tuberculosis, who was undergoing treatment with isoniazid, developed signs of B6 hypovitaminosis. What is the cause of this condition?

a. Isoniazid is a vitamin B6 antagonist
b. A strong connection forms between vitamin and blood plasma proteins
c. Vitamin elimination speeds up
d. Vitamin biotransformation speeds up
e. Vitamin absorption slows down

725. A patient has a tumor in the left half of the medulla oblongata. Examination shows that the soft palate on the affected side sags, the pharyngeal reflex is reduced, the uvula deviates to the healthy side when making the sound "a", the voice is hoarse. What nerves are likely to be dysfunctional due to the tumor?

a. Glossopharyngeal nerve and accessory nerve
b. Glossopharyngeal nerve and facial nerve
c. Accessory nerve and hypoglossal nerve
d. Vagus and accessory nerve
e. Glossopharyngeal nerve and vagus

726. The doctor observes a disturbed process of lacrimation in the patient due to irritation of one of the branches of the VII pair of cranial nerves. What branch is irritated?
a. Chorda tympani
b. R. colli
c. N. stapedius
d. N. auricularis posterior
e. N. petrosus major
727. A patient is diagnosed with a displaced fracture of the coronoid process of the mandible. What muscle will displace the coronoid process?
a. Temporal
b. Lateral pterygoid muscle
c. Masseter
d. Medial pterygoid muscle
e. -
728. 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. Enamel
c. Reticulofibrous bone tissue
d. Cellular cement
e. Periodontium
729. The physiological properties of human cardiac muscle include all of the listed below except:
a. Contractility
b. Conductivity
c. Automaticity
d. Excitability
e. Elasticity
730. Oral examination revealed dark yellow and brown spots and stripes on the labial and lingual surfaces of the patent's teeth; more than the half of the dental surface is affected; enamel and dentin are destroyed. What diagnosis is the most likely?
a. Cuneiform defect
b. Metastatic calcification
c. Fluorosis
d. Dystrophic calcification
e. Dental calculus
731. A 36-year-old woman came to a dentist with complaints of facial edema localized under her right eye. After examination, the dentist diagnosed her with phlegmon of the infraorbital region. What teeth often become the source of infection that spreads into this region?
a. Upper central incisor
b. Upper lateral and central incisors
c. Upper first and second molars
d. Second premolar and first molar
e. Upper canine and first premolar
732. A child with signs of rickets has been prescribed a certain liposoluble vitamin drug by the pediatrician and dentist. This drug affects the metabolism of phosphorus and calcium in the body and facilitates calcium accumulation in bone tissue and dentine. If its content in the body is insufficient, there develop disorders of ossification process, dental structure, and occlusion. Name this drug:
a. Retinol acetate
b. Menadione (Vicasolum)
c. Tocopherol acetate
d. Thyroidin
e. Ergocalciferol
733. An experimet was conducted to study major indicators of hemodynamics. What hemodynamics indicator would be the same for both systemic and pulmonary circulation?
a. Dyastolic blood pressure

b. Volumetric blood flow rate
c. Linear blood flow velocity
d. Vascular resistance
e. Mean arterial pressure
734. A deletion of the short arm of the 5th chromosome was detected in the somatic cells of an abortive human fetus. Specify the number of autosomes in the karyotype of this organism:
a. 44
b. 46
c. 48
d. 45
e. 47
735. A child has a congenital immunodeficiency. The cell-mediated immunity is affected, causing frequent viral infections. It is likely to be caused by a disorder of the following organ:
a. Lymph nodes
b. Thymus gland
c. Red bone marrow
d. Palatine tonsils
e. Spleen
736. A 32-year-old woman with asymptomatic progression of the disease for the second time gave birth to a stillborn baby with marked microcephaly. What disease can be suspected in this case?
a. Listeriosis
b. Toxoplasmosis
c. Histoplasmosis
d. Syphilis
e. Brucellosis
737. What type of hemophilia inheritance results in men being affected by hemophilia and in women being carriers of this disease?
a. X-linked dominant
b. Holandric
c. Autosomal recessive
d. X-linked recessive
e. Autosomal dominant
738. A dentist administers anesthesia in the area of the upper second molar. What nerves does the doctor anesthetize?
a. Rr. alveolares inferiores posteriores
b. Rr. alveolares superiores posteriores
c. Rr. alveolares superiores medii
d. Rr. alveolares superiores anteriores
e. Rr. alveolares inferiores anteriores
739. Oral examination of a child revealed that the first upper molars have already erupted. What is the age of this child?
a. 6-7 years
b. 10-11 years
c. 8-9 years
d. 12-13 years
e. 4-5 years
740. A tooth has been extracted. Its crown is chisel-shaped, wide, with narrow edge. The root is cone-shaped and flattened from the sides. What tooth was extracted?
a. Lower premolar
b. Upper premolar
c. Lower incisor
d. Upper incisor
e. Lower canine
741. Histology of the dental pulp shows that the larger part of the dental cavity is filled with connective tissue that contains numerous collagen fibers and cellular infiltrations, consisting

predominantly of lymphocytes and plasma cells. Some collagen fibers exhibit signs of hyalinosis and petrified patches can be detected. What is the most likely diagnosis?
a. Serous pulpitis
b. Granulating pulpitis
c. Fibrous pulpitis
d. Diffuse purulent pulpitis
e. Gangrenous pulpitis
742. After ineffective treatment of stomatitis with antibiotics, the patient consulted a dentist. The dentist made a diagnosis of herpetic stomatitis. What medicine should the patient be prescribed?
a. Metrogyl (Metronidazole)
b. Azithromycin
c. Acyclovir
d. Sulfacyl sodium (Sulfacetamide)
e. Clotrimazole
743. 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. Carotid canal
b. Canaliculus of the chorda tympani
c. Facial canal
d. Tympanic canal
e. Musculotubal canal
744. A child presents with reduced thyroid function from birth. What pathological condition can develop in this child as a result?
a. Cretinism
b. Dwarfism
c. Giantism
d. Hypopituitarism
e. Skin hyperpigmentation
745. Histologic specimen of endometrium demonstrates isolated epithelial cells with chromosomes that form a ''plate'' located in the equatorial plane of the cell. What stage of the cell cycle is it?
a. Metaphase
b. Anaphase
c. Telophase
d. Prophase
e. Interphase
746. Normal cardiomiocytes have a specific phase of the action potential:
a. Systolic repolarization
b. Rapid systolic repolarization
c. Slow repolarization (plateau)
d. Rapid dyastolic repolarization
e. Slow dyastolic repolarization
747. 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. Alkaline phosphatase
c. Cholesterol
d. Fatty acids
e. Bile pigments
748. An experimental animal, a dog, received a weak solution of hydrochloric acid through a tube inserted into the duodenum. Primarily it will result in increased secretion of the following hormone:
a. Cholecystokinin
b. Secretin
c. Gastrin
d. Neurotensin
e. Histamine

749. In an experiment on a dog, the role of adrenal glands in the thermoregulation processes was studied. What adrenal hormone constricts the blood vessels, reducing the heat emission?
a. Estrogens
b. Corticosterone
c. Cortisone
d. Adrenaline
e. Androgens
750. Secretory units of salivary glands are surrounded with specific contractile cells. Name these cells:
a. Ciliated cells
b. Myoepithelial cells
c. Endotheliocytes
d. Pericytes
e. Adipocytes
751. Alkaline phosphatase catalyzes the reactions of phosphorus-ether bonds hydrolysis with release of phosphate ions that play an important role in the formation of bone mineral matrix. What factors ensure the course of such reactions?
a. Fe^3+, pH=5.0-5.5
b. Fe^3+, pH=7.0-7.4
c. Fe^2+, pH=7.0-7.4
d. Zn^2+, pH=5.0-5.5
e. Zn^2+, pH=7.0-7.4
752. Because of chondrodysplasia (cartilage maldevelopment), fibrocartilage was damaged. Where can pathologic changes be observed in this case?
a. Bronchi
b. Auricle
c. Trachea
d. Larynx
e. Intervertebral disks
753. The patient's EEG shows delta and theta rhythms, which indicates that the patient is in a state of:
a. Active wakefulness
b. Rest with eyes closed
c. Slow-wave sleep
d. Rapid eye movement sleep
e. Rest with eyes open
754. In an experiment, urethane poisoning was induced in a test animal. What type of hypoxia occurred as a result?
a. Hemic hypoxia
b. Tissue hypoxia
c. Respiratory hypoxia
d. Circulatory hypoxia
e. Hypoxic hypoxia
755. The cessation of bleeding after a childbirth is associated with the effect of hormones on the uterine structures. What layer of this organ plays the largest role in this process?
a. Perimetrium
b. Endometrium
c. Outer layer of the myometrium
d. Middle layer of the myometrium
e. Inner layer of the myometrium
756. During a regular examination of a 2-year-old child, the doctor noted that the child's anterior fontanelle is open. At what age does it close?
a. At the age of 1--2 months
b. During the first year of life
c. During the second year of life

d. At the age of 3 months
e. At the age of 6-9 months
757. After the extraction of the second upper molar, the patient developed bleeding from the tooth socket. What vessel is damaged in this case, causing the bleeding?
a. A) alveolaris inferior
b. Aa. alveolares superiores posteriores
c. Aa. alveolares superiores anteriores
d. A) palatina descendens
e. A) infraorbitalis
758. A 24-year-old man died of acute cardiopulmonary failure. During the last two days he complained of a cough with a small amount of <<rusty>> sputum, chest pain on the right that intensified sharply during breathing, and a fever of 39^oC) Autopsy of the body revealed red, dense, and airless lower pulmonary lobes; the pleura is covered in fibrin threads and membranes. The deceased was diagnosed with bilateral pleuropneumonia of the lower pulmonary lobes. What stage of pneumonia was most likely in this man?
a. -
b. Congestion
c. Red hepatization
d. Gray hepatization
e. Resolution
759. A patient presents with impaired absorption of fats. A doctor prescribed the patient a bile preparation to improve the digestion of fatty foods. What bile components take part in this process?
a. Bile acid salts
b. Bilirubin glucuronides
c. Diglycerides
d. Cholesterol and its ethers
e. Saturated fatty acids
760. A tumor is detected in one of the regions of the patient's brain, resulting in the patient's inability to maintain normal body temperature. What brain structure is damaged?
a. Substantia nigra
b. Thalamus
c. Hypothalamus
d. Striatum
e. Cerebellum
761. A 13-year-old girl is an in-patient at the hematology department of the regional children's hospital. She was diagnosed with iron-deficiency anemia. What type of hypoxia does this patient have?
a. Respiratory
b. Circulatory
c. Tissue
d. Hemic
e. Mixed
762. Increased levels of high-density lipoproteins lead to decreased risk of atherosclerosis. What is the mechanism of anti-atherosclerotic effect of high-density lipoproteins?
a. They extract cholesterol from tissues
b. They take part in cholesterol breakdown
c. They facilitate cholesterol absorption in the intestine
d. They activate cholesterol transformation into bile acids
e. They supply tissues with cholesterol
763. Heart auscultation revealed a split first heart sound over the base of the xiphoid process. In this case, the doctor was auscultating the pathology of the following valve:
a. Bicuspid valve
b. Aortic valve
c. Tricuspid valve
d. Valve of the superior vena cava

e. Pulmonary valve

764. A 67-year-old man suffers from cardiac and cerebral atherosclerosis. Examination detected hyperlipidemia. What class of blood plasma lipoproteins contributes the most to the pathogenesis of atherosclerosis?

