

1. Examination of a man revealed a protozoan disease that affected brain and caused vision loss. Blood analysis revealed unicellular half-moon-shaped organisms with pointed end. The causative agent of this disease is:

- A. Toxoplasma
- B. Leishmania
- C. Lamblia
- D. Amoeba
- E. Trichomonad

2. A married couple applied to the genetic consultation in order to consult about their child with multiple abnormalities (microcephaly, idiocy etc). The woman has had an illnesses during her pregnancy but she didn't take any teratogens or mutagens. The parents' and the child's karyotype is normal. Anamnesis study revealed that the family kept a cat. What gravidic disease caused the child's abnormalities?

- A. Toxoplasmosis
- B. Leishmaniasis
- C. Dysentery
- D. Balantidiasis
- E. Trichomoniasis

3. A patient has mental retardation, small height, brachydactyly, mongoloid slant. Analysys of his karyotype revealed trisomy 21. What chromosomal anomaly is it?

- A. Down's disease
- B. Klinefelter's syndrome
- C. Turner's syndrome
- D. Trisomy X
- E. Specific fetopathy

4. A female patient has symptoms of inflammation of urogenital tracts. A smear from the vaginal mucous membrane contained big unicellular pyriform organisms with a sharp spike on the back end of their bodies; big nucleus and undulating membrane. What protozoa were revealed in the smear?

- A. Trichomonas vaginalis
- B. Trichomonas hominis
- C. Trichomonas buccalis
- D. Trypanosoma gambiense
- E. Lamblia intestinalis

5. Analysis of an electron diffraction pattern of a cell revealed mitochondrion destruction. This might result in abnormal course of the following cell process:

- A. Oxidation of organic substances
- B. Nuclear division
- C. Crossingover
- D. Cleavage
- E. -

6. Formation of ribosome subunits in a cell was disturbed in course of an experiment (by means of activated mutagenic factors). This will have an effect on the following metabolic process:

- A. Protein biosynthesis
- B. Carbohydrate biosynthesis
- C. ATP synthesis
- D. Photosynthesis
- E. Biological oxidation

7. Among public catering workers examined by doctors of sanitary-and-epidemiologic station often occur asymptomatic parasite carriers. This means that a healthy person carries cysts that infect other people. Such parasitizing is impossible for the following causative agent:

- A. Dysenteric amoeba
- B. Malarial plasmodium
- C. Intestinal trichomonad
- D. Dermatotropic leishmania
- E. Viscerotropic leishmania

8. It is known that information about sequence of amino acids in a protein molecule is encoded as a sequence of four types of nucleotides in a DNA molecule, and different amino acids are encoded by different number of triplets - from one to six. Such peculiarity of the genetic code is called:

- A. Degeneracy
- B. Universality
- C. Nonoverlapping
- D. Tripletty
- E. Specificity

9. A patient suffering from caries of the left inferior premolar has got a swelling on his neck above the hyoid bone. There appeared fever, salivary discharge, contraction of masticatory muscles, difficult mouth opening. The patient was diagnosed with phlegmon of mouth floor. What muscles will be involved in the process?

- A. Mylohyoid and geniohyoid
- B. Digastric and stylohyoid
- C. Hyoglossal and styloglossal
- D. Platysma and stylohyoid
- E. Thyrohyoid and sternohyoid

10. Vagosympathetic Vishnevsky's block involves introduction of novocaine along the posterior edge of sternocleidomastoid muscle above its intersection with external jugular vein. The block is performed within the following triangle of neck:

- A. Omotraperzoid
- B. Omoclavicular
- C. Carotid
- D. Pirogoff's
- E. Submandibular

11. During approach to the thyroid gland by means of transverse section suprasternal cellular tissue space should be opened. It will be dangerous to damage the following anatomic formation located within this space:

- A. Venous jugular arch
- B. Lymph nodes
- C. Carotid artery
- D. Subclavicular artery
- E. Internal jugular vein

12. A female patient with pyelonephritis was admitted to the urological department. Examination revealed an associated infection accompanied by pyelovenous reflux. This complication was induced by affection of the following structure:

- A. Fornical renal apparatus
- B. Excretory renal tracts
- C. Straight tubules
- D. Renal tubules
- E. Renal corpuscle

13. A 27 year old patient consulted a doctor about a solid tumour in front of the antilobium. During removal of this tumour a dental surgeon revealed a vein. What vein is localized in this area?

