

1. A woman with ischemic disease has been taking an antianginal medication that has the following properties: dilates coronary arteries, peripheral vessels (arterial and venous), reduces the need of myocardium in oxygen, improves endocardial blood circulation. Name this preparation:

- A. Nitroglycerin
- B. Validol
- C. Papaverine
- D. Dibasol
- E. Aminophylline

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

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

3. A 50 year old woman had her tooth extracted. The tissue regenerated. Which of the following organella are the most active during tissue regeneration?

- A. Ribosomes
- B. Centrosomes
- C. Postlysosomes
- D. Agranular endoplasmic reticulum
- E. Lysosomes

4. A patient's preliminary diagnosis is toxoplasmosis. What material was used for diagnostics of this disease?

- A. Blood
- B. Feces
- C. Urine
- D. Duodenal contents
- E. Sputum

5. In the vermiform appendix there was found a white helminth, 40 mm long with thin filiform forward end. Ecscrements contained oval eggs with plugs at the poles. Determine the kind of helminth:

- A. Whipworm
- B. Seatworm
- C. Ascarid
- D. Hookworm
- E. Threadworm

6. After an operation a patient's sensitivity of front and lateral surface of neck has reduced. What nerve is damaged?

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

7. Excessive hairiness of auricles (hypertrichosis) is determined by a gene which is localized in Y-chromosome. Father has this feature. What is the probability of the fact that the boy will be born with such anomaly?

- A. 100%
- B. 0%
- C. 25%
- D. 35%
- E. 75%

8. A child complains of having an itch in occipital and temporal region of head. After examination his mother found superficial ulcers as a result of scratching and white nits in the hair. Name the pathogenic organism:

- A. Head louse
- B. Body louse
- C. Human flea
- D. Screwworm fly
- E. Pubic louse

9. The students studied peculiarities of genetic code and found out that there are amino acids corresponded by 6 codons, 5 amino acids - 4 different codons. Other amino acids are codified by three or two codons and only two amino acids are codified by one codon. What peculiarity of genetic code did the students find out?

- A. Redundancy
- B. Versatility
- C. Collinearity
- D. Unidirectionality
- E. Tripletty

10. A 16 year old girl consulted a dentist about dark colour of teeth enamel. The family tree analysis revealed that this pathology is transmitted to all girls from father and to 50% of boys from mother. What type of inheritance are these peculiarities typical for?

- A. Dominant, X-chromosome-linked
- B. Recessive, X-chromosome-linked
- C. Recessive, Y-chromosome-linked
- D. Autosomal-dominant
- E. Autosomal-recessive

11. A 1,5 year old child was taken to the hospital. The examination revealed dementia, disorder of motor functions regulation, hypopigmentation of skin, high rate of phenylalanine in blood. What is the most probable diagnosis?

- A. Phenylketonuria
- B. Galactosemia
- C. Tyrosinosis
- D. Down's syndrome
- E. Mucoviscidosis

12. A wide cleft between incisors of both mother and father is the dominant feature. They are both homozygous. What genetic regularity will their children have?

- A. Uniformity of first generation hybrids
- B. Hybrid segregation by phenotype
- C. Independent inheritance of feature
- D. Non-linked inheritance
- E. Linked inheritance

13. Father bought some pork at the market. What disease may the members of his family catch supposed this meat didn't stand veterinary control?

- A. Teniosis
- B. Beef tapeworm infection
- C. Hymenolepiasis
- D. Echinococcosis
- E. Fasciola hepatica

14. Examination of a patient with hepatolenticular degeneration revealed that synthesis of ceruloplasmin protein has a defect. What organelles is this defect connected with?

- A. Granular endoplasmic reticulum
- B. Agranular endoplasmic reticulum
- C. Mitochondrions
- D. Golgi complex
- E. Lysosomes

15. During the postsynthetic period of mitotic cycle the synthesis of tubulin proteins was disturbed. These proteins take part in construction of division spindle. It can lead to the disturbance of:

- A. Chromosome disjunction
- B. Spiralization of chromosomes
- C. Cytokinesis
- D. Despiralization of chromosomes
- E. Mitosis duration

16. A newborn child has microcephalia. Doctors believe that it is the result of mother's taking actinomycin D during pregnancy. What embryonal leaf was influenced by this teratogen?

- A. Ectoderma
- B. All leaves
- C. Entoderma
- D. Mesoderma
- E. Entoderma and mesoderma

17. Pigmentation intensity of human skin is controlled by a few independent dominant genes. It is known that pigmentation is the more intensive, the bigger quantity of these genes. What is the type of interaction between these genes?

- A. Polymery
- B. Pleiotropy
- C. Epistasis
- D. Codominancy
- E. Complementarity

18. A patient arrived to the oral surgery department with dislocation of temporomandibular joint and injury of its main ligament. Name this ligament:

- A. Lateral
- B. Mandibular
- C. Styloid-mandibular
- D. Pterygoid-mandibular
- E. Medial

19. There is a 9 year old boy in endocrinological department, who has already had a few fractures of extremities caused by fragility of bones. Malfunction of what endocrinous glands (gland) takes place?

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

20. During the examination of patient's oral cavity a dentist noticed a slight overbite of mandibular teeth by maxillary incisors. What occlusion belongs such position of teeth to?

- A. Orthognathic occlusion
- B. Prognathism
- C. Biprognathic occlusion
- D. Orthogenic occlusion
- E. Closed occlusion

21. A patient complains of having urination disorder. He is diagnosed the hypertrophy of prostate gland. What part of gland is damaged?

- A. Median lobe
- B. Left lobe
- C. Right lobe
- D. Base
- E. Apex

22. In order to make a functional complete denture the left superior canine of a patient should be extracted. After the infraorbital anesthesia the patient got a rapidly growing hematoma in the front part of face. It was found that the injured artery is a branch of:

- A. *A.maxillaris*
- B. *A.alveolaris inferior*
- C. *A.temporalis superficialis*
- D. *A.opthalmica*
- E. *A.labialis superior*

23. A patient consulted dental surgeon about an injury of submandibular triangle. During the wound cleansing the surgeon found that the artery leading to the soft palate is damaged. What artery is damaged?

- A. *A.palatina ascendens*
- B. *A.palatina descendens*
- C. *A.sphenopalatina*
- D. *A.pharyngea ascendens*
- E. *A.facialis*

24. During ablation of the nose wing lypoma a dentist injured a vessel, that caused a saphenous hematoma. What vessel was damaged?

- A. *A.facialis*
- B. *A.maxillaris*
- C. *A.supraorbitalis*
- D. *A.infraorbitalis*
- E. *A.angularis*

25. A patient has an injury in right lateral area of belly. What part of large intestine is most likely injured?

- A. Ascending colon
- B. Transverse colon
- C. Descending colon
- D. Sigmoid colon
- E. Rectum

26. A 28 year old patient was diagnosed:an acute inflammation of mucuos membrane of nasolacrimal duct. It is known from his past history that after influenza he had been having nasal excretions for 10 days. From what part of nasal cavity could the infection get into the nasolacrimal duct?

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

27. A three year old child was admitted to the hospital with a foreign body in bronches. What bronchus contains most likely a foreign body?