a. Chylomicrons

b. -

c. Low-density lipoproteins

d. Alpha-lipoproteins

e. High-density lipoproteins

765. 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. Petrifaction

766. A doctor diagnosed a patient with meningococcal nasopharyngitis. What method of laboratory diagnostics would be a rational choice for confirmation of the diagnosis?

a. Allergy testing

b. Microscopy

c. Serology

d. Bacteriology

e. Biological method

767. The patient's blood group is being determined using monoclonal test reagents. Agglutination reaction is positive with anti-A and anti-B reagents and negative with anti-D reagents. Name the blood group of this patient:

a. AB (IV) Rh (+)

b. A (II) Rh (+)

c. 0 (I) Rh (+)

d. AB (IV) Rh (-)

e. B (III) Rh (-)

768. Histologic specimen of renal cortex shows renal corpuscle and renal tubules. It is known that reabsorption of substances occurs in the renal tubules. What nephron tissue takes part in this process?

a. Connective tissue proper

b. Reticular tissue

c. Cartilaginous tissue

d. Epithelial tissue

e. Mucous tissue

769. 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. Meniscus

b. Ligament

c. Disc

d. Lip

e. Fold

770. In some hereditary diseases (e.g., Kearns-Sayre syndrome), mitochondrial destruction can be observed. What cellular processes can be disturbed in the result?

a. Protein synthesis

b. Crossingover

c. Nuclear division

d. Lipid synthesis

e. ATP synthesis

771. Beriberi is a classical example of thiamine deficiency. Active form of this vitamin is synthesized

by an enzyme belonging to the following group:
a. Hydrolases
b. Isomerase
c. Lyases
d. Oxidoreductases
e. Transferases
772. Formation of a large amount of immunoglobulins with various antigen specificity from a small number of genes occurs due to:
a. Transcription
b. Replication
c. Deletion
d. Recombination
e. Translocation
773. What antimicrobial drug is not a cephalosporin antibiotic?
a. Cefepime
b. Cefazolin
c. Cefalexin
d. Ceftriaxone
e. Ciprofloxacin
774. A 2-month-old girl has been diagnosed with cri-du-chat syndrome. This condition is caused by the deletion of the short arm of chromosome 5. What total number of chromosomes will be detected in this child?
a. 46
b. 47
c. 45
d. 44
e. 23
775. After a cerebrocranial trauma during wich the cerebellar region was damaged, the patient's movements became temporally and spatially discoordinated. What pathology developed in the patient?
a. Astasia
b. Abasia
c. Ataxia
d. Paresis
e. -
776. A patient consulted a doctor about a dislocation of the articular head of the mandible. What type of bone connection can be observed in this joint?
a. Synchondrosis
b. Diarthrosis
c. Syndesmosis
d. Hemiarthrosis
e. Synostosis
777. Curariform drugs are used to immobilize the patient during a surgery. Their mechanism of action is based on the blockade of:
a. Nicotinic acetylcholine receptors of skeletal muscles
b. Acetylcholine release into the synaptic cleft
c. Muscarinic acetylcholine receptors of smooth muscles
d. Noradrenaline release into the synaptic cleft
e. Conduction of excitation in the nerve fibers
778. A 42-year-old woman, who has been keeping to a vegetarian diet for a long period of time, consulted a doctor. Examination revealed negative nitrogen balance in the patient. What factor is the most likely cause of such a condition?
a. Decreased rate of metabolic processses
b. Insufficient amount of fats in the diet
c. Insufficient amount of dietary fiber

d. Insufficient amount of proteins in the diet
e. Excessive amount of fats in the diet
779. A 66-year-old man was diagnosed with a malignant epithelial tumor, originating from a middle-sized bronchus. What epithelium is the source of tumor development in this case?
a. Simple columnar epithelium
b. Stratified non-cornified epithelium
c. Simple pseudostratified ciliated epithelium
d. Stratified cornified epithelium
e. Simple pseudostratified transitional epithelium
780. An electronic microphotograph of a cell shows two different protein-destroying organelles. Name them:
a. Endoplasmic reticulum and microfilament
b. Peroxisomes and ribosomes
c. Golgi complex and microtubules
d. Ribosomes
e. Lysosomes and proteasomes
781. To terminate a bronchial asthma attack that developed in the patient during the tooth extraction, the patient was given salbutamol. This drug belongs to the following pharmacological group:
a. Narcotic analgesics
b. Analeptics
c. Muscarinic agonists
d. Adaptogens
e. Beta-2-adrenergic agonists
782. Lysozyme is a hydrolyzing enzyme that provides protective function of saliva. Its antibacterial properties are based on its ability to break the structural integrity of a bacterial cell wall by inducing hydrolysis of the following:
a. Glycosidic bonds of nitrogen bases and pentoses
b. Cell wall antigens and endotoxins
c. Peptide bonds of proteins
d. Glycosidic bonds of mucopolysaccharides
e. Ester bonds of lipids
783. Complex therapy of a patient with bronchopneumonia accompanied by exhausting dry cough includes a certain mucolytic agent that depolymerizes mucoproteins. Name this drug:
a. Neodicoumarin
b. Codeine
c. Strophanthin
d. Acetylcysteine
e. Atenolol
784. A 30-year-old patient has been diagnosed with a tumor of the body of the mandible. The tumor appeared several months ago. Macroscopically, the tumor is represented by a dense whitish tissue that destroys the jaw bone. Microscopy of the removed tumor shows that its structure consists of a network of odontogenic epithelial strands with various types of branching. What type of tumor is it?
a. Acanthomatous ameloblastoma
b. Plexiform ameloblastoma
c. Follicular ameloblastoma
d. Granular cell ameloblastoma
e. Basal cell ameloblastoma
785. Under the influence of ionizing radiation or in case of avitaminosis E, an increased permeability of lysosome membranes can be observed in the cells. What are the likely consequences of such pathology?
a. Intensive protein synthesis
b. Restoration of the cytoplasmic membrane
c. Partial or complete destruction of the cell
d. Intensive energy synthesis

e. Formation of the mitotic spindle

786. 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. Cerebellum
c. Lateral vestibular nuclei
d. Diencephalon
e. Corpora quadrigemina

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

788. After examination of a 6-year-old girl with sore throat, the doctor suspected diphtheria. He obtained a swab from the child's tonsils. What microscopic presentation is characteristic of the causative agent of this disease?

a. Gram-positive cocci, arranged in chains
b. Gram-negative cocci, arranged in pairs
c. Gram-positive bacilli, arranged at an angle to each other
d. Gram-negative bacilli, arranged chaotically
e. -

789. When studying chemical composition of a tooth tissue, it is determined that 95-97% of this tissue consists of mineral substances (hydroxyapatite, carbonate apatite, fluorapatite), 1-2% consists of organic compounds, and 3% consists of water. What type of dental tissue is it?

a. Periodontium
b. Dentin
c. Cement
d. Enamel
e. Pulp

790. A woman has been hospitalized with complaints of dry mouth, thirst, and weight loss. Examination detected glucosuria. Her blood glucose level is 8.7 mmol/L. What pathological condition can be characterized by these symptoms?

a. Steroid-induced diabetes
b. Diabetes mellitus
c. Alimentary glucosuria
d. Diabetes insipidus
e. Renal diabetes

791. In protein biosynthesis that occurs in a eukaryotic cell, one of the stages is the conversion of pro-mRNA into mRNA) As a result of this process, mRNA <<matures>>. Name this process.

a. Repair
b. Transduction
c. Transcription
d. Processing
e. Replication

792. A patient with hypochromic anemia was prescribed an iron-containing drug for intravenous administration only. Name this drug:

a. Mannitol
b. Furosemide
c. Dichlothiazide (Hydrochlorothiazide)
d. Etacrynic acid
e. Fercoven

793. A 16-year-old girl, who has been starving herself for a long time to lose weight, developed an edema. This phenomenon is mainly caused by:

a. Deceleration of glomerular filtration rate
b. Decreased production of vasopressin in the hypothalamus
c. Hypoproteinemia due to protein synthesis disturbance
d. Venous congestion and increased venous pressure
e. Hypoglycemia due to glycogen synthesis disturbance
794. A patient developed anaphylactic shock after administration of novocaine (procaine) for conduction anesthesia. What is the drug of choice for shock relief in this case?
a. Adrenalin hydrochloride
b. Dimedrol (Diphenhydramine)
c. Noradrenaline hydrotartrate
d. Prednisolone
e. Suprastin (Chloropyramine)
795. Phenylketonuria belongs to the following group of molecular metabolic diseases:
a. Carbohydrate metabolism disorders
b. Hereditary disorders of lipid metabolism
c. Mineral metabolism disorders
d. Hereditary disorders of connective tissue metabolism
e. Amino acid metabolism disorders
796. Sodium citrate is used to preserve donor blood. What should be added to this blood to induce its coagulation?
a. Fibrinogen
b. Vitamin K
c. Calcium ions
d. Prothrombin
e. Sodium ions
797. A student uses percussion to determine the cardiac border that projects on the anterior thoracic wall at the level of the third costal cartilage. What cardiac border is being determined?
a. Upper
b. Left
c. Apex
d. Right
e. Lower
798. A patient with dislocated jaw was given a short-acting muscle relaxant by a doctor. Name this drug:
a. Pyridostigmine hydrobromide
b. Procaine
c. Cytitonum (Cytisine)
d. Papaverine hydrochloride
e. Dithylinum (Suxamethonium chloride)
799. A person has an upper jaw injury - one of the first premolars was knocked out. What maxillary process is damaged in this case?
a. Frontal
b. Zygomatic
c. Orbital
d. Alveolar
e. Palatine
800. A woman was diagnosed with peptic ulcer of the stomach. She has a long history of rheumatoid arthritis. What drugs are the likely cause of this disease in the patient?
a. H2 blockers
b. Antihypertensive drugs
c. Antihistamines
d. Glucocorticoids
e. Antibiotics
801. The workers of a nuclear power plant undergo regular medical check-ups, during which primarily the system that is the most sensitive to ionizing radiation is examined. Name this system:

a. Epithelial tissues
b. Skeletal system
c. Hematopoietic system
d. Nervous system
e. Muscular system
802. Presence of citrulline and high ammonia levels are detected in the urine of a newborn. This child is likely to present with disturbed production of the following substance:
a. Uric acid
b. Urea
c. Ammonia
d. Creatinine
e. Creatine
803. An electron micrograph of red bone marrow shows a megakaryocyte with demarcation channels in its peripheral cytoplasm. What is the function of these structures?
a. Increasing the surface area of cells
b. Platelet formation
c. Cell destruction
d. Increasing the number of ion channels
e. Cell division
804. The levels of Ca^2+ ions in the blood decreased as a result of a special diet, which will in turn cause increased secretion of a certain hormone. Name this hormone.
a. Vasopressin
b. Thyrocalcitonin
c. Somatotropin
d. Thyroxine
e. Parathormone
805. A 5-year-old boy suffers from severe headache, nuchal rigidity, vomiting without nausea, herpetic rash on his face, and fever. Bacteriology of what pathological material must be performed to confirm the provisional diagnosis of cerebrospinal meningitis?
a. Urine culture of N. meningitidis
b. Stool culture of N. meningitidis
c. Cerebrospinal fluid
d. Vomitus analysis
e. Obtaining N. meningitidis bacteria from the mucosa of the genitourinary system
806. What helminthiasis typically has natural foci, where population eats freshwater fish?
a. Echinococcosis
b. Taeniasis
c. Fascioliasis
d. Dicroceliasis
e. Opisthorchiasis
807. A sample of the patient's blood was taken for analysis in the presence of heparin. By its chemical structure, this anticoagulant belongs to:
a. Triacylglycerols
b. Phospholipids
c. Hemeproteins
d. Simple proteins
e. Glycosaminoglycans
808. During tooth extraction, novocaine (procaine) is administered to the area of a sensitive nerve, which results in an anesthetic effect because of disturbed:
a. Axonal transport
b. Formation of pain mediators
c. Tissue pH
d. Excitability of pain receptors
e. Conduction of pain impulses
809. 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. Ascending pharyngeal artery
b. Lingual artery
c. Ophthalmic artery
d. Facial artery
e. Maxillary artery
810. A structural gene - a segment of a DNA molecule - was damaged. However, it did not result in an amino acid replacement in the protein, because after a time the damage was corrected. It indicates such DNA ability as:
a. Replication
b. Mutation
c. Repair
d. Transcription
e. Reverse transcription
811. The course of complete starvation consists of three stages. What is characteristic of the third (terminal) stage of starvation?
a. Activation of lipolysis in adipose tissue
b. Increased formation of ketone bodies in the liver
c. Increased breakdown of proteins in vital organs
d. Development of non-gaseous acidosis
e. Intensified protein catabolism in muscles and gluconeogenesis in the liver
812. Bacteriological examination of a group of patients with dental caries detected various microorganisms. What microorganism plays the leading role in caries development in these patients?
a. St. salivarius
b. Borellia buccalis
c. Candida albicans
d. Streptococcus mutans
e. Staphylococcus aureus
813. In the blood plasma of a healthy person there are several dozens of proteins. Illness leads to production of new proteins, in particular ''acute-phase proteins''. Name one such protein:
a. Immunoglobulin G
b. Fibrinogen
c. C-reactive protein
d. Immunoglobulin A
e. Prothrombin
814. A patient with bronchopneumonia was prescribed acetylcysteine. What are the indications for this drug?
a. Bronchial asthma
b. Productive bronchitis
c. Asphyxia of newborn
d. Heart failure
e. Convulsions
815. The toxicology department received a patient with signs of acute mercury compound poisoning. What drug should be prescribed as an antidote?
a. Neuromidin (Ipidacrine)
b. Unithiol (Dimercaptopropansulfonate)
c. Barrol (Rabeprazole)
d. Plantaglucid (Plantaginis majoris foliorum extract)
e. Triphthazin (Trifluoperazine)
816. Accelerated synthesis of a certain polysaccharide precedes the deposition of mineral salts into the organic matrix of the tooth. Name this polysaccharide:
a. Glycogen
b. Dermatan sulfate
c. Keratan sulfate
d. Chondroitin sulfate

e. Heparin

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

818. A student, who unexpectedly met his girlfriend, developed an increase in systemic arterial pressure. This pressure change was caused by the intensified realization of the following reflexes:

a. Conditional sympathetic
b. Unconditional sympathetic
c. Unconditional parasympathetic
d. Conditional sympathetic and parasympathetic
e. Conditional parasympathetic

819. During a spinal surgery, the patient's vertebral arches and their connecting ligaments were removed. Name these ligaments:

a. -
b. Posterior longitudinal ligament
c. Interspinous ligaments
d. Anterior longitudinal ligament
e. Yellow ligaments

820. A certain hereditary syndrome affects teeth, hair, and bones. Each generation has affected individuals. The syndrome occurs equally frequent in men and women. What type of inheritance is it?

a. Autosomal recessive
b. X-linked dominant
c. X-linked recessive
d. Y-linked
e. Autosomal dominant

821. In diabetes mellitus, the levels of ketone bodies in the blood increase, causing metabolic acidosis. From what substance are ketone bodies synthesized?

a. Acetyl-CoA
b. Propionyl-CoA
c. Methylmalonyl-CoA
d. Malonyl-CoA
e. Succinyl-CoA

822. A surgeon accidentally damaged a nerve that innervates mylohyoid muscle. Name this nerve:

a. N. hypoglossus
b. N. facialis
c. N. trigeminus
d. N. accessorius
e. N. glossopharyngeus

823. In the course of experiment the vagus nerve of the test animal was severed, which resulted in the animal developing constant tachycardia. What effect of parasympathetic nervous system on cardiac performance is demonstrated by this experiment?

a. Paradoxical response
b. Mixed effect
c. Inhibition
d. Stimulation
e. Stimulus summation

824. What enzyme has demineralization effect, i. e. intensifies decomposition of mineral components of the tooth tissues?

a. Alkaline phosphatase
b. Glycogen phosphorylase

c. Glucose 6-phosphatase
d. Phosphotransferase
e. Acid phosphatase
825. A man has a malignant lingual tumor. The surgeon ligates his A) Lingualis in the area of the Pirogov triangle. I this case, special attention should be paid to the:
a. N. lingualis
b. N. hypoglossus
c. Ansa cervicalis
d. N. glossopharynseus
e. N. sublingualis
826. A patient complains of acute spastic abdominal pain, frequent urge to defecate, liquid bloody feces with mucus. Laboratory analysis of fecal smear revealed inconstant in shape organisms with erythrocytes. What is the most likely diagnosis?
a. Balantidiasis
b. Lambliasis
c. Amebiasis
d. Intestinal trichomoniasis
e. Schistosomiasis
827. A lab rat received a subcutaneous injection of mercury(II) chloride in the dosage of 5 mg per 1 kg of body mass. 24 hours later, the creatinine levels in the animal's blood plasma increased several times. What mechanism of retention azotemia is observed in this case?
a. Decreased glomerular filtration
b. Increased glomerular filtration
c. Increased creatinine production in the muscles
d. Increased creatinine secretion in the renal tubules
e. Increased creatinine reabsorption
828. A histopathological analysis of the tissues of an extracted tooth shows that a larger part of the dental cavity is filled with the collagen fiber-rich connective tissue and cellular infiltrations that are made up of lymphocytes and plasma cells. What type of pulpitis can be characterized by the described changes?
a. Gangrenous pulpitis
b. Fibrous pulpitis
c. Purulent pulpitis
d. Granulating pulpitis
e. -
829. A man is being examined in the maxillofacial surgery department and the doctor studies his mandibular buttresses. How many buttresses are there on the lower jaw?
a. 3
b. 2
c. 1
d. 5
e. 4
830. A patient with trauma has an epidural hematoma in the temporal region. What artery was damaged?
a. Anterior cerebral artery
b. Anterior meningeal artery
c. Posterior communicating artery
d. Medial cerebral artery
e. Middle meningeal artery
831. Amniocentesis detected karyotype 45, X0 in fetal epithelial cells. The mother and father are healthy. What is the likely diagnosis in this case?
a. Patau syndrome
b. Trisomy X
c. Edwards syndrome
d. Cri-du-chat syndrome

e. Turner syndrome

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

a. Serous inflammation

b. Catarrhal inflammation

c. Fibrinous inflammation

d. Hemorrhagic inflammation

e. Suppurative inflammation

833. After acute blood loss, the patient with rhesus-negative blood was mistakenly transfused with rhesus-positive blood. What changes will occur in blood in this case?

a. Erythrocytosis

b. Platelet aggregation

c. Hemolysis of recipient's erythrocytes

d. Aggregation of donor's erythrocytes

e. Hemolysis of donor's erythrocytes

834. A patient has a head trauma in the area of the suture between two parietal bones. What sinus of dura mater is likely to be damaged in this case?

a. Superior sagittal sinus

b. Sigmoid sinus

c. Transverse sinus

d. Occipital sinus

e. Inferior sagittal sinus

835. Gene expression is regulated by various mechanisms and activates upon induction of certain DNA regions. Name these regions.

a. Terminator

b. Enhancer

c. Silencer

d. Attenuator

e. Spacer

836. Auscultation detects a murmur in the projection of the patient's cardiac apex. What heart valve is likely to have a defect in this case?

a. Mitral valve

b. -

c. Aortic valve

d. Pulmonary trunk valve

e. Tricuspid valve

837. During a surgery on the oral diaphragm, a surgeon needs to locate an area that is called a ''submandibular triangle''. What muscle bounds this area?

a. M. digastricus

b. M. stylohyoideus

c. -

d. M. hyoglossus

e. M. geniohyoideus

838. A 50-year-old patient, who recovered from a heart attack, five years later died of chronic heart failure. Autopsy detects a dense sac-like protrusion on the lateral surface of the wall of the left ventricle. The wall in this place is thinned out, dense, and gray. What cardiac pathology can be characterized by these changes?

a. Cardiosclerosis

b. Myocardial infarction

c. Myocarditis

d. Cardiomyopathy

e. Chronic aneurysm

839. Electronic microscopy of a kidney shows tubules paved with cuboidal epithelium. In the epithelium there are light and dark cells. The light cells contain few organelles; their cytoplasm forms

folds. These cells provide reabsorption of water from primary urine into blood. The dark cells structurally and functionally resemble gastric parietal cells. What tubules are shown on the microslide?
a. Proximal tubules
b. Descending limb of loop of Henle
c. Distal tubules
d. Collecting tubules
e. Ascending limb of loop of Henle
840. 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. Non-competitive antagonism
b. Competitive antagonism
c. Additive synergism
d. Potentiated synergism
e. Synergo-antagonism
841. Phenylketonuria has autosomal recessive pattern of inheritance. What parental genotypes result in the risk of phenylketonuria in their children?
a. aa x aa
b. Aa x Aa
c. AA x Aa
d. AA x AA
e. AA x aa
842. During a visit to a dentist, the patient's oral mucosa is bright red. The patient has angular stomatitis and cheilosis. What vitamin deficiency is observed in this case?
a. B6
b. C
c. B2
d. B5
e. B1
843. After an insulin injection, a patient with diabetes mellitus developed unconsciousness and convulsions. What result will be shown by the biochemical test for blood sugar in this case?
a. 3.3 mmol/L
b. 10.0 mmol/L
c. 1.5 mmol/L
d. 5.5 mmol/L
e. 8.0 mmol/L
844. During a class in molecular biology, the mutations resulting in production of abnormal hemoglobin are being studied. What amino acid substitution occurs when S-hemoglobin is being produced, resulting in the development of sickle-cell anemia?
a. Glutamic acid is substituted with valine
b. Lysine is substituted with glutamine
c. Histidine is substituted with arginine
d. Glycine is substituted with asparagine
e. Threonine is substituted with lysine
845. Glucose synthesis from non-carbohydrate components is an important biochemical process. Gluconeogenesis from amino acids occurs most actively if a diet is rich in proteins. Which amino acid of those listed below is the most glucogenic?
a. Lysine
b. Isoleucine
c. Alanine
d. Valine
e. Leucine
846. Miners' work at the coal-face often leads to development of anthracosis. What type of respiratory failure arises along with this disease?