- A. *V. retromandibularis*
- B. *V. facialis*
- C. *V. jugularis interna*
- D. *V. jugularis externa*
- E. *V. auricularis posterior*

14. A 24 year old patient consulted a doctor about pain below his lower jaw on the right. Dental surgeon revealed a concretment in the submandibular gland. During its removal he had to prevent

bleeding out of the following artery:

- A. *A. facialis*
- B. *A. submentalis*
- C. *A. alveolaris inferior*
- D. *A. labialis inferior*
- E. *A. lingualis*

15. Study of a patient's facial gesture revealed that he couldn't whistle, round his lips; mouth corners didn't rise during laughing, oral fissure stretched sideways (transversal smile). These symptoms indicate the atrophy of the following muscle:

- A. Orbicular muscle of mouth
- B. Greater zygomatic muscle
- C. Cervical muscle
- D. Risorius muscle
- E. Masticatory muscle

16. A doctor examined a victim of a road accident and revealed damage of the exterior wall of eye socket. The patient has lost ability to abduct the eyeball on the affected side. What nerve might be damaged in this case?

- A. *N. abducens*
- B. *N. trochlearis*
- C. *N. oculomotorius*
- D. *N. ophthalmicus*
- E. *N. infraorbitalis*

17. After extraction of the II maxillary molar tooth the patient has got haemorrhage from the alveolar socket. The observed haemorrhage is from the system of the following artery:

- A. Maxillary
- B. Inferior alveolar
- C. Facial
- D. Ascending pharyngeal
- E. Mylohyoid

18. A basketball player complains of pain over his heel that is getting stronger during walking. It might be caused by damage of tendon of the following muscle:

- A. *m. triceps surae*
- B. *m. tibialis posterior*
- C. *m. flexor digitorum longus*
- D. *m. fibularis longus*
- E. *m. fibularis brevis*

19. A student has accidentally hit his elbow against the edge of the table and sensed burning and tingling on the interior surface of his forearm. What nerve was damaged in this case?

- A. *N. ulnaris*
- B. *N. radialis*
- C. *N. medianus*
- D. *N. axillaris*
- E. *N. musculocutaneus*

20. In process of the secretory cycle secretion granules come and go in the apical part of cytoplasm of pancreas cells. These granules relate to the following structure elements:

- A. Inclusions
- B. Microfilaments
- C. Lysosomes
- D. Exocytic vacuoles
- E. Granular endoplasmic reticulum

21. A 35 year old female patient diagnosed with infertility underwent diagnostic biopsy of endometrium. Microscopical examination revealed that its mucous membrane was edematic, uterine glands were convoluted and filled with thick secretion. Such changes of endometrium are caused by excess of the following hormone:

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

22. Influence of unfavourable factors upon the organism causes change of thymus accompanied by mass loss of thymocytes, their displacement to the peripheral organs, proliferation of epithelioreticulocytes. What phenomenon is it?

- A. Accidental thymus involution
- B. Age thymus involution
- C. Thymus hypotrophy
- D. Thymus dystrophy
- E. Thymus atrophy

23. Examination of a patient revealed abnormal development of enamel. This is caused by damage of the following structural elements of dental germ:

- A. Internal enamel epithelium of enamel organ
- B. External enamel epithelium of enamel organ
- C. Intermediate layer of enamel organ
- D. Pulp of enamel organ
- E. Cervix of enamel organ

24. A histological specimen of an oral cavity organ demonstrates that the organ's

anterior surface is lined with multilayer squamous nonkeratinous epithelium, and its posterior surface - with multiserial ciliated epithelium. What organ is it?

- A. Soft palate
- B. Gingiva
- C. Hard palate
- D. Lip
- E. Cheek

25. Examination of uterine cavity revealed an embryonated ovum that wasn't attached to the endometrium. The embryo is at the following stage of development:

- A. Blastocyst
- B. Zygote
- C. Morula
- D. Gastrula
- E. Neurula

26. A mountain climber spent a long time in the mountains. Erythrocyte number has risen from $5,0 \cdot 10^{12}/l$ up to $6,0 \cdot 10^{12}/l$. What factor stimulated erythropoiesis?