- A. Right primary
- B. Left primary
- C. Right segmental
- D. Left segmental
- E. Lobular

28. A mother consulted a doctor about her one year old child, who has got six teeth come out. How many teeth should the child of such age have?

- A. 8
- B. 10
- C. 7
- D. 12
- E. 6

29. Chronic rhinitis was complicated by inflammation of frontal sinus. What nasal meatus did the infection get into this sinus through?

- A. Median
- B. Inferior
- C. Common
- D. Superior
- E. Nasopharyngeal

30. A victim of a road accident has an abruption of a part of mandibular angle, displacement of fragment backwards and upwards. What ligament is responsible for this displacement?

- A. Styloid-mandibular
- B. Intraarticular
- C. Lateral
- D. Sphenoid-mandibular
- E. Pterygoid-mandibular

31. A surgeon is going to take lymph from patient's thoracic duct in the point of its flowing into venous channel. Where exactly should he insert a cannula?

- A. Left venous angle
- B. Right venous angle
- C. Point of formation of inferior vena cava
- D. Point of formation of superior vena cava
- E. Point of formation of portal vein

32. X-ray examination revealed an accumulation of suppuration in maxillary sinus. Into what nasal meatus excretes the suppuration?

- A. Median nasal
- B. Nasopharyngeal
- C. Inferior nasal
- D. Superior nasal
- E. Common nasal

33. A patient has assymetric face, it is especially noticeable during active muscle contraction. What nerve may be damaged?

- A. Facial (motor unit)
- B. Trigeminal, I branch
- C. Trigeminal, II branch
- D. Trigeminal, III branch
- E. Sublingual

34. A 5 year old child was admitted to the ENT-department with suppurative inflammation of middle ear (tympanitis). It began with the inflammation of nasopharynx. What canal of temporal bone did the infection get into tympanic cavity through?

- A. Musculotubal canal
- B. Small canal of chorda tympani
- C. Caroticotympanic foramina
- D. Small tympanic canal
- E. Carotid canal

35. A patient has lost ability to recognize the objects by the typical for them sounds (clock, bell, music). What part of brain is most likely damaged?

- A. *Lobus temporalis*
- B. *Lobus occipitalis*
- C. *Lobus frontalis*
- D. *Lobus parietalis*
- E. *Insula*

36. A patient has the inflammation of middle ear (otitis). At the same time he claims to have the disorder of gustatory sensation in the front part of tongue. What nerve is damaged?

- A. *N. facialis*
- B. *N. trigeminus*
- C. *N. vestibulo – cochlearis*
- D. *N. vagus*
- E. *N. glossopharyngeus*

37. After consumption some tinned meat a patient had diplopia, acute headache, deglutition disorder, hard breathing, muscle weakness. The diagnosis was botulism. What factor of pathogenicity are the clinic presentations of this disease connected with?

- A. Exotoxin
- B. Hemolysin
- C. Endotoxin
- D. Plasmocoagulase
- E. Fibrinolysin

38. A patient complains of aching gums and maxillary teeth. What nerve is inflamed?

- A. II branch of the V pair
- B. III branch of the V pair
- C. I branch of the V pair
- D. Sublingual
- E. Accessory

39. A boxer who got a punch in the region of temporomandibular joint has a traumatic dislocation of mandible. Displacement of what articular surfaces will overstep the limits of physiological norm?

- A. Head of mandible and mandibular fossa
- B. Coronoid process and pterygoid fossa
- C. Coronoid process and submandibular fossa
- D. Head of mandible and submandibular fossa
- E. Neck of mandible and submandibular fossa

40. A patient has urolithiasis that was complicated by a renal calculus passage. At what level of ureter is it most likely to stop?

- A. Between abdominal and pelvic part
- B. In pelvis
- C. In the middle abdominal part
- D. 2 cm above flowing into urinary bladder
- E. 5 cm above pelvic part

41. During the examination of patient's oral cavity a dentist found a carious cavity on the crown surface of the second premolar tooth that was turned to the first molar tooth. Name the damaged crown surface:

- A. *Facies mesialis*
- B. *Facies vestibularis*
- C. *Facies lingualis*
- D. *Facies distalis*
- E. *Facies oclusalis*

42. A woman in grave condition was admitted to a hospital with the following diagnosis: hemorrhagic stroke in the region of frontal part of the right cerebral hemisphere. The damage of what artery caused most likely this condition?

- A. *A.cerebri anterior*
- B. *A.cerebri posterior*
- C. *A.communicans anterior*
- D. *A.cerebri media*
- E. *A.communicans posterior*

43. A patient with cancer of the back of tongue had an intensive bleeding as a result of tumor spread to the dorsal artery of tongue. What vessel should be ligated in order to stop bleeding?

- A. Lingual artery
- B. Dorsal artery of tongue
- C. Deep artery of tongue
- D. Facial artery
- E. Ascending pharyngeal artery

44. A patient has an exudative pleurisy. At what level should the pleural puncture along the posterior axillary line be taken?

- A. IX intercostal space
- B. VIII intercostal space
- C. VII intercostal space
- D. XI intercostal space
- E. VI intercostal space

45. A 17 year old student pressed out a pustule in the medial angle of eye. In 2 days she was taken to the institute of neurosurgery with thrombosis of cavernous sinus. Through what vein did the infection get into this sinus?

- A. *V.angularis*
- B. *V.maxillaris*
- C. *V.profunda faciei*
- D. *V.transversa faciei*
- E. *V.diploicae frontalis*

46. Before teeth come out first on their roots appears a solid tissue that looks like membrane reticulated bone. What tissue is it?

- A. Cement
- B. Dentin
- C. Enamel
- D. Loose fibrous connective tissue
- E. Dense fibrous connective tissue

47. A patient had a trauma that led to the injury of front spinal roots. Denote the damaged structures:

- A. Axons of motoneurons and lateral horn neurons
- B. Central processes of spinal ganglion neurons
- C. Peripheral processes of spinal ganglion neurons
- D. Axons of lateral horn neurons
- E. Axons of motoneurons

48. The regeneration process of damaged skeletal muscles is very slow. What elements of musculoskeletal fiber take part in the process of regeneration?

- A. Myosatellitocytes
- B. Myoblasts
- C. Smooth myocytes
- D. Myofibroblasts
- E. Myoepithelial cells

49. A 46 year old patient was admitted to the hematological department. It was found that he had disorder of granulocytopoiesis and thrombocytopoiesis processes. In what organ does this pathological process take place?

- A. Red bone marrow
- B. Thymus
- C. Spleen
- D. Lymphatic ganglion
- E. Palatine tonsil

50. A patient with an acute rhinitis has hyperemia and excessive mucus formation in nasal cavity. What epithelial cells of mucous membrane have the intensified activity?

- A. Goblet cells
- B. Ciliated cells
- C. Microvillous cells
- D. Basal cells
- E. Endocrine cells

51. In course of an experiment the blood pressure of an animal had a stable rise by means of renal artery constriction. Hyperfunctioning of what renal cells cause this effect?

- A. Juxtaglomerular cells
- B. Podocytes
- C. Endotheliocytes
- D. Interstitial cells
- E. Thick spot cells

52. The symptoms of regeneration process (callus) on the place of fracture were revealed at the histologic specimen of tubular bone. What tissue forms this structure?