a. Obstructive
b. Restrictive
c. Thoracic
d. Dysregulatory
e. Diaphragmatic
847. Biological material taken from a patient contains several species of microorganisms (staphylococci and streptococci) that are causative agents of the patient's disease. Name this type of infection:
a. Coinfection
b. Superinfection
c. Mixed infection
d. Reinfection
e. Consecutive infection
848. A man presents with suppurative wound in the area of mastoid bone, which resulted in development of cerebral meningitis in the patient. Specify the way of infection penetration into the patient's cranial cavity:
a. V. emissariae mastoidea
b. V.v. tympanicae
c. V. auricularis
d. V.v. labirinthi
e. V. facialis
849. 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. platysma
b. M. stylohyoideus
c. M. sternocleidomastoideus
d. M. omohyoideus
e. M. mylohyoideus
850. To facilitate teeth mineralization in the course of caries treatment, certain substances are used. These substances are the source from which minerals are supplied to the hard dental tissues. Name these substances:
a. Magnesium sulfate
b. Potassium sulfate
c. Sodium chloride
d. Calcium glycerophosphate
e. Copper sulfate
851. In an experiment, dehydration was induced in a test animal. What receptors signal a lack of water?
a. Hypothalamic osmoreceptors
b. Gastric mechanoreceptors
c. Atrial volume receptors
d. Carotid body chemoreceptors
e. Taste receptors
852. Ketone bodies were detected in the urine of a patient. Ketone bodies appear in the urine during the following disease:
a. Renal tuberculosis
b. Diabetes mellitus
c. Acute glomerulonephritis
d. Urolithiasis
e. Renal infarction
853. In Western Europe nearly half of all congenital malformations occur in the children conceived in the period, when pesticides were used extensively in the region. Those congenital conditions result from the following influence:
a. Mechanical
b. Mutagenic

c. Carcinogenic
d. Malignization
e. Teratogenic
854. Auscultation reveals that in the patient's II intercostal space along the parasternal line on the right the II heart sound is better heard than the I heart sound. What valve produces this sound when closing?
a. Tricuspid valve
b. Bicuspid and tricuspid valves
c. Semilunar aortic valve
d. Semilunar pulmonary valve
e. Bicuspid valve
855. Normal occlusion of the dental arches can be made more pronounced by pulling the lower jaw backwards. What muscle performs this action?
a. Medial pterygoid
b. Temporal
c. Lateral pterygoid
d. Sternocleidomastoid
e. Masseter
856. 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, interlayed 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. Nonmuscular vein
c. Muscular vein
d. Muscular artery
e. Elastic artery
857. A fixed-run taxi passenger has a severe attack of tachycardia. A doctor travelling by the same taxi has managed to slow down his heart rate by pressing upon the eyeballs and thus inducing the following reflex:
a. Holtz reflex
b. Hering-Breuer reflex
c. Bainbridge reflex
d. Frank-Starling mechanism
e. Aschner-Dagnini reflex
858. The patient's caries was complicated by pulpitis accompanied by unbearable pain. What is the main cause of such pain in cases of pulp inflammation?
a. Primary alteration
b. Leukocyte emigration
c. Exudation
d. Ischemia
e. Proliferation
859. Enzyme cofactors include various derivatives of water-soluble vitamins. Which one of them is a component of aminotransferases?
a. B2
b. B1
c. PP
d. B3
e. B6
860. 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. Adrenal gland
b. Spleen
c. Kidney

d. Lymph node
e. Thymus
861. A culture of Gram-positive cocci was isolated from the oral cavity of a clinically healthy 25-year-old person. These cocci have a slightly elongated shape, are arranged in pairs or short chains, form a capsule, and exhibit alpha hemolysis on blood agar. This person is a carrier of the following pathogen:
a. Streptococcus salivarium
b. Streptococcus pyogenes
c. Streptococcus feacalis
d. Streptococcus pneumoniae
e. Peptostreptococcus
862. For a surgery in the maxillofacial area, cholinergic agents are used to decrease salivation. What drug of those listed below would you recommend for this purpose?
a. Atropine sulfate
b. Adrenaline hydrochloride
c. Proserin
d. Lobeline hydrochloride
e. Dithylinum (Suxamethonium chloride)
863. During kidney microscopy, the pathologist noticed crescent-shaped epithelial formations in the outer layer of the Bowman's capsule in 80% of the glomeruli. He concluded that such clinical presentation corresponds with:
a. Intracapillary proliferative glomerulonephritis
b. Rapidly progressive extracapillary proliferative glomerulonephritis
c. Extracapillary exudative glomerulonephritis
d. Fibroplastic glomerulonephritis
e. Intracapillary exudative glomerulonephritis
864. 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. cerebri posterior
b. A. cerebri anterior
c. A. communicans posterior
d. A. chorioidea
e. A. cerebri media
865. A 5-year-old child was diagnosed with Duchenne muscular dystrophy. The parents are healthy. The child's maternal uncle and the son of the child's maternal aunt have myopathy too. What is the type of inheritance of this disease?
a. X-linked dominant
b. Y-linked
c. Autosomal recessive
d. Autosomal dominant
e. X-linked recessive
866. A dentist has to spend much of his time on his feet when working, which can result in a venous congestion in the legs and varicose veins. Leading mechanism of congestion in this case is the decrease of:
a. Diaphragmatic piston effect on the abdominal organs
b. Cardiac residual pumping force
c. Thoracic pump effect
d. Blood pressure gradient in the veins
e. Skeletal muscle contraction in the lower limbs
867. A woman had been taking synthetic hormones during her pregnancy. Her newborn girl presents with excessive hairiness which has formal resemblance to adrenogenital syndrome. This sign of variability is called:
a. Recombination
b. Phenocopy
c. Replication

d. Mutation
e. Heterosis
868. A patient with Cushing syndrome presents with persistent hyperglycemia and glucosuria. This patient is likely to have increased production and secretion of the following hormone:
a. Aldosterone
b. Adrenaline
c. Thyroxine
d. Cortisol
e. Glucagon
869. Microscopy of the samples obtained from the patient's pharynx and stained according to Neisser shows bacilli with thickened poles situated at an angle to each other. Name the likely species of these microorganisms:
a. Corynebacterium diphtheriae
b. Neisseria gonorrhoeae
c. Streptococcus pyogenes
d. Leptospira interrhogans
e. Mycobacterium tuberculosis
870. Examination of the epithelial cells from the buccal mucosa of a man detected that the majority of cell nuclei contain one Barr body. What syndrome can be characterized by these findings?
a. Down syndrome
b. Klinefelter syndrome
c. Edwards syndrome
d. Turner syndrome
e. Patau syndrome
871. After exposure to radiation, a rabbit presents with the III stage of acute radiation sickness that manifests in bone marrow syndrome. Damage to what tissue is the leading link in the pathogenesis of radiation sickness-related disorders in this case?
a. Nerve tissue
b. Hematopoietic tissue
c. Glandular epithelium
d. Bone tissue
e. Gonadal epithelium
872. A patient was diagnosed with ishemic heart disease and prescribed a calcium channel blocker agent. What drug is it?
a. Thiotriazoline
b. Eldepryl (Selegiline)
c. Nitroglycerin
d. Carvedilol
e. Amlodipine
873. A 30-year-old patient hospitalized with diagnosis of acute glomerulonephritis presents with proteinuria. What disturbance has caused this phenomenon?
a. Increased permeability of glomerular membrane
b. Increased hydrostatic pressure on the capillary walls
c. Delayed excretion of nitrogen metabolism products
d. Decreased oncotic blood pressure
e. Decreased number of functional nephrons
874. An inoculation of pus, obtained from a furuncle, revealed spheric microorganisms arranged in ''grape clusters''. What microbes were detected?
a. Tetracocci
b. Staphylococci
c. Diplococci
d. Micrococci
e. Streptococci
875. Ten weeks after a case of jaundice, HBsAg were detected in the patient's blood. What pathology is it characteristic of?

a. Viral hepatitis D
b. Viral hepatitis C
c. Viral hepatitis E
d. Viral hepatitis B
e. Viral hepatitis A
876. A patient with skin burns was delivered to a hospital. To clean the wound from necrotic tissues and mucus the doctor prescribed an enzymatic drug for topical treatment. Name this drug:
a. Streptokinase
b. Asparaginase
c. Pancreatin
d. Tripsin
e. Pepsin
877. Spore-containing bacilli were detected in a patient with tetanus. What staining technique was used to detect them?
a. Ozheshko stain
b. Ziehl-Neelsen stain
c. Morozov stain
d. Gram stain
e. Burri-Gins stain
878. A patient has aspermia. What organ is dysfunctional in this case?
a. Epididymis
b. Prostate
c. Bulbourethral (Cowper's) glands
d. Seminal vesicles
e. Testicle
879. When divers quickly rise from the depths to the surface, they risk developing decompression sickness that can result in death caused by gas embolism. What gas is produced in this case?
a. NO_2
b. CO_2
c. N_2
d. O_2
e. CO
880. Human teeth are fixed in the special sockets on the upper and lower jaw, which means that they belong to the following system:
a. Pleurodont
b. Homodont
c. Heterodont
d. Acrodont
e. Thecodont
881. Autopsy of the body of a 62-year-old man detected a focus of tissue breakdown in the liver. The lesion is 4 cm in diameter and filled with a yellowish-green fluid. What is the most likely diagnosis?
a. Empyema
b. Carbuncle
c. Phlegmon
d. Abscess
e. Granuloma
882. A sick child has signs of achondroplasia (dwarfism). It is known that this disease is monogenic and the gene that causes the development of this anomaly is dominant. The natural brother of this child has normal development. Genotypically, the healthy child is:
a. Aa
b. AABB
c. AA
d. AaBb
e. aa
883. A diabetus mellitus patient developed unconsciousness and convulsions after administration of

insulin. What result of blood glucose analysis is the most likely in this case?
a. 8 mmol/L
b. 3.3 mmol/L
c. 1.5 mmol/L
d. 5.5 mmol/L
e. 10 mmol/L
884. Lower limbs of a patient with varicose veins were examined. The patient's legs are cyanotic and pastose, skin temperature is low, single petechiae are observed. What disturbance of hemodynamics is it?
a. Obstruction ischemia
b. Venous hyperemia
c. Arterial hyperemia
d. Compression ischemia
e. Thromboembolism
885. 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. Partial proteolysis
b. Acetylation
c. Phosphorylation
d. Covalent modification
e. Methylation
886. A 28-year-old patient presented with elevated blood pressure, hematuria, and facial edemas. Despite the treatment, the signs of renal failure were exacerbating. 6 months later the patient died of uremia. Microscopy of the kidneys shows proliferation of nephrothelium in the glomerular capsules and proliferation of podocytes that contributes to crescent formation. Sclerosis and hyalinosis of the glomeruli is observed. Make the diagnosis:
a. Acute glomerulonephritis
b. Subacute glomerulonephritis
c. Nephrotic syndrome
d. Chronic glomerulonephritis
e. Acute pyelonephritis
887. A 40-year-old woman after installation of artificial crowns on her upper incisors eventually developed a brownish gingival enlargement on the vestibular surface. The enlargement covers the crowns and is 15 mm in diameter. Open biopsy results: under the stratified squamous epithelium of the gums there is a neoplasm consisting of connective tissue with numerous sinusoid vessels, oval mononuclear cells that form osteoid substance, and multinucleated giant cells that destroy the maxillary alveolar ridge. Make the diagnosis:
a. Gingival fibromatosis
b. Fibromatous epulis
c. Giant-cell epulis
d. Angiomatous epulis
e. Eosinophilic granuloma
888. 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. Chronic cholecystitis
b. Familial nonhemolytic (Gilbert's) syndrome
c. Mechanical jaundice
d. Parenchymatous jaundice
e. Hemolytic jaundice
889. A Gram-negative mobile bacillus was obtained from a patient, provisionally diagnosed with typhoid fever. The obtained culture was inoculated onto semiliquid Hiss media for identification. What phenomenon signifies the microbial breakdown of carbohydrates into acid?
a. Precipitation
b. Indicator changes its color

c. Gas formation
d. Liquefaction of the medium
e. Nutrient medium becomes turbid
890. 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. Elongated legs and shorter arms
b. Lean stature
c. Increased layer of subcutaneous fat
d. Lower need for fat intake
e. Hyperhidrosis
891. A 2-year-old child with a history of URTI, who died with signs of cardiopulmonary failure, has hyperemic right lung. In segments 2, 6, and 10 on the surface and on section there are irregular-shaped yellow airless foci, with their size varying from several millimeters to 1 cm. Microscopy shows that in these portions of pulmonary tissue the alveoli, bronchioles, and small bronchi contain exudate with predominance of neutrophils. What is the most likely diagnosis?
a. Croupous pneumonia
b. Acute bronchitis
c. Focal pneumonia
d. Pulmonary abscess
e. Interstitial pneumonia
892. 2 months after a kidney transplantation, the patient's condition deteriorated. Based on laboratory analysis, it was determined that transplant rejection started. What factor of the immune system plays the key role in the reaction of transplant rejection?
a. T helper 2 cells
b. B lymphocytes
c. Natural killer cells
d. T killer cells
e. Interleukin-1
893. What internal organ plays the largest role in the humoral regulation of erythropoiesis?
a. Lungs
b. Pancreas
c. Liver
d. Kidneys
e. Gastrointestinal tract
894. An 18-year-old man came to a doctor with complaints of a facial deformity. Examination detected a tumor-like formation on his lower jaw. Microscopy revealed that the thickened area of this formation consists of large homogeneous cells, such as histiocytes, and a large number of eosinophils. Horizontal resorption of the patient's interdental septa is observed. What tumor-like disease can be characterized by this histological presentation?
a. Giant cell epulis
b. Cherubism
c. Fibrous dysplasia
d. Fibromatous epulis
e. Eosinophilic granuloma
895. Mass screening of newborns for phenylketonuria is being carried out in Ukraine. What method of medical genetics is used for this purpose?
a. Biochemistry
b. Genealogy
c. Population statistics
d. Twin method
e. Cytogenetics
896. A patient has a general sensitivity loss in separate areas of his body on the right. What cerebral gyrus is affected in this case?
a. Precentral gyrus

b. Inferior temporal gyrus
c. Postcentral gyrus
d. Superior temporal gyrus
e. Middle temporal gyrus
897. What component of the parodontium performs the sensory function that regulates the force of masticatory pressure applied to the teeth?
a. Gums
b. Bones of the alveolar process
c. Cement
d. Periodontium
e. Periosteum
898. A 25-year-old man undergoes dental procedures. Several minutes after his oral cavity was lavaged with a furacilin (nitrofural) solution, he developed markedly swollen lips. What type of allergic reaction is observed in this case?
a. Cytolytic
b. Anaphylactic
c. Delayed-type hypersensitivity
d. Stimulating
e. Immune complex
899. A 53-year-old woman complains of painful swelling in her left parotid area. The swelling appeared 5 days ago. Objectively the skin in this area is slightly hyperemic and tender. Excretory duct of the salivary gland produces a small amount of viscous turbid yellow-green liquid. Microscopy detects a diffuse infiltration of the gland with segmented neutrophils. Make the diagnosis:
a. Sjogren syndrome
b. Acute serous parotitis
c. Epidemic parotitis
d. Glandular adenoma
e. Acute suppurative parotitis
900. After a traumatic brain injury the patient developed a urinary system dysfunction - polyuria. What hormone secretion was disturbed, resulting in polyuria in this patient?
a. Vasopressin
b. Adrenaline
c. Mineralocorticoids
d. ACTH
e. Insulin
901. What property is not characteristic of low molecular weight heparins, such as enoxaparin, fraxiparine (nadroparin calcium), etc.?
a. An increase in the inhibitory effect of antithrombin III on factor Xa
b. No inhibitory effect on thrombin
c. Antiplatelet and anticoagulant activity
d. Bioavailability is higher than that of heparin
e. Injected subcutaneously 1-2 times a day
902. In the epithelium of the airways, there are cells with a dome-shaped apical part with microvilli on its surface. These cells have a well-developed synthetic apparatus and contain secretory granules in their apical part. Name these cells.
a. Endocrine cells
b. Cambial cells
c. Cells without a border
d. Goblet cells
e. Clara cells
903. In the wall of a blood vessel there is a large number of elastic fibers in all the layers. The middle layer contains elastic fenestrated membranes. Such characteristics of the vessel wall structure are caused by the following factors:
a. Low blood pressure
b. Low blood flow velocity

c. High blood pressure
d. High blood flow velocity
e. Osmotic pressure
904. A 27-year-old man came to a doctor. Examination detects enlarged hands, feet, and lower jaw, deformed joints (kiphosis), and hormonal disorders (impotence and testicular atrophy). What gland is dysfunctional in this patient, as indicated by these signs?
a. Anterior pituitary gland
b. Adrenal glands
c. Pineal gland
d. Parathyroid glands
e. Thyroid gland
905. A 50-year-old man has been undergoing treatment for peptic ulcer disease of the stomach. His digestion normalized, pain disappeared, and general mood improved. However, several weeks later he again developed epigastric pain, heartburn, and sour eructation. How can this clinical course be characterized?
a. Remission
b. Latent period
c. Prodromal stage
d. Relapse
e. Terminal state
906. During an abdominal surgery, the patient developed a reflex cardiac arrest. Name the location of this reflex center:
a. Medulla oblongata
b. Cerebral cortex
c. Spinal cord
d. Midbrain
e. Diencephalon
907. In an experiment, an excitable cell was exposed to tetraethylammonium that blocks potassium-selective ion channels. What effect will it have on the membrane potential of the cell?
a. Resting potential will disappear
b. Resting potential will increase
c. Hyperpolarization will develop
d. Action potential will not occur
e. Resting potential will remain unchanged
908. 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. Narcotic
b. Chemical
c. Physical
d. Toxic
e. Allergic
909. 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 the second pharyngeal arch
b. Nonclosure of frontal and maxillary processes of the first pharyngeal arch
c. Nonclosure of maxillary and mandibular processes of the first pharyngeal arch
d. Nonclosure of the third pharyngeal arch
e. Nonclosure of palatine tori of maxillary processes of the first pharyngeal arch
910. A patient with trigeminal neuralgia was given parenterally a non-narcotic analgesic with rapid onset and short action. This analgesic is manufactured in tablets and ampoules. What drug was the patient administered?
a. Piroxicam
b. Ibuprofen
c. Indometacin
d. Mefenamic acid

e. Analgin (Metamizole)

911. Due to severe pain syndrome a patient has been prescribed a narcotic analgesic. Specify the prescribed drug:

a. Dimexid

b. Morphine

c. Analgin (Metamizole)

d. Indometacin

e. Nimesulid

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

a. Maxillary nerve

b. Supraorbital nerve and infratrochlear nerve

c. Zygomatic nerve

d. Mandibular nerve

e. Nasociliary nerve

913. Prolonged taking of large doses of aspirin (acetylsalicylic acid) leads to inhibition of prostaglandin synthesis because of decreased activity of the following enzyme:

a. Cyclooxygenase

b. Phospholipase A2

c. 5-Lipoxygenase

d. Peroxidase

e. Phosphodiesterase

914. A 78-year-old woman during physical exertion suddenly developed abdominal pain accompanied by pallor and a drop in blood pressure to as low as 70/40 mm Hg. Death occurred with signs of acute heart failure. Autopsy detected marked atherosclerosis and a sacculation of vessel wall in the abdominal aorta. The sacculation is 16 cm in diameter and filled with blood clots. In the wall of the sacculation there is a fissured perforation. What pathology occurred in the woman's aorta?

a. -

b. Dysplastic aortic wall

c. Syphilitic mesaortitis

d. Aortic aneurysm with rupture

e. Nonspecific aortitis

915. A woman with the height of 1.70 m and the body weight of 94 kg presents with decreased carbohydrate tolerance. What hormone is likely to be deficient in this case, causing this condition?

a. Cortisol

b. Insulin

c. Adrenaline

d. Somatotropin

e. Glucagon

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

a. Adrenaline

b. Hydrocortisone

c. Thyroxine

d. Somatotropin

e. Aldosterone

917. To study the functional state of the kidneys, the challenge test with a para-aminohippuric acid (PAH) was used. What mechanism of urine formation can be studied using this test?

a. Filtration system

b. Concentration system

c. Reabsorption system

d. Countercurrent system

e. Secretion system

918. A woman complains of painful chewing, especilly when she moves her lower jaw backwards. What muscles are affected?

a. Posterior bundles of the temporal muscles

b. Anterior bundles of the temporal muscles
c. Medial pterygoid muscles
d. Masseter muscles
e. Lateral pterygoid muscles
919. A student, who throughout the semester was studying poorly, is emotionally tense during the final exam. Leading mechanism of emotional tension in this case is the lack of:
a. Time and energy
b. Energy
c. Energy and information
d. Information
e. Time
920. What type of apatite makes up the largest portion of mineral component in the human teeth?
a. Hydroxyapatite
b. Carbonate apatite
c. Fluorapatite
d. Chlorapatite
e. Strontium apatite
921. 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. Immune
b. Reproductive
c. Nervous
d. Circulatory
e. Endocrine
922. A patient diagnosed with stomatitis came to a dentist. Objectively, against the background of inflammatory reaction of the oral mucosa, increased salivation is observed, forcing the patient to spit constantly. What water-electrolyte metabolic imbalance is likely to develop in this case?
a. Hyperosmolar hypohydration
b. Hyperosmolar hyperhydration
c. Hypoosmolar hyperhydration
d. Hypoosmolar hypohydration
e. There will be no water-electrolyte metabolic imbalances
923. A patient diagnosed with systemic lupus erythematosus has kidney damage with nephrotic syndrome. What is the cause of this condition?
a. Ischemic kidney damage
b. Mechanical damage to the urinary tract
c. Glomerulosclerosis
d. Hyperproteinemia
e. Autoimmune damage to nephron glomeruli
924. Local anesthetic lidocaine is widely used in dental practice. Lidocaine has an analgesic effect because it:
a. Blocks ligand-gated sodium channels
b. Blocks voltage-gated calcium channels
c. Blocks voltage-gated sodium channels
d. Blocks voltage-gated potassium channels
e. Activates voltage-gated potassium channels
925. During parodontosis, destruction of protein and polysaccharide components of connective tissue occurs. Which of the proteins listed below is a component of connective tissue?
a. Ceruloplasmin
b. Albumin
c. Antitrypsin
d. Collagen
e. Transferrin
926. A patient on the 2nd day after cardiac infarction presents with acute decrease of systolic blood

pressure down to 60 mm Hg with tachycardia 140/min., dyspnea, loss of consciousness. What mechanism is essential in the pathogenesis of shock developed in this case?