- A. Fibrous bone tissue
- B. Loose connective tissue
- C. Reticular tissue
- D. Epithelial tissue
- E. Lamellar bone tissue

53. The chemical burn of esophagus caused its local constriction as a result of scar formation. What cells of loose connective tissue take part in scar formation?

- A. Mature specialized fibroblasts
- B. Young fibroblasts
- C. Fibrocytes
- D. Myofibroblasts
- E. Fibroclasts

54. A woman has ovary hyperemia, increase of hematofollicular barrier permeability with edema development, infiltration of follicle wall by segmentonuclear leukocytes. The volume of follicle is big, its wall is thinned. What period of sex cycle does the described picture correspond with?

- A. Preovulatory stage
- B. Ovulation
- C. Menstrual period
- D. Postmenstrual period
- E. Relative rest period

55. In a histological specimen the gland adenomeres should be determined. They are formed by the cells with central round nucleus and basophilic cytoplasm. Determine the type of adenomeres:

- A. Serous
- B. Mucous
- C. Combined
- D. Sebaceous
- E. Seromucous

56. Microspecimen analysis of child's finger skin revealed that epidermis has signs of inadequate development. What embryonal leaf was damaged in the process of development?

- A. Ectoderma
- B. Mesoderma
- C. Entoderma
- D. Mezenchyma
- E. Ectomezenchyma

57. In a specimen that was coloured by method of silver impregnation some piriform cells with 2-3 evident dendrites were found. What structure is being analysed?

- A. Cerebellar cortex
- B. Spiral organ of middle ear
- C. Retina
- D. Cerebral cortex
- E. Spinal ganglion

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

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

59. The deficit of vitamin A causes the disorder of twilight vision. What cells is the photoreceptor function typical for?

- A. Rod neurosensory cells
- B. Horizontal neurocytes
- C. Conic neurosensory cells
- D. Bipolar neurons
- E. Ganglionic nerve cells

60. During the embryogenesis of oral cavity the development of dental enamel was disturbed. What source of dental development was damaged?

- A. Epithelium
- B. Mesenchyma
- C. Mesoderma
- D. Dental saccule
- E. Dental papilla

61. During the tooth development the enamel organ has prismatic cells with hexagonal intersection; the nucleus is si-

tuated in the central part of the cell. What cells are meant?

- A. Preenameloblasts
- B. Exterior enameloblasts
- C. Cambial cells
- D. Enamel pulp cells
- E. Preodontoblasts

62. In course of embryogenesis maxillary and mandibular processes grew together with a delay. What development anomalies should be expected in this case?

- A. Macrostomia
- B. Microstomia
- C. Cleft palate
- D. Gothic palate
- E. Cleft of superior lip

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

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

64. In a histological specimen of adrenal cortex there are petite polygonal cells that form roundish clusters and contain some lipidic inclusions. What part of adrenal is presented in this histological specimen?

- A. Glomerular zone
- B. Intermedial zone
- C. Fasciolar zone
- D. Reticular zone
- E. -

65. A 20 year old patient complains of excessive thirst and urinary excretion up to 10 L a day. The level of glucose in blood is normal, there is no glucose in urine. What hormone deficit can cause such changes?

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

66. A man has been holding his breath for 60 seconds. After that the respiratory minute volume has increased up to 12 L. What blood change is the main reason for the increase of respiratory minute volume?

- A. Increase of $p\text{CO}_2$
- B. Decrease of $p\text{O}_2$
- C. Increase of $p\text{O}_2$
- D. Decrease of $p\text{CO}_2$
- E. Increase of pH

67. A patient with diminished excretory function of kidneys has bad breath. What substance which is excessively excreted by salivary glands is the main cause of this occurrence?

- A. Urea
- B. Alpha-amylase
- C. Lysozyme
- D. Phosphatase
- E. Mucin

68. A patient with kidney disease has high blood pressure, especially the diastolic one. Hypersecretion of what biologically active substance causes blood pressure rise?

- A. Renin
- B. Adrenaline
- C. Noradrenaline
- D. Vasopressin
- E. Catecholamines

69. In course of an experiment *chorda tympani* of an animal was being stimulated by electric current, as a result the parotid duct excreted:

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

70. A man permanently lives high in the mountains. What changes of blood characteristics can be found in his organism?

- A. Increase of erythrocytes number
- B. Decrease of hemoglobin content
- C. Erythroblasts in blood
- D. Decrease of reticulocytes number
- E. Decrease of colour index of blood

71. A patient has been taking glucocorticoids for a long time. Drug withdrawal caused acute attack of his disease, blood pressure reduction, weakness. What are these occurrences connected with?

- A. Adrenal glands insufficiency
- B. Drug habituation
- C. Sensibilisation
- D. Hyperproduction of corticotroph hormone
- E. Cumulation

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

- A. Central synapses
- B. Neuromuscular synapses
- C. Efferent nerves
- D. Afferent nerves
- E. Conduction tracts

73. A patient has a transverse laceration of spinal cord below the VI thoracal segment. How will it change the character of breathing?

- A. It won't change essentially
- B. It will stop
- C. It will become more rare
- D. It will become more deep
- E. It will become more frequent

74. A man consumes dry food. What salivary glands secrete most of all?

- A. Parotides
- B. Buccal
- C. Submandibular
- D. Sublingual
- E. Palatine

75. During the preparation of a patient for a heart operation the doctors measured blood pressure in heart chambers. In one of them the pressure was changing from 0 to 120 mm during one cardiac cycle. Name the heart chamber:

- A. Left ventricle
- B. Right ventricle
- C. Right atrium
- D. Left atrium
- E. -

76. A patient has the sudden decrease of Ca^{2+} content in blood. What hormone secretion will increase?

- A. Parathormone
- B. Thyrocalcitonin
- C. Aldosterone
- D. Vasopressin
- E. Somatotropin

77. After a hemorrhage into the brainstem a patient has lost reflex of myosis as a reaction to increase of illumination. What structure was damaged?

- A. Vegetative nuclei of oculomotor nerve
- B. Lateral reticular nuclei
- C. Medial reticular nuclei
- D. Red nuclei
- E. Black substance

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

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

79. In the course of an experiment a nerve is being stimulated by electric impulses. It leads to excretion of some quantity of thick viscous saliva by sublingual and submandibular glands. What nerve is being stimulated?

- A. *N. sympathicus*
- B. *N. glossopharyngeus*
- C. *N. facialis*
- D. *N. trigeminus*
- E. *N. vagus*

80. Human body cools in water much more faster than in the air. Due to what way of heat emission does it happen?

- A. Thermal conduction
- B. Convection
- C. Heat radiation
- D. Sweat evaporation
- E. -

81. A man has a disorder of absorption of fat hydrolysates. What components deficit in the cavity of small intestine may cause this effect?

- A. Bile acids
- B. Bile pigments
- C. Lipolytic enzymes
- D. Sodium ions
- E. Liposoluble vitamins

82. A man left a conditioned premise and went outside. The outside temperature was $+40^{\circ}\text{C}$, the air moisture - 60%. What way of heat emission will be mostly involved in this case?

- A. Sweat evaporation
- B. Convection
- C. Radiation
- D. Conduction
- E. -

83. In course of an experiment posterior roots of spinal cord of an animal were cut. What changes will take place in the innervation zone?