a. Decreased cardiac output

b. Increased myocardial excitability caused by products of necrotic disintegration

c. Development of paroxysmal tachycardia

d. Decreased circulating blood volume

e. Development of anaphylactic reaction to myocardial proteins

927. 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. Insulin

c. Progesterone

d. Glucagon

e. Adrenaline

928. A woman with a deep wound on her leg was brought into the trauma department. She received the injury three days ago. What drug must be used to prevent tetanus in this case?

a. Antibiotics

b. Diphtheria and tetanus toxoids

c. Antitetanic serum

d. BCG vaccine

e. DPT vaccine

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

a. Verapamil

b. Propranolol

c. No-Spa (Drotaverine)

d. Nitroglycerin

e. Nitrosorbide (Isosorbide dinitrate)

930. A small amount of specific antibodies was detected in the blood of an infectious patient, which indicates inhibited function of certain connective tissue cells. Name these cells.

a. Neutrophilic granulocytes

b. Macrophages

c. Lymphocytes

d. Labrocytes

e. Plasma cells

931. A man diagnosed with arthritis of the maxillofacial joint came to a doctor. The doctor prescribed him an ointment with diclofenac sodium as the active substance. What is the mechanism of action of this medicine?

a. Phospholipase inhibition

b. Blockade of opiate receptors

c. Cyclooxygenase activation

d. Cyclooxygenase inhibition

e. Activation of opiate receptors

932. Before diving underwater, pearl hunters make several deep inhales and exhales. Why do they do it?

a. To increase the blood flow in the pulmonary circulation

b. To provide the body with oxygen reserves

c. For the maximum possible excretion of nitrogen from the body

d. For the maximum possible excretion of CO_2 from the body

e. To increase the diffusing capacity of the lungs

933. When examining a 1-month-old child, the doctor noted open posterior fontanelle. At what age does it close, if a child develops normally?

a. In the 2nd-3rd month of life

b. In the 2nd year of life

c. In the 6th month of life

d. In the 4th month of life
e. In the 5th month of life
934. A patient diagnosed with acute pulpitis complains of toothache and swollen lower face on the side of the affected tooth. What is the leading mechanism of edema development in this disease?
a. Disturbed microcirculation in the lesion focus
b. Disturbed trophic function of the nervous system
c. Hypoproteinemia
d. Disturbed nerve regulation of water metabolism
e. Increased aldosterone production
935. 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. Caseous pneumonia
b. Infiltrative tuberculosis
c. Cirrhotic tuberculosis
d. Acute cavernous tuberculosis
e. Tuberculoma
936. 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 passive
b. Innate
c. Artificial active
d. Artificial passive
e. Natural active
937. Examination of a patient revealed increased pyruvate levels in the blood and a decrease in transketolase activity of erythrocytes. What vitamin is deficient in this case, as indicated by these biochemical parameters?
a. Retinol
b. Tocopherol
c. Biotin
d. Folic acid
e. Thiamine
938. A 37-year-old woman presents with fructosemia and fructosuria. Her blood glucose is 2.1 mmol/L. She is diagnosed with fructose intolerance. What congenital enzyme deficiency is the molecular basis of this disease?
a. Hexokinase
b. Phosphoglucomutase
c. Triose-phosphate isomerase
d. Phosphofructokinase
e. Fructose 1-phosphate aldolase
939. A patient with severe poisoning caused by an unknown substance was brought into an admission room. The patient is in a state of acute cardiac insufficiency. What cardiac glycosides must be given to the patient as an emergency aid?
a. Anaprilin (Propranolol)
b. Salbutamol
c. Corglycon (Convallatoxin)
d. Cordiamin (Nikethamide)
e. Naphthyzin (Naphazoline)
940. Examination of a patient with disturbed process of saliva production in the parotid gland shows that the otic ganglion is likely to be damaged. This ganglion is formed by the following nerve:
a. N. petrosus minor
b. N. hypoglossus
c. N. vagus

d. N. auricularis magnus
e. N. petrosus major
941. It is dangerous to eat plants and mushrooms harvested along the motorways due to high risk of lead poisoning. What is the main source of lead contamination in the environment?
a. Sewage
b. Acid rains
c. Herbicides
d. Exhaust gases
e. Chemical fertilizers
942. The leading role in the process of dentin and cementum mineralization belongs to osteocalcin protein that has a high ability to bind calcium ions due to the presence of residues of a certain modified amino acid in its polypeptide chain. Name this amino acid:
a. gamma-carboxyglutamic amino acid
b. beta-alanine
c. beta-carboxyaspartic amino acid
d. gamma-aminobutyric amino acid
e. beta-aminopropionic amino acid
943. A patient has been diagnosed with acute respiratory viral infection. Blood serum analysis detects class M immunoglobulins. What stage of the infectious process is observed in the patient in this case?
a. Incubation
b. Prodromal stage
c. Acute stage
d. Reconvalescence
e. Microbial carriage
944. 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. Impulse conduction
c. Regenerative
d. Endocrine
e. Contraction
945. A patient with inflammation of the nasal mucosa and a disturbed sense of smell came to the otorhinolaryngology department. What area of the nasal mucosa is most likely to be affected in this case?
a. Common nasal meatus
b. Middle nasal meatus
c. Lower nasal meatus
d. Nasal septum
e. Upper nasal meatus
946. A 59-year-old man has signs of parenchymal jaundice and portal hypertension. Histology of the puncture biopsy material, obtained from the patient's liver, shows the following: disturbed lobar and trabecular structure, signs of fatty degeneration in a portion of hepatocytes, formation of porto-portal connective tissue septa with pseudolobules and periportal lympho-macrophageal infiltrations. Make the diagnosis:
a. Viral hepatitis
b. Alcoholic hepatitis
c. Chronic hepatosis
d. Hepatic cirrhosis
e. Toxic dystrophy
947. X-ray scan shows a skull fracture. The line of the fracture passes through the supraorbital rim. What bone is damaged?
a. Temporal bone
b. Occipital bone
c. Frontal bone
d. Parietal bone

e. Maxilla

948. A 60-year-old patient died of cardiopulmonary failure. In the lower lobes of both lungs, the walls of the bronchi are of varying thickness and have bag-like distensions. In some of the distended bronchi, their lumina are filled with purulent masses. In the bronchial walls, histology detects destruction of non-striated muscle fibers and elastic fibers, as well as chronic inflammatory infiltration of the tissue. What disease can be characterized by these pathological changes?

a. Chronic bronchitis
b. Acute bronchitis
c. Bronchogenic carcinoma
d. Metaplasia of bronchial epithelium
e. Bronchiectasis

949. A 67-year-old man was delivered to a cardiology department with complaints of periodical pains in his heart, dyspnea caused by even slight exertion, cyanosis and edemas. ECG shows additional excitations of heart ventricles. Name this type of rhythm disturbance:

a. Extrasystole
b. Flutter
c. Fibrillation
d. Bradycardia
e. Tachycardia

950. In the course of experiment it is necessary to detect muscle excitation. For this purpose the following measurement should be made:

a. Ion concentration
b. Mechanomyogram
c. Electromyogram
d. Contraction strength
e. Contraction duration

951. A patient with syphilis developed pale spots on the skin of his neck. What disturbance of pigment metabolism is it?

a. Porphyria
b. Lentigo
c. Xeroderma
d. Leukoderma
e. Melanoderma

952. A patient with urolithiasis was given a narcotic analgesic with antispasmodic effect. Name this drug:

a. Ibuprofen
b. Analgin (Metamizole)
c. Mefenamic acid
d. Promedol (Trimeperidine)
e. Indomethacin

953. After a prolonged isoniazid treatment, the patient developed polyneuritis, paresthesia, memory disorders, and convulsions. What is the likely mechanism of the described isoniazid side-effects?

a. Inhibition of RNA synthesis
b. Disruption of cell membrane synthesis
c. Inhibition of pyridoxal phosphate formation
d. Inhibition of protein synthesis
e. Para-aminobenzoic acid antagonism

954. During autopsy of the patient, who died of cardiovascular insufficiency, the patient's right foot is darkly colored. The vessels of the patient's thigh are partially obstructed by grayish-red clots. On the vessel walls there are yellowish-gray spots and fibrous plaques, some of which are of stony density. What clinicopathological type of atherosclerosis was complicated in the patient?

a. Atherosclerosis of aorta
b. Renal atherosclerosis
c. Atherosclerosis of lower extremities
d. Vascular intestinal atherosclerosis

e. Cerebral atherosclerosis

955. Three days after the filling of the first right premolar, the patient developed pain under the right eye and persistent nasal congestion accompanied by the fever of 38^oC and discharge of purulent mucus from the right nasal passage. What mistake was likely made by the doctor in this case?

a. Perforation of the right maxillary sinus

b. Perforation of the sphenoid sinus

c. Perforation of the right wall of the nasal cavity

d. Fracture of the interalveolar septum

e. Perforation of the infraorbital canal

956. Microphotogram made with electron microscope shows alveolar cells that compose blood-air barrier. Name this cells:

a. Alveolar respiratory epithelial cells

b. Villous epithelial cells

c. Clara cells (club cells)

d. Alveolar macrophages

e. Alveolar secretory epithelial cells

957. The height of a person is controlled by several non-allelic dominant genes. If the number of this genes is increased, the height of a person increases as well. What type of interaction occurs between these genes?

a. Complementarity

b. Codominance

c. Pleiotropy

d. Epistasis

e. Polymery

958. During the neurologist's examination, a patient presents with a sensory loss on the back surface of the left hand. Name this phenomenon:

a. Asthenia

b. Alexia

c. Ataxia

d. Anesthesia

e. Atony

959. A 50-year-old man, who has been suffering from chronic hepatic failure for years, developed ascites. What is the main mechanism of development of this new disorder in the patient?

a. Increased pressure in the portal venous system

b. Decreased hepatic synthesis of albumins and globulins

c. Increased oncotic blood pressure

d. Appearance of neurotoxic substances in blood

e. Increased blood levels of low density and very low density lipoproteins

960. A 25-year-old patient has been hospitalized with complaints of headache, purulent discharge from the nasal cavity, and difficulty breathing through the nose. X-ray revealed inflammation in the region of the right maxillary sinus. Into which nasal meatus will the pathological fluid be discharged in this case?

a. Right supreme nasal meatus

b. Right middle nasal meatus

c. Right inferior nasal meatus

d. Right superior nasal meatus

e. Right common nasal meatus

961. After a surgery an animal developed tetany as a result of low plasma calcium levels. What endocrine gland was removed in the animal?