- A. Loss of sensation
- B. Loss of motor functions
- C. Decline of muscle tone
- D. Raise of muscle tone
- E. Loss of sensation and motor functions

84. The impact of oxytocin on uterus wall helps to stop uterine bleeding after labor. What membrane of this organ reacts on the effect of this hormone?

- A. Myometrium
- B. Endometrium
- C. Perimetrium
- D. Parametrium
- E. Submucous membrane

85. A patient with chronic glomerulonephritis has disorder of incretoty function of kidneys. What blood elements deficit will result from it?

- A. Erythrocytes
- B. Leukocytes
- C. Thrombocytes
- D. Leukocytes and thrombocytes
- E. Erythrocytes and leukocytes

86. A patient with disorder of cerebral circulation has problems with deglutition. What part of cerebrum was damaged?

- A. Brainstem
- B. Cervical part of spinal cord
- C. Forebrain
- D. Interbrain
- E. Midbrain

87. ESR of a patient with pneumonia is 48 mm/h. What caused such changes?

- A. Hypergammaglobulinemia
- B. Hyperalbuminemia
- C. Hypogammaglobulinemia
- D. Hypoproteinemia
- E. Erythrocytosis

88. Examination of a child who hasn't got fresh fruit and vegetables during winter revealed numerous subcutaneous hemorrhages, gingivitis, carious cavities in teeth. What vitamin combination should be prescribed in this case?

- A. Ascorbic acid and rutin
- B. Thiamine and pyridoxine
- C. Folic acid and cobalamin
- D. Riboflavin and nicotinamide
- E. Calciferol and ascorbic acid

89. A patient consulted a doctor about the intensive skin itch, especially between fingers, in axillary creases, in the inferior part of belly. During the skin examination there were found twisting whitish tracts with speckles at the end of them. What disease are these clinical presentations typical for?

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

90. A one year old child has enlarged head and belly, retarded cutting of teeth, destruction of enamel structure. What hypovitaminosis causes these changes?

- A. Hypovitaminosis D
- B. Hypovitaminosis C
- C. Hypovitaminosis A
- D. Hypovitaminosis B₁
- E. Hypovitaminosis B₂

91. To what total ATP quantity is the full glucose oxidation and its linking with phosphorylation equivalent?

- A. 38
- B. 8
- C. 12
- D. 52
- E. 58

92. A patient with chronic hypoglycemia had adrenaline introduction. After introduction blood test hasn't changed essentially. Doctor assumed liver pathology. What liver function may have been changed?

- A. Function of glycogen depositing
- B. Function of cholesterol production
- C. Ketogenic function
- D. Glycolytic function
- E. Excretory function

93. For assessment of the neutralizing function of liver a patient with chronic hepatitis went through a test with sodium benzoate load. The excretion of what acid with urine will characterize the neutralizing function of liver?

- A. Hippuric acid
- B. Phenylacetic acid
- C. Citric acid
- D. Valeric acid
- E. Oxalic acid

94. A 57 year old patient with diabetes mellitus was developed ketoacidosis. Biochemical base of this condition is smaller extent of acetyl-CoA utilization. What cell compound deficit causes this effect?

- A. Oxaloacetate
- B. 2-oxoglutarate
- C. Glutamate
- D. Aspartate
- E. Succinate

95. A patient has painfulness along big nerve trunks and excessive content of pyruvate in blood. What vitamin deficit may cause such changes?

- A. B₁
- B. B₂
- C. PP
- D. Pantothenic acid
- E. Biotin

96. Unskilled people usually have muscle pain after sprints as a result of lactate accumulation. What biochemical process may it be connected with?

- A. Glycolysis
- B. Gluconeogenesis
- C. Pentose-phosphate cycle
- D. Lypogenesis
- E. Glycogenesis

97. Decreased ratio of adenylic nucleotides ATP/ADP results in intensified glycolysis in parodontium tissues under hypoxia conditions. What reaction is activated in this case?

- A. Phosphofructokinase
- B. Aldolase
- C. Triosphosphate isomerase
- D. Enolase
- E. Lactate dehydrogenase

98. A sportsman was recommended to take a preparation with carnitine in order to improve his achievements. What process is activated by carnitine to the most extent?

- A. Transporting of fatty acids to the mitochondrions
- B. Synthesis of steroid hormones
- C. Synthesis of ketone bodies
- D. Lipide synthesis
- E. Tissue respiration

99. A patient has liver cirrhosis. Analysis of what substance excreted with urine may characterize the state of antitoxic liver function?

- A. Hippuric acid
- B. Ammonian salts
- C. Creatinine
- D. Uric acid
- E. Amino acids

100. What vitamin deficit causes the simultaneous disorder of reproductive function and dystrophy of skeletal musculature?

- A. Vitamin E
- B. Vitamin A
- C. Vitamin K
- D. Vitamin D
- E. Vitamin B₁

101. A patient was taken to the hospital with preliminary diagnosis progressive muscle dystrophy. What substance will be excessively contained in urine and confirm this diagnosis?

- A. Creatine
- B. Pyruvate
- C. Carnosine
- D. Troponine
- E. Hydroxiproline

102. A patient with systemic scleroderma has an intensified collagen destruction. What amino acid will be intensively excreted with urine and reflect processes of collagen destruction?

- A. Oxyproline
- B. Alanine
- C. Tryptophan
- D. Serine
- E. Phenylalanine

103. What substance makes saliva viscous and mucous, has protective function, protects mucous membrane of oral cavity from mechanical damage?

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

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

- A. Mucopolysaccharidosis
- B. Glycogenosis
- C. Aglycogenosis
- D. Collagenosis
- E. Lipidosis

105. After implantation of a cardiac valve a young man constantly takes indirect anticoagulants. His state was complicated by hemorrhage. What substance content has decreased in blood?

- A. Prothrombin
- B. Haptoglobin
- C. Heparin
- D. Creatin
- E. Ceruloplasmin

106. During the histologic examination of thyroid gland of a man who died of cardiac insufficiency together with hypothyroidism there was found the diffusive infiltration of gland by lymphocytes and plasmocytes, parenchyma atrophy and growth of connective tissue. Formulate a diagnosis:

- A. Hashimoto's thyroiditis
- B. Thyroid gland adenoma
- C. Purulent thyroiditis
- D. Thyrotoxic goiter
- E. -

107. The myocytes cytoplasm contains a big number of dissolved metabolites of glucose oxidation. Name one of them that converts directly into lactate:

- A. Pyruvate
- B. Oxaloacetate
- C. Glycerophosphate
- D. Glucose-6-phosphate
- E. Fructose-6-phosphate

108. Chronic overdosage of glucocorticoids leads to the development of hyperglycemia. What process of carbohydrate metabolism is responsible for this effect?

- A. Gluconeogenesis
- B. Glycogenolysis
- C. Aerobic glycolysis
- D. Pentose-phosphate cycle
- E. Glycogenesis

109. Patient with pigmentary xeroderma

are characterized by anomalously high sensitivity to ultraviolet rays that causes skin cancer as a result of enzyme systems incapability to restore damages of hereditary apparatus of cells. What process abnormality is this pathology connected with?

- A. DNA reparation
- B. Genetic conversion
- C. DNA recombination
- D. Genetic complementation
- E. DNA reduplication

110. In compliance with the clinical presentations a man was prescribed pyridoxal phosphate. What processes are corrected by this preparation?

- A. Transamination and decarboxylation of amino acids
- B. Oxidative decarboxilation of keto acids
- C. Desamination of purine nucleotides
- D. Synthesis of purine and pyrimidine bases
- E. Protein synthesis

111. 15 minutes after a car accident examination of a 35 year old man revealed massive injury of lower extremities without serious external loss of blood. The victim is in excited state. What component of pathogenesis of traumatic shock is basic and requires urgent correction?

- A. Pain
- B. Acute renal insufficiency
- C. Intoxication
- D. Cardiac function disorder
- E. Internal loss of plasma

112. A patient has disorder of airways patency at the level of small and middle bronchs. What changes of acid-base balance may take place?

- A. Respiratory acidosis
- B. Respiratory alkalosis
- C. Metabolic acidosis
- D. Metabolic alkalosis
- E. Acid-base balance won't change

113. The body temperature of a patient with an infectious disease rises once in two days up to $39,5 - 40,5^{\circ}\text{C}$ and stays so for about an hour and then drops to the initial level. What type of fever is it?

- A. Intermittent
- B. Continued
- C. Remittent
- D. Hectic
- E. Atypical

114. A 23 year patient was admitted to the hospital in grave condition with craniocerebral trauma. His respiration is characterized by a spasmodic long inspiration interrupted by a short expiration. What respiration type is it typical for?

- A. Apneustic
- B. Gasping
- C. Kussmaul's respiration
- D. Cheyne-Stokes respiration
- E. Biot's respiration

115. Two days after myocardial infarction a patient had a sudden systolic pressure decrease up to 60 mm, tachycardia up to 140/min, dyspnea; the patient lost consciousness. What mechanism is principal for the shock pathogenesis?

- A. Decrease of cardiac volume
- B. Intoxication
- C. Decrease of circulating blood volume
- D. Paroxysmal tachycardia
- E. Anaphylactic reaction

116. After a psychoemotional stress a 48 year old patient had a sudden attack of acute heart pain with irradiation to the left hand. Nitroglycerine suppressed pain in 10 minutes. What pathogenetic mechanism is principal for the pain development?

- A. Spasm of coronary vessels
- B. Dilatation of peripheral vessels
- C. Coronary vessel occlusion
- D. Embarrassment of coronary vessels
- E. Increased need of myocardium in oxygen

117. A 40 year old man who took part in disaster-management at a nuclear power plant fell sick with paradontitis. What etiological agent is the most important for the development of this pathology?

- A. Emotional stress
- B. Iron deficit
- C. Malnutrition
- D. Increased load of dentoalveolar apparatus
- E. Streptococcus

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

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

119. After honey consumption a teenager had urticaria accompanied by leukocytosis. What type of leukocytosis is it in this case?

- A. Eosinophilic leukocytosis
- B. Lymphocytosis
- C. Monocytosis
- D. Basophylic leukocytosis
- E. Neutrophilic leukocytosis

120. Climbing the mountains at a height of 5000 m climbers started complaining of breath shortness, palpitation, vertigo, ring in the ears. What pathogenetic factor determines the development of these occurrences?

- A. Hypoxemia
- B. Hypokalemia
- C. Decreased oxygen capacity of blood
- D. Lactacidemia
- E. Hypernatremia

121. The lung hypertension and cardiac insufficiency of right ventricle with ascites and edemata developed at patient with pneumosclerosis. What is the principal pathogenetic mechanism of edemata development?

- A. Increase of hydrostatic blood pressure in veins
- B. Increase of oncotic pressure of intercellular fluid
- C. Decrease of oncotic blood pressure
- D. Decrease of osmotic blood pressure
- E. Increase of vascular permeability

122. Damage of one of the reactors at a nuclear power plant resulted in runout of radioactive products. People who were present in the high-radiation area got approximately 250-300 R. They were urgently taken to the hospital. What blood changes will be typical for this period?

- A. Lymphopenia
- B. Leukopenia
- C. Anemia
- D. Thrombocytopenia
- E. Neutropenia

123. Dystrophic changes of heart are accompanied by dilatation of cardiac cavities, decrease of heart beat force, increased volume of blood that remains

in cardiac cavity after systole; veins are overfilled. What state is this presentation typical for?

- A. Myogenic dilatation
- B. Tonogenic dilatation
- C. Emergency phase of myocardial hypertrophy
- D. Cardiosclerosis stage
- E. Cardiac tamponade

124. After poisoning with an unknown drug a 37 year old patient has stereotypical face muscle contractions that imitate blinking and squinting. What form of motor function disorder of nervous system is it?

- A. Hyperkinesia
- B. Hypokinesia
- C. Akinesia
- D. Ataxy
- E. -

125. A patient with adenoma of glomerular zone of adrenal cortex (Conn's disease) has arterial hypertension, convulsions, polyuria. What is the main link in pathogenesis of these disorders?

- A. Aldosterone hypersecretion
- B. Aldosterone hyposecretion
- C. Catecholamine hypersecretion
- D. Glucocorticoid hypersecretion
- E. Glucocorticoid hyposecretion

126. A man who took part in disaster-management at a nuclear power plant had hemorrhagic syndrome at the same time with acute radiation sickness. What is the most important thing for the pathogenesis of this syndrome?

- A. Thrombocytopenia
- B. Destructed structure of vessel walls
- C. High activity of fibrinolysis factors
- D. High activity of anticoagulative blood system
- E. Low activity of anticoagulative blood system

127. After a long-lasting and grave illness the blood pressure of a patient fell up to 60/40 mm; he has tachycardia, dyspnea, black-out. How can this state be defined?

- A. Preagony
- B. Agony
- C. Shock
- D. Apparent death
- E. -

128. A 56 year old man was taken to

the hospital with complaints of general weakness, pain and burning in the region of tongue, extremity numbness. In the past he had resection of cardiac part of ventricle. Blood test: Hb- 80 g/L; RBC- $2,0 \cdot 10^{12}/L$; colour index of blood- 1,2; leukocytes - $3,5 \cdot 10^9/L$. What type of anemy is it?

- A. B₁₂ folic-deficient
- B. Hemolytic
- C. Posthemorrhagic
- D. Aplastic
- E. Iron-deficient

129. After recovering from epidemic parotiditis a patient began to put off weight, he was permanently thirsty, drank a lot of water, had frequent urination, voracious appetite. Now he has complaints of skin itch, weakness, furunculosis. His blood contains: glucose - 16 mmole/L, ketone bodies - 100 mcmmole/L; glucosuria. What disease has developed?

- A. Insulin-dependent diabetes
- B. Insulin-independent diabetes
- C. Steroid diabetes
- D. Diabetes insipidus
- E. Malnutrition diabetes

130. A patient has the following diagnosis: renal hypertension. What is the initial pathogenetic factor of arterial hypertension development in this case?

- A. Renal ischemia
- B. Hypernatremia
- C. Hyperaldosteronism
- D. Intensified renin synthesis
- E. Intensified angiotensin synthesis

131. A 7 year old child had an acute onset of disease. Pediatrician stated that mucous membrane of fauces is hyperemic and covered with a lot of mucus. Mucous membrane of cheeks has whitish stains. Next day the child's skin of face, neck, body was covered with coarsely-papular rash. What disease may be presumed?