a. Thymus

b. Parathyroid glands

c. Pineal gland

d. Adrenal cortex

e. Thyroid gland

962. What process becomes disturbed, if salivary pH drops below 6.5?

a. Intensity of metabolic processes in the pulp
b. Dental blood supply
c. Dentin formation
d. Supply of hard dental tissues with mineral substances
e. -
963. Significant shortcoming of microscopy in infection diagnostics is its insufficient information value due to morphological similarity between many species of microorganisms. What immunoassay can significantly increase informativity of this method?
a. Fluorescence immunoassay
b. Radioimmunoassay
c. Coombs' test
d. Opsonization
e. Immune-enzyme assay
964. 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 hemorrhage
b. Pulmonary gangrene
c. Pulmonary carnification
d. Pulmonary atelectasis
e. Hemorrhagic pulmonary infarction
965. During dental manipulations in the oral cavity, a woman felt unwell: she developed headache and palpitations. Blood pressure measurement revealed a systolic pressure of 170 mm Hg. What is the normal value (mm Hg) of human systolic blood pressure?
a. 100-120
b. 140-160
c. 60-80
d. 90-100
e. 160-180
966. A person in the state of nervous tension develops transverse wrinkles on the forehead. What muscle contracts to produce this result?
a. M. temporoparietalis
b. M. auricularis anterior
c. M. occipitofrontalis
d. M. corrugator supercilii
e. M. procerus
967. A 59-year-old man was diagnosed with chorea that manifests as involuntary rapid movements accompanied by grimaces. Chorea development is associated with damage to a certain brain structure. Name this brain structure.
a. N. fasciculi longitudinalis medialis (Darkshewitch nuclei)
b. Striatum
c. Amygdala
d. Thalamus
e. Claustrum
968. A 36-year-old man traveled to the mountains for a vacation (altitude of 2000 meters above the sea level). He developed increased respiration rate, tachycardia, and slight dizziness. Two days later these signs disappeared. This process is called:
a. Proliferation
b. Inhibition
c. Adaptation
d. Compensation
e. Regeneration
969. 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. Serology, biologic method
c. Microscopy, serology
d. Bacteriology, allergy testing
e. Microscopy, microbial culture
970. 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 a half-titer
c. Double increase
d. Fourfold increase or more
e. By one titer
971. A patient with wrist wound started to develop an edema. At what stage of local circulatory disturbance does it usually occur?
a. Venous hyperemia
b. Prestasis
c. Stasis
d. Arterial hyperemia
e. Arteriolar spasm
972. A patient has been hospitalized with an injury to the occipital region. Examination detects a hemorrhage in the area of the calcarine sulcus. In this case, it is likely that the cortical site of a certain analyzer is damaged. What analyzer is it?
a. Visual
b. Auditory
c. Olfactory
d. Vestibular
e. Gustatory
973. Glutamate decarboxylation produces an inhibitory neurotransmitter in the central nervous system. What neurotransmitter is it?
a. GABA
b. Histamine
c. Serotonin
d. Glutathione
e. Asparagine
974. A man complaining of nausea, liquid stool with mucus and blood streaks, high temperature, and weakness was hospitalized into the infectious diseases department. The doctor suspects dysentery. What method of laboratory diagnostics would be the most effective for confirmation of this diagnosis?
a. Serological analysis
b. Protozoan analysis
c. Bacteriological analysis
d. Mycological analysis
e. Microscopy
975. There are several ways of ammonia neutralization in the body, with some organs having their own specific ways. What way of ammonia neutralization is characteristic of brain cells?
a. Urea formation
b. Creatine formation
c. Glutamine formation
d. Asparagine formation
e. NH4+ formation
976. 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
977. Microscopy with an immersion system was used to study a smear microslide with a Streptobacillus culture stained according to the Aujeszky method. What structural feature of the bacteria was analyzed?
a. Cell wall structure
b. Spores
c. Flagella
d. Capsule
e. Inclusions
978. Cells of basal layer of epidermis were damaged due to exposure to radiation. What function of epidermis will be impaired or inhibited first?
a. Regenerative
b. Barrier
c. Absorption
d. Dielectric
e. Protective
979. What non-collagenous proteins belong to the organic part of periodontal bone tissue?
a. Fibrinogen, prothrombin
b. Osteocalcin, osteonectin
c. Albumins, globulins
d. Enamelin, amelogenin
e. Collagen, elastin
980. A 6-month-old child has a dense red nodule on the skin. The nodule becomes pale when pressed. What disease can be characterized by these pathological changes?
a. Lymphangioma
b. Melanoma
c. Pigmented nevus
d. Hemangioma
e. Leiomyoma
981. On histological examination of biopsy material taken from the liver of a woman, who for a long time had been suffering from viral hepatitis type B, the pathologist detected diffuse hepatic fibrosis with formation of porto-portal and porto-central fibrotic septa and disturbance of the liver lobular structure (development of pseudolobules). What process can be characterized by the given morphological changes?
a. Hepatic cirrhosis
b. Chronic hepatitis
c. Cholestasis
d. Hepatocellular carcinoma
e. Acute hepatitis
982. A patient died of a cardiopulmonary insufficiency. His heart is enlarged, the wall of his right ventricle is thickened on section, and the cavity is dilated. Characterize the pathological process:
a. Hyperplasia
b. Sclerosis
c. Hypertrophy
d. Atrophy
e. Metaplasia
983. During a brain surgery stimulation of the cerebral cortex resulted in tactile and thermal sensations in the patient. What gyrus was stimulated?
a. Superior temporal gyrus
b. Cingulate convolution
c. Precentral gyrus
d. Parahippocampal gyrus
e. Postcentral gyrus

984. A patient diagnosed with hepatic abscess was brought into the surgery department. He has a history of recurrent gastrointestinal disorders. Laboratory stool analysis detected round cells with 4 nuclei. What protozoal invasion can be detected in this case?
a. Entamoeba gingivalis
b. Trichomonas vaginalis
c. Balantidium coli
d. Trichomonas hominis
e. Entamoeba hystolytica
985. A patient has deep lacerated wound with uneven edges. The wound is suppurating; its edges present with moist granulation tissue that does not protrude above the wound level. Name the type of wound healing:
a. Healing under the scab
b. Wound organization
c. Direct closure of the epithelial defect
d. Healing by primary intention
e. Healing by secondary intention
986. An ophthalmologist suspects blennorrhea (gonococcal conjunctivitis) in a child with signs of suppurative keratoconjunctivitis. What laboratory diagnostics should be conducted to confirm the diagnosis?
a. Serum diagnostics and allergy test
b. Microscopy and bacteriological analysis
c. Biological analysis and phagodiagnostics
d. Microscopy and serum diagnostics
e. Biological analysis and allergy test
987. A patient was delivered into a hospital with the provisional diagnosis of botulism. What serological reaction should be used for detection of botulinum toxin in the material being analyzed?
a. Immunofluorescence reaction
b. Neutralization reaction
c. Complement fixation reaction
d. Agglutination reaction
e. Precipitation reaction
988. A patient complains of toothache. Examination revealed a carious cavity that exposes the pulp. What stage of caries is it?
a. Circular caries
b. Chalky lesion
c. Superficial caries
d. Deep caries
e. Median caries
989. A 26-year-old woman was found to have a tumor of the alveolar process. The tumor manifests as a dense node with clear margins. Histological examination shows homogeneous mononuclear small oval cells mixed with multinucleated giant cells; occasionally bone trabeculae form among the cells. Make the diagnosis:
a. Eosinophilic granuloma
b. Fibromatous epulis
c. Giant-cell tumor of the bone
d. Ameloblastoma
e. Primordial cyst
990. During a surgery on the parotid gland, the surgeon ligated a vein passing through the center of this gland. Name this vein:
a. Vv. thyroideae superiores
b. V. facialis
c. Vv. pharyngeae
d. V. retromandibularis
e. V. lingualis
991. A man complains of varicose veins on his left leg. Venous nodes are located on the posterior

surface of the shin and on the posterior and anterior surfaces of the thigh. What superficial leg veins are damaged in this patient?
a. Femoral vein, great saphenous vein, small saphenous vein
b. Popliteal vein, superficial saphenous vein
c. Small saphenous vein, deep femoral vein
d. Posterior tibial vein, great saphenous vein
e. Great saphenous vein, small saphenous vein
992. A man underwent a surgery for acute abdomen. His urine is brown, with indican levels over 93 mmol per 24 hours. What can be estimated based on urine indican levels?
a. Protein putrefaction rate in the intestine
b. Oxidative deamination rate in aromatic amino acids
c. Ammonia neutralization rate
d. Renal filtration ability
e. Decreased activity of ornithine cycle enzymes
993. Specify the concentration of ethyl alcohol that has the most active antimicrobial action in a protein-containing medium:
a. 60%
b. 40%
c. 96%
d. 70%
e. 15%
994. During physical and emotional exertion a person is less sensitive to pain. This phenomenon occurs due to activation of the:
a. Nociceptive system
b. Parasympathetic system
c. Adrenal function
d. Thyroid function
e. Antinociceptive system
995. After introdiction of adrenaline the patient's blood glucose level increased. It is caused by intensified:
a. Glycogenolysis in the muscles
b. Glycogenolysis in the liver
c. Glycolysis in the skeletal muscles
d. Glycolysis in the liver
e. Glycogen synthesis
996. A patient complains of urine excretion that occurs during sexual intercourse. What organ is affected?
a. Testicle
b. Prostate
c. Urinary bladder
d. Epididymis
e. Seminal vesicles
997. 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. Gentamicin
b. Amphotericin
c. Nystatin
d. Tetracycline
e. Griseofulvin
998. Disturbed auditory function can be caused by changes in the structure of the receptor cells of spiral organ of Corti. What cells are affected in such cases?
a. Phalangeal cells
b. Hair cells
c. Pillars
d. Marginal cells

e. Supporting cells

999. In human population some people throughout their life develop not two but three dentitions. It is the manifestation of the following law:

a. Embryonic induction

b. Independent assortment

c. Biogenetic law (recapitulation theory)

d. Hardy-Weinberg principle

e. Homologous series of genetic variation

1000. An older person presents with changes in the force of cardiac contractions and in the physical properties of the vasculature, which is clearly visible in the graphic recording of the pulse waves over the carotid artery. What examination method was used?

a. Phlebography

b. Myography

c. Rheography

d. Plethysmography

e. Sphygmography

1001. Oral cavity examination reveals gingival retraction with exposed roots and cervices of the lower incisors. X-ray shows osteoporotic foci in the alveolar bone; smooth resorption of the bone tissue is prevalent. Microscopy of gingival tissues shows sclerosis and hyalinosis of the microvasculature, accompanied by luminal obliteration; the capillary network is reduced; connective tissue undergoes dystrophic changes. What pathological process was detected?

a. Parodontosis

b. Periostitis

c. Parodontitis

d. Osteomyelitis

e. Periodontitis

1002. 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. Additional

d. Optional

e. Intermediate

1003. A patient has been diagnosed with a pathology accompanied by decreased levels of volatile metabolites in the internal environment of the body. Through what organs are they excreted?

a. Sebaceous glands

b. -

c. Sweat glands

d. Kidneys

e. Lungs

1004. Blood serum of the patient has milky appearance. Biochemical analysis revealed high content of triacylglycerols and chylomicrons. This condition is caused by hereditary defect of the following enzyme:

a. Lipoprotein lipase

b. Phosphodiesterase

c. Phospholipase

d. Adipose tissue hormone-sensitive lipase

e. Pancreatic lipase

1005. 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 necrosis

c. Pulp atrophy

d. Acute pulpitis

e. Pulp hyalinosis

1006. A man came to a dentist with complaints of pain during chewing and moving the jaw forward. What masticatory muscles are inflamed in this case?