- A. Measles
- B. Scarlet fever
- C. Diphtheria
- D. Meningococemia
- E. Allergic dermatitis

132. A 10 year old child lives in the region where fluorine content in water is above the mark. A dentist examined the child and found teeth damage in form of chalky and also pigmentary stains and stripes. What is the most probable diagnosis?

- A. Fluorosis
- B. Median caries
- C. Wedge defects
- D. Tooth erosion
- E. Acidic necrosis of hard tooth tissues

133. A 53 year old patient consulted a doctor about white patch on the mucous membrane of tongue. This patch sticks out from the mucous membrane, its surface is cracked. Microscopic analysis reveals thickening of multilayer epithelium, parakeratosis and acanthosis. What is the most probable diagnosis?

- A. Leukoplakia
- B. Geographic tongue
- C. Epidermoid cancer
- D. Papilloma
- E. Median rhomboid glossitis

134. The microscopic analysis of bronch biopsy revealed a tumor that consisted of circumscribed accumulations of atypical cells of multilayer plane epithelium, here and there with typical "pearls". What is the most likely diagnosis?

- A. Epidermoid cancer with keratinization
- B. Epidermoid cancer without keratinization
- C. Solid carcinoma
- D. Mucous carcinoma
- E. Scirrhous

135. Histologic examination revealed in all layers of appendix a big number of polymorphonuclear leukocytes; hyperemia, stases. What disease are these symptoms typical for?

- A. Phlegmonous appendicitis
- B. Gangrenous appendicitis
- C. Superficial appendicitis
- D. Simple appendicitis
- E. Chronic appendicitis

136. Microscopic analysis of a specimen revealed an organ of nervous system that consists of pseudounipolar neurons covered with glial and connective tissue membranes. Determine this organ:

- A. Spinal ganglion
- B. Vegetative ganglion
- C. Spinal cord
- D. Cerebellum
- E. Cortex of cerebrum

137. Microscopic analysis of brain base vessels of a patient who died of ischemic stroke revealed that intima of cerebral

vessels is irregular, with moderate quantity of yellow stains and yellowish-whitish patches that narrow lumen. What is the most probable diagnosis?

- A. Atherosclerosis
- B. Primary hypertension
- C. Diabetes mellitus
- D. Rheumatism
- E. Nodular periarteritis

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

- A. Meningococcosis
- B. Tuberculosis
- C. Anthrax
- D. Influenza
- E. Measles

139. Tissue sample of soft palate arches that was taken because a tumor was suspected (microscopic analysis revealed an ulcer with dense fundus) revealed mucous membrane necrosis, submucous layer was infiltrated by lymphocytes, epithelioid cells, plasmocytes, solitary neutrophils. There was also evident endovasculitis and perivasculitis. What disease are these changes typical for?

- A. Primary syphilis
- B. Aphthous stomatitis
- C. ulcerative stomatitis
- D. Vensan's ulcerative-necrotic stomatitis
- E. Faucial diphtheria

140. During morphologic analysis of pulp floor three zones can be distinctly differentiated: the one of softened dentin, transparent dentin and replacing dentin. What stage of caries are these changes typical for?

- A. Median caries
- B. Stain stage
- C. Superficial caries
- D. Deep caries
- E. Chronic caries

141. A 65 year old patient suddenly died. She suffered from thrombophlebitis of deep veins of shin. Autopsy revealed: trunk and bifurcation of pulmonary artery contain red loose masses with dull corrugated surface. What pathological process did the morbid anatomist reveal

in pulmonary artery?

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

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

- A. Tuberculosis
- B. Syphilis
- C. Leprosy
- D. Rhinoscleroma
- E. Glanders

143. Autopsy of a woman who died of tumorous dissemination of mucinous cystadenocarcinoma and before that had to stay in bed for a long time revealed big necrotic areas of skin and soft subjacent tissues in sacral region. What form of necrosis is the case?

- A. Pressure sore
- B. Infarction
- C. Sequester
- D. Caseous necrosis
- E. Zenker's necrosis

144. During the electronical microscopic analysis of salivary gland the cell fragments were revealed which are surrounded by a membrane and contain condensed particles of nuclear substance and solitary organelles; the inflammatory reaction around these cells is absent. What process is meant?

- A. Apoptosis
- B. Karyorhexis
- C. Coagulation necrosis
- D. Karyopcnosis
- E. Karyolysis

145. Autopsy of a man who died of typhoid fever revealed ulcers along the ileum. These ulcers have even sides, clean fundus formed by muscle layer or even by serous tunic of an intestine. What stage of disease does the described presentation correspond with?

- A. Stage of "clean" ulcers
- B. Stage of medullary swelling
- C. Stage of necrosis
- D. Stage of "dirty" ulcers
- E. Stage of ulcer healing

146. A man had an acute onset of disease, he complained of chill, temperature rise up to 40°C, headache, cough, dyspnea. On the fifth day of illness he died. Autopsy revealed: his lungs were enlarged, they had a look of "coal-miner's lungs". What illness is such postmortem diagnosis typical for?

- A. Influenza
- B. Adenovirus infection
- C. Croupous pneumonia
- D. Respiratory syncytial infection
- E. Multiple bronchiectasis

147. A 22 year woman has enlarged lymphatic ganglions. Histological analysis of a ganglion revealed lymphocytes, histiocytes, reticular cells, small and great Hodgkin's cells, multinuclear Reed-Sternberg cells, solitary foci of caseous necrosis. What disease are these changes typical for?

- A. Lymphogranulematosis
- B. Lymphosarcoma
- C. Chronic leukemia
- D. Acute leukemia
- E. Cancer metastasis

148. Autopsy of a man who died from ethylene glycol poisoning revealed that his kidneys are a little bit enlarged, edematic; their capsule can be easily removed. Cortical substance is broad and light-grey. Medullary substance is dark-red. What pathology had this man?

- A. Necrotic nephrosis
- B. Acute pyelonephritis
- C. Acute glomerulonephritis
- D. Acute tubular-interstitial nephritis
- E. Lipoid nephrosis

149. During the histologic lung analysis of a man who died from cardiac insufficiency the inflammation focuses were revealed. Alveoles were full of light-pink fluid, here and there with pinkish fibers that formed a close-meshed reticulum with a small number of lymphocytes. What type of exudate is present in lungs?

- A. Serofibrinous
- B. Hemorrhagic
- C. Serous
- D. Purulent
- E. Fibrinous

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

- A. Diphtheritic
- B. Purulent
- C. Serous
- D. Crupous
- E. Hemorrhagic

151. A 4 year old child had Mantoux test. 60 hours after tuberculin introduction a focal skin hardening and redness 15 mm in diameter appeared. It was regarded as positive test. What type of hypersensitivity reaction is this test based upon?

- A. Delayed-type hypersensitivity
- B. Immune complex-mediated hypersensitivity
- C. Complement-mediated cytotoxic hypersensitivity
- D. Immediate hypersensitivity
- E. -

152. Autopsy of an 8 year old boy who was ill with pharyngeal and tonsillar diphtheria and died one week after illness begin revealed myocardial changes in form of small-focal myocardiocyte necroses, stroma edema with slight lymphocytic infiltration. What type of myocarditis is it:

- A. Alternative
- B. Septic
- C. Granulomatous
- D. Interstitial
- E. Focal-intermediate, exudative

153. The contents of vesicles from the mucous tunic of a man who has smallpox variola was sent to the virusologic laboratory. What will be revealed during microscopy of smears?

- A. Paschen's corpuscles
- B. Babesh-Negri corpuscles
- C. Guarnieri's corpuscles
- D. Babesh-Ernst corpuscles
- E. Syncytium

154. Histologic analysis of uterus mucous membrane revealed twisting glands, serrated and spined, they were extended by stroma growth with proliferation of its cells. Formulate a diagnosis:

- A. Glandular hyperplasia of endometrium
- B. Acute endometritis
- C. Leiomyoma
- D. Cystic mole
- E. Placental polyp

155. A laboratory received a material (extract of animal matter) from the region with cases of anthrax among animals. What serological reaction should be used in order to reveal antigens of pathogenic organism in the given material?

- A. Thermoprecipitation
- B. Complement binding
- C. Indirect hemagglutination
- D. Radio assay
- E. Precipitations in agar

156. Bacteriological laboratory has the task to sterilize nutrient mediums containing substances that convert under the temperature over 100°C (urea, carbohydrates). What method of sterilization should be used?

- A. Fluid steam sterilization
- B. Autoclaving
- C. Boiling
- D. Tindalization
- E. Pasteurization

157. A patient was taken to the hospital with complaints of headache, high temperature, frequent stool, stomach pain with tenesmus. Doctor made a clinical diagnosis dysentery and sent the material (excrements) to the bacteriological laboratory for analysis. What diagnostic method should the laboratory doctor use to confirm or to disprove the clinical diagnosis?

- A. Bacteriological
- B. Biological
- C. Bacterioscopic
- D. Serological
- E. Allergic

158. Skin samples of a patient with bronchial asthma revealed allergen sensi-

tization of poplar fuzz. What factor of immune system plays the main part in development of this immunopathological state?

- A. IgE
- B. IgD
- C. IgM
- D. Sensitized T-lymphocytes
- E. -

159. Sputum smears of a patient with chronic pulmonary disease were stained by Ziehl-Neelsen method and analyzed in the bacteriological laboratory. Microscopy revealed red bacillus. What property of tuberculosis myobacteria was found?

- A. Acid resistance
- B. Alkali resistance
- C. Alcohol resistance
- D. Encapsulation
- E. Spore-formation

160. A patient who suffered from syphilis took a course of antibiotic therapy and fully recovered. Some time later he was infected again with *Treponema pallidum*. What form of infection is it?

- A. Reinfection
- B. Recurrence
- C. Secondary infection
- D. Superinfection
- E. Complication

161. A 7 year old girl was taken to an infectious diseases hospital. She had complaints of high temperature, sore throat, general weakness. A doctor assumed diphtheria. What will be crucial proof of diagnosis after defining pure culture of pathogenic organism?

- A. Toxigenity test
- B. Detection of volutine granules
- C. Cystinase test
- D. Hemolytic ability of pathogenic organism
- E. Phagolysability

162. A lot of pyoinflammatory processes in oral cavity are caused by anaerobes. What nutrient medium can be used for control of wound textile contamination by anaerobes?

- A. Kitt-Tarozzi
- B. Endo
- C. Roux
- D. Sabouraud's
- E. Ploskirev's

163. Microscopic analysis of tissue sampling from affected area of mucous membrane of oral cavity revealed bacillus in form of accumulations that looked like a pack of cigarettes. Ziehl-Neelsen staining gives them red colour. What kind of pathogenic organism was most likely revealed in tissue sampling?

- A. *M.leprae*
- B. *M.tuberculosis*
- C. *A.bovis*
- D. *A.israelii*
- E. *M.avium*

164. From the purulent exudate of a patient with odontogenic phlegmon a pure culture of Gram(+) microorganisms was segregated. This culture was lecithinously active, coagulated plasma of a rabbit, decomposed mannitol under anaerobe conditions. What microorganism may have contributed to the origin of suppurative complication?

- A. *S.aureus*
- B. *S.epidermidis*
- C. *S.pyogenes*
- D. *S.viridans*
- E. *S.mutans*

165. A patient has pure culture of diphtheria corynebacteria. What immunological reaction should be used in order to determine bacteria toxigenity?

- A. Precipitation in agar
- B. Agglutination
- C. Complement binding
- D. Inhibition of hemagglutination
- E. Indirect hemagglutination

166. An infectious diseases hospital admitted a veterinarian with assumed brucellosis. What serologic test can confirm this diagnosis?

- A. Wright's agglutination reaction
- B. Widal's agglutination reaction
- C. Ascoli's precipitation reaction
- D. Weigl's agglutination reaction
- E. Wassermann reaction of complement binding

167. A patient with insulin-dependent diabetes had an insulin injection. Some time later he felt weakness, irritability, excessive sweating. What is the main reason of these disorders?

- A. Carbohydrate starvation of brain
- B. Intensified glycogenolysis
- C. Intensified ketogenesis
- D. Intensified lipogenesis
- E. Reduced glyconeogenesis

168. The activity of parotides reduces with age. Activity of what enzyme in saliva will be reducing?

- A. Amylase
- B. Lysozyme
- C. Phosphatase
- D. Hexokinase
- E. Maltase

169. In an excitable cell the ion channels were blocked. It hasn't changed essentially the value of rest potential, but the cell lost its ability to generate AP (action potential). What channels were blocked?

- A. Natrium
- B. Potassium
- C. Natrium and potassium
- D. Chloric
- E. Calcium

170. A 25 year old patient had in the dentist's room a sudden attack of bronchial asthma. The doctor gave him salbutamol in the form of inhalation. What is the mechanism of action of this preparation?

- A. Stimulates β_2 -adrenoreceptors
- B. Stimulates α -adrenoreceptors
- C. Blocks H_1 -histamine receptors
- D. Blocks phosphodiesterase
- E. Blocks M-cholinergic receptors

171. A 30 year old patient who was taken to the hospital with diagnosis acute glomerulonephritis has proteinuria. What disorder caused this occurrence?

- A. Increased permeability of renal filter
- B. Delayed excretion of nitrogen metabolism products
- C. Decreased oncotic pressure of blood plasma
- D. Increase of hydrostatic blood pressure in capillaries
- E. Decreased number of functioning nephrons

172. A patient has myocardial infarction with thrombosis of the left coronary artery. What pharmacological preparation group should be used to reestablish blood flow?

- A. Fibrinolysis activators
- B. Narcotic analgesics
- C. β -adrenergic blockers
- D. Angiotensin-converting enzyme inhibitors
- E. Glucocorticoids

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

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

174. A patient with gingivitis was prescribed a gargle with a certain preparation. Its antiseptic properties are determined by atomic oxygen that slivers in presence of organic substances. It has also deodorant, adstringent (anti-inflammatory), and in big concentrations - cauterizing effect. Water solutions are used for bathing of wounds, mouth gargling and in higher concentrations - for burn treatment. It is also used for gastric lavage in case of poisoning. Name this preparation:

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

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

- A. Rutin
- B. Calcium pantothenate
- C. Calcium panganate
- D. Cyanocobalamin
- E. Folic acid

176. A patient with focal tuberculosis of superior lobe of his right lung takes isoniazid as a part of combined therapy. After a time he started complaining of muscular weakness, decrease of skin sensitivity, sight and movement coordination disorder. What vitamin preparation will be right for elimination of these occurrences?