a. M.m. pterigoidei laterales

b. -

c. M.m. temporales

d. M.m. buccalis

e. M.m. pterigoidei mediales

1007. Name the state of the biosphere, where the human mental activity is the key developmental factor:

a. Lithosphere

b. Noosphere

c. Troposphere

d. Hydrosphere

e. Atmosphere

1008. Blood sample was obtained for analysis. 30% of erythrocytes in the sample are abnormally shaped. Name this phenomenon:

a. Macrocytosis

b. Physiological poikilocytosis

c. Pathological poikilocytosis

d. Microcytosis

e. Anisocytosis

1009. 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. Lymph node

b. Spleen

c. Thymus

d. Vermiform appendix

e. Tonsils

1010. A 20-year-old pregnant woman has a round reddish formation with ulceration on its surface on the vestibular surface of the gums in her incisor region. Microscopy detects in this formation a similarity to a capillary hemangioma. What diagnosis is likely in this case?

a. Fibroma

b. Papilloma

c. Giant cell epulis

d. Fibrous epulis

e. Angiomatous epulis

1011. Prior to a complex surgery the patient developed skin pallor, rapid heart rate and respiration rate, elevated blood pressure, and dry mouth. These signs appeared due to activation of:

a. -

b. Sympathetic nervous system

c. Parasympathetic nervous system

d. Metasympathetic nervous system

e. Somatic nervous system

1012. What nitrate drug would you recommend to a patient with ischemic heart disease for prevention of angina pectoris attacks?

a. Lovastatin

b. Isosorbide mononitrate

c. Menthol

d. Lisinopril

e. Nitroglycerine

1013. Premature excitation that occurrs in the ventricular myocardium:

a. Reduces the automaticity of the sinoatrial node

b. Increases the speed of excitation conduction through working cardiomyocytes

c. Has no effect on the automaticity of the sinoatrial node

d. Reduces the speed of excitation conduction through working cardiomyocytes
e. Increases the automaticity of the sinoatrial node
1014. In the genetic consultancy a pregnant woman (20 weeks of pregnancy) was examined. US shows normally developed fetus, no abnormalities in the cardiovascular system, ductus arteriosus is functional. What fetal vessels are connected with ductus arteriosus?
a. Pulmonary trunk and inferior vena cava
b. Pulmonary trunk and aorta
c. Aorta and inferior vena cava
d. Aorta and superior vena cava
e. Pulmonary trunk and pulmonary veins
1015. 30 minutes after dental treatment the patient developed red itching spots on the face and oral mucosa. The patient was diagnosed with urticaria. What bioactive substance with vasodilating and pruriginous effect is produced during this type of allergic reaction?
a. Interleukin-1
b. Prostaglandin E2
c. Leukotriene B4
d. Bradykinin
e. Histamine
1016. Kidney diseases lead to increased levels of residual nitrogen in the blood. What fraction contributes to the elevated residual nitrogen levels in the patients with renal pathology?
a. Ammonium
b. Prokinase
c. Ammonia
d. Uric acid
e. Urea
1017. A patient with diabetes mellitus developed a pain in the right leg. The tissues of the big toe became black and edematous, desquamation of the epidermis is observed and a foul-smelling discharge is produced. Specify the pathological process:
a. Dry gangrene
b. Wet gangrene
c. Infarction
d. Coagulative necrosis
e. Sequestrum
1018. A woman has undergone a surgery for femoral hernia. In this case the hernial protrusion is projected into the:
a. Pubic region
b. Gluteal region
c. -
d. Femoral triangle
e. Inguinal region
1019. After a mechanical injury a tourniquet was applied to the patient's arm to stop the bleeding. Below the tourniquet the arm became pale and numb. This condition is caused by:
a. Angiospastic ischemia
b. Compression ischemia
c. Obstruction ischemia
d. Thrombosis
e. Venous congestion
1020. A patient diagnosed with renal failure shows signs of renal osteodystrophy accompanied by resorption of periodontal bone tissue. This condition is caused by disturbed formation of:
a. D_3
b. 1,25(OH)_2 D_3
c. D_2
d. 25(OH) D_3
e. 24, 25(OH)_2 D_3
1021. What hormone of parotid glands intensifies teeth mineralization by stimulating calcium supply

to the calcified tissues?
a. Parathyrin
b. Cortisol
c. Calcitonin
d. Parotin
e. Glucagon
1022. A patient with high blood coagulability was for a long time treated with salicylates. What metabolic process risks being disturbed as a result?
a. Prostaglandin synthesis
b. Oxidative phosphorylation
c. Coupling between tissue respiration and oxidative phosphorylation
d. Microsomal oxidation
e. Tissue respiration
1023. Histology of a tissue shows that it has no blood vessels and its cells tightly adhere to one another, forming layers. What tissue is it?
a. Bone tissue
b. Muscle tissue
c. Nerve tissue
d. Cartilaginous tissue
e. Epithelial tissue
1024. A patient is diagnosed with maxillary sinusitis. Into what anatomical structure will the pus flow from the inflamed paranasal sinus?
a. -
b. Common nasal meatus
c. Middle nasal meatus
d. Inferior nasal meatus
e. Superior nasal meatus
1025. A microslide of the cerebral cortex shows large pyramidal cells. What is the name of the scientist who discovered these cells?
a. Cajal
b. Golgi
c. Nissl
d. Betz
e. Lenhossek
1026. In what organ biotransformation (metabolic transformation) of most medicinal agents occurs upon their introduction into an organism?
a. Kidneys
b. Liver
c. Lungs
d. Intestine
e. Skin
1027. Local anesthetics are used in dental practice. They block the following ion channels:
a. Chloride channels
b. Slow calcium channel
c. Rapid calcium channels
d. Potassium channels
e. Sodium channels
1028. Examination shows that tooth 47 touches a deep defect in the patient's buccal mucosa. The margins of the defect are dense and clear, the floor of the defect is gray. Microscopy of the biopsy material obtained from the wall of the defect detected a purulent exudate on the floor of the defect. Under the exudate there is an area of necrotized tissue with underlying granulation tissue that transforms into mature fibrous tissue. What pathology has developed in the patient's cheek?
a. Chronic erosion
b. Chronic ulcer
c. Acute ulcer

d. Cancer
e. Acute erosion
1029. Reading of hereditary information encoded within a gene begins with pre-mRNA synthesis on a fragment of DNA matrix chain. Where does this process occur in the eukaryotic cells?
a. Centrosomes
b. Golgi complex
c. Nucleus
d. Cytoplasm
e. Ribosomes
1030. A patient has received a trauma to the calvaria. What sinuses are likely to be damaged?
a. Sigmoid sinus
b. Inferior sagittal sinus
c. Superior sagittal sinus
d. Superior petrosal sinus
e. Inferior petrosal sinus
1031. X-ray shows a cranial fracture. The fracture line passes through the superior nuchal line. What bone is damaged?
a. Occipital bone
b. Frontal bone
c. Temporal bone
d. Parietal bone
e. Palatine bone
1032. A patient with chronic hyperacidic gastritis developed joint pain and was prescribed celecoxib. This drug has no effect on gastric mucosa because of its selective effect on a certain enzyme. What enzyme is it?
a. Phospholipase C
b. Kallikrein
c. Cyclooxygenase 2
d. Cyclooxygenase 1
e. Phospholipase A2
1033. A bacteriological laboratory received a sample of dried fish from an outbreak of food poisoning. Inoculation of the sample on Kitt-Tarozzi medium revealed microorganisms resembling tennis racket. These microorganisms are causative agents of the following disease:
a. Salmonellosis
b. Diphtheria
c. Dysentery
d. Botulism
e. Typhoid fever
1034. In hot weather the bus passengers asked to open the roof hatches. What way of heat transfer is activated in this situation?
a. Conduction and radiation
b. Convection
c. Sweat evaporation
d. Radiation
e. Conduction
1035. Oral examination reveals marked reddening of mucosa at the root of the tongue. What structure is involved in the inflammatory process?
a. Veil of palate
b. Lingual tonsil
c. Pharyngeal tonsil
d. Palatine tonsil
e. Tonsil of torus tubaris
1036. Degenerative changes resulted in formation of mineralized foci in the tongue pulp. Some of these foci contain canaliculi. Name these formations:
a. Ossification patches

b. Fibrous bodies
c. Bone tissue
d. Denticles
e. Cement
1037. During a dental manipulation, the patient developed an angina pectoris attack. What group of drugs needs to be prescribed for the emergency aid in this case?
a. Respiratory stimulants
b. Antiarrhythmic drugs
c. Cardiotonics
d. Antihypertensive drugs
e. Antianginal drugs
1038. A 2-month-old child has been diagnosed with cri-du-chat syndrome. This disease is caused by deletion of the short arm of autosome 5. What is the total number of chromosomes in this child?
a. 23
b. 47
c. 46
d. 44
e. 45
1039. A 52-year-old man was diagnosed with systemic amebiasis that affects intestine, liver, and lungs. What drug should be administered in this case?
a. Chiniofon
b. Enteroseptol
c. Metronidazole
d. Chingamin (Chloroquine)
e. Tetracycline
1040. In the bone tissue there are large multinucleated cells with processes that contain numerous lysosome. Name these cells:
a. Mesenchymal cells
b. Chondrocytes
c. Semi-stem osteogenic cells
d. Chondroblasts
e. Osteoclasts
1041. A 57-year-old man with chronic pyelonephritis developed arterial hypertension. What is the main mechanism of arterial pressure increase in this case?
a. Increased blood levels of catecholamines
b. Stimulation of the cerebral cortex
c. Stimulation of hypothalamic vegetative centers
d. Increased renin secretion in the kidneys
e. Stimulation of sinocarotid baroreceptors
1042. 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. Thiamine
b. Ascorbic acid
c. Retinol
d. Folic acid
e. Riboflavin
1043. According to the law of constancy of chromosome numbers, most animal species have definite and constant chromosome number. The mechanism that maintains this constancy during sexual reproduction of organisms is called:
a. Meiosis
b. -
c. Regeneration
d. Amitosis
e. Schizogony
1044. During chest X-ray, a patient was diagnosed with a diaphragmatic hernia, located in the

posterior mediastinum. At what weak point of the diaphragm was this hernia formed?
a. Medial and lateral arcuate ligaments
b. Sternocostal triangle
c. Lumbocostal triangle
d. Opening of the inferior vena cava
e. Central tendon of the diaphragm
1045. Dentists have high risk of contracting viral hepatitis type B in the course of their duties and therefore are subject to mandatory vaccination. What vaccine is used in such cases?
a. Live vaccine
b. Recombinant vaccine
c. Chemical vaccine
d. Inactivated vaccine
e. Anatoxin
1046. A 5-month-old child was prescribed an antibacterial therapy for treatment of bronchopneumonia. What substance has a negative effect on teeth development?
a. Penicillin
b. Doxycycline
c. Biseptol (Co-trimoxazole)
d. Levomycetin (Chloramphenicol)
e. Nitroxoline
1047. A bacteriological laboratory conducts the analysis of potable water quality. Microbial number of the water sample is approximately 100. What microorganisms were accounted for in this case?
a. Human and animal pathogenic bacteria
b. Enteropathogenic bacteria and viruses
c. All bacteria that have grown on a nutrient medium
d. Opportunistic pathogenic bacteria
e. Colibacilli
1048. Replication is one of the reactions of matrix synthesis. What new molecule forms on the DNA molecule in the result of replication?
a. Pro-mRNA
b. mRNA
c. tRNA
d. DNA
e. rRNA
1049. Mother of a newborn has made an appointment with a neonatologist. The neonatologist determined that the child has brain maldevelopments. What has likely been damaged in the process of embryonic development?
a. Endoderm
b. Mesoderm
c. Ectoderm
d. -
e. Mesenchyme