- A. Vitamin B₆
- B. Vitamin A
- C. Vitamin D
- D. Vitamin B₁₂
- E. Vitamin C

177. In course of combined therapy a patient with chronic cardiac insufficiency was taking digitoxin and furocemid. As a result he had extreme muscular weakness. What electrolyte imbalances may be revealed in his blood?

- A. Hypokaliemia
- B. Hyperkaliemia
- C. Hypocalcemia
- D. Hypercalcemia
- E. -

178. A patient with complaints of dizziness, worsening of vision acuity, sickness, salivation and spasmodic stomachaches was taken to the admission department. The diagnosis was poisoning with organophosphorous compounds. What preparations should be included into complex therapy?

- A. Atropine sulfate and dipiroxim
- B. Sodium thiosulfate and bemegride
- C. Tetacin-calcium and unithiol
- D. Nalorphine hydrochloride and bemegride
- E. Glucose and bemegride

179. In a cell the mutation of the first exon of structural gene took place. The number of nucleotide pairs has decreased - 250 pairs instead of 290. Determine the type of mutation:

- A. Deletion
- B. Inversion
- C. Duplication
- D. Translocation
- E. Nonsense-mutation

180. A patient who has been ill with tuberculosis for a long time has an intracellular mycobacteria disposition. What preparation must be included into the complex therapy of tuberculosis?

- A. Isoniazid
- B. Rifampicin
- C. Ethionamide
- D. Sodium para-aminosalicylate
- E. Ethambutol

181. A patient started bleeding after tooth extraction. What action is necessary in this case?

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

182. After tooth extraction the blood pressure of a patient fell dramatically, the patient lost consciousness. Collaptoïd state was diagnosed. What drug should be used?

- A. Cordiamin
- B. Strophanthine
- C. Isadrin
- D. Sustac
- E. Nitroglycerine

183. A patient who takes tetracyclin was recommended not to consume dairy products. Why did the doctor give him such recommendation?

- A. They inhibit antibiotic absorption
- B. Dairy products don't assimilate
- C. They increase risk of dysbacteriosis
- D. Antibiotic toxicity increases
- E. Gastrointestinal digestion may be disturbed

184. A 50 year old patient with ischemic disease was prescribed an antiaggregant preparation. The patient was taking overdoses of this preparation. It resulted in nausea, vomiting, stomach pain during fasting. What preparation was the patient prescribed?

- A. Acetylsalicylic acid
- B. Parmidine
- C. Ticlide
- D. Dipyridamol
- E. Pentoxyphilline

185. In course of an experiment the peripheral fragment of a cut vagus nerve on the dog's neck was being stimulated. There was the following change of cardiac activity:

- A. Decrease of beat frequency
- B. Increase of beat frequency and force
- C. Increase of myocardium excitability
- D. Increased speed of excitement conduction through myocardium
- E. Increase of beat force

186. A patient was attacked by bees. He was taken to the hospital with Quincke's edema. What antihistaminic medication without sedative effect should be prescribed the patient?

- A. Diasoline
- B. Suprastine
- C. Phencarol
- D. Tavegil
- E. Diphenhydramine hydrochloride

187. A purulent wound was treated with a solution that had antiseptic effect and contributed to the mechanical wound cleansing. What solution was used?

- A. Hydrogen peroxide
- B. Potassium permanganate
- C. Alcoholic iodine
- D. Ethacrydine lactate
- E. Brilliant green

188. A patient with essential hypertension takes enalapril. What mechanism of action has this hypotensive medication?

- A. Inhibitor of angiotensin converting enzyme
- B. Antagonist of angiotensine II
- C. Inhibitor of phosphodiesterase
- D. Inhibitor of cyclooxygenase
- E. Ca^{++} channel-blocking agent

189. While of oral cavity examination the dentist revealed the formation of the first big cheekteeth on the lower jaw of a child. How old is this child?

- A. 6-7 years old
- B. 4-5 years old
- C. 8-9 years old
- D. 10-11 years old
- E. 12-13 years old

190. After a surgical procedure a patient was developed an enteroparesis. What anticholinesterase medication should be prescribed in this case?

- A. Proserin
- B. Carbacholine
- C. Aceclidine
- D. Pilocarpine
- E. Acetylcholine

191. A patient with chronic alcoholism has symptoms of polyneuritis and cardiac insufficiency. What vitamin preparation should be prescribed to this patient?

- A. Thiamine
- B. Ergocalciferol
- C. Retinol
- D. Rutin
- E. Phylloquinone

192. A patient has a slowly healing fracture. What medicine can be used to accelerate formation of connective tissue

matrix?

- A. Methyluracil
- B. Prednisolone
- C. Cyclophosphan
- D. Methotrexate
- E. Cyclosporine

193. A patient complains of painful cracks in mouth angles. What sulfanilamide can be recommended for local treatment of angular stomatitis?

- A. Streptocide liniment
- B. Synthomycine liniment
- C. Prednisolone ointment
- D. Butadione ointment
- E. Tetracycline ointment

194. A patient with an acute myocarditis has the clinic presentations of cardiogenic shock. What pathogenetic mechanism plays the main part in shock development?

- A. Disorder of pumping ability of heart
- B. Depositing of blood in veins
- C. Decrease of diastolic flow to the heart
- D. Decrease of vascular tone
- E. Increase of vascular tone

195. Leukoses are treated with anti-metabolite methotrexate. What vitamin is its antagonist?

- A. Folic acid
- B. Cyanocobalamin
- C. Phyllochinone
- D. Piridoxine
- E. Rutin

196. Mother of a two year old child consulted a dentist. In the period of pregnancy she was non-systematically taking antibiotics to treat an infectious disease. The child's examination revealed incisor destruction, yellow enamel, brown limbus of dental cervix. What preparation was mother taking during her pregnancy?

- A. Doxycycline
- B. Furosemide
- C. Ampiox
- D. Xanthinol nicotinate
- E. Octadine

197. A 36 year old man with craniocerebral trauma has diminished breath sounds, thready pulse, reflexes are absent. What route of pyracetam introduction is the most suitable in this case?

- A.** Intravenous
- B.** Rectal
- C.** Subcutaneous
- D.** Oral
- E.** Inhaling

198. A patient is being operated under inhalation narcosis with nitrous oxide. It is known that it has evident lipophilic properties. What mechanism is responsible for transporting this preparation through biological membranes?

- A.** Passive diffusion
- B.** Active transport
- C.** Facilitated diffusion
- D.** Filtration
- E.** Pinocytosis

199. A patient has an acute painfulness of

face skin. What nerve is damaged?

- A.** Trifacial
- B.** Facial
- C.** Oculomotor
- D.** Vagus
- E.** Glossopharyngeal

200. A patient with inflammation of trigeminal nerve has been having progressive paradontitis for some years. What factor is the most important for paradontitis development?

- A.** Neurodystrophic disorders
- B.** Low activity of leukocytic elastase
- C.** Poor formation of immunoglobulins
- D.** Increased tone of vagus nerve
- E.** Low activity of kallikrein-kinin system