- A. Decrease of O_2 in the arterial blood
- B. Increase of O_2 in the arterial blood
- C. Decrease of O_2 in the venous blood
- D. Increase of O_2 in the venous blood
- E. Increase of O_2 in the cells

27. What factor may cause increase of power inputs of human organism by 100%?

- A. Drop of external temperature
- B. Rise of external temperature
- C. Consumption of protein food
- D. Consumption of carbohydrate food
- E. Consumption of fatty food

28. A 40 year old European works in a Southeast Asian country. He complains that it is hard to bear high temperature under conditions of high relative humidity. The reason for it is difficult heat emission by way of:

- A. Evaporation
- B. Radiation
- C. Heat conduction
- D. Convection
- E. Convection and heat conduction

29. Examination of a patient who has recently had a hepatic disease revealed low concentration of prothrombin in blood. First of all this will cause disturbance of:

- A.** Second phase of coagulation haemostasis
B. First phase of coagulation haemostasis
C. Vasculothrombocytic haemostasis
D. Fibrinolysis
E. Anticoagulative blood properties
- 30.** Researchers studied speed of excitement conduction in different areas of an isolated heart. Which area demonstrated the lowest speed?
- A.** Atrioventricular node
B. His' bundle
C. Purkinje's fibers
D. Atrial myocardium
E. Ventricular myocardium
- 31.** A patient who takes blocker of membrane cytoceptors of efferent conductor synapses of autonomic nervous system complains about dry mouth. What receptors are blocked?
- A.** Muscarinic cholinoreceptors
B. Nicotinic cholinoreceptors
C. H_2 -receptors
D. α -adrenoreceptors
E. β -adrenoreceptors
- 32.** A student has dry mouth during an exam. This is caused by realization of the following reflexes:
- A.** Conditioned sympathetic
B. Conditioned and unconditioned sympathetic
C. Conditioned parasympathetic
D. Unconditioned parasympathetic
E. Unconditioned sympathetic and parasympathetic
- 33.** A child has abnormal formation of tooth enamel and dentin as a result of low concentration of calcium ions in blood. Such abnormalities might be caused by deficiency of the following hormone:
- A.** Parathormone
B. Thyrocalcitonin
C. Thyroxin
D. Somatotropic hormone
E. Triiodothyronine
- 34.** ECG of a patient showed that RR interval equaled 1,5 s, heart rate equaled 40 bpm. What is cardiac pacemaker?
- A.** Atrioventricular node
B. Sinus node
C. His' bundle
D. Left branch of His' bundle
E. Right branch of His' bundle
- 35.** A patient has hyperkaliemia and hyponatremia. Such changes might be caused by hyposecretion of the following hormone:
- A.** Aldosterone
B. Vasopressin
C. Cortisol
D. Parathormone
E. Natriuretic
- 36.** Tissue is being stimulated by electric cathodic impulse with amplitude of 70% of threshold. What changes of membrane potential will be observed?
- A.** Partial depolarization
B. Hyperpolarization
C. Action potential
D. No changes
E. -
- 37.** Analysis of a patient's saliva revealed high concentration of lactate. This is most probably caused by activation of the following process:
- A.** Anaerobic glucose breakdown
B. Aerobic glucose breakdown
C. Glycogen breakdown
D. Carbohydrate hydrolysis
E. Glucose-lactate cycle
- 38.** A patient diagnosed with malignant carcinoid has extremely high concentration of serotonin in blood. This biogenic amine can be formed from the following amino acid:
- A.** Tryptophan
B. Alanine
C. Leucine
D. Threonine
E. Methionine
- 39.** As a result of improper feeding an infant got full-blown diarrhea. One of its main consequences is excretion of large amount of sodium bicarbonate. What form of acid-base balance disturbance is it?
- A.** Excretory acidosis
B. Metabolic alkalosis
C. Respiratory acidosis
D. Respiratory alkalosis
E. Acid-base balance won't be disturbed
- 40.** A patient suffering from chronic renal insufficiency has got osteoporosis. Osteoporosis was caused by abnormal synthesis of the following regulator of mineral metabolism in kidneys:

- A. 1, 25(OH)₂ D₃ formation
- B. Proline hydroxylation
- C. Lysine hydroxylation
- D. Glutamate carboxylation
- E. Cortisol hydroxylation

41. Parodontosis is treated by means of antioxidants. Which of the following natural compounds is used as an antioxidant:

- A. Tocopherol
- B. Thiamine
- C. Gluconate
- D. Pyridoxine
- E. Choline

42. A patient has high sunlight sensitivity of skin. During standing his urine turns dark-brown. What is the most probable cause of this condition?

- A. Porphyria
- B. Haemolytic jaundice
- C. Albinism
- D. Pellagra
- E. Alkaptonuria

43. Periodontitis is accompanied by activation of proteolysis in the periodontium tissues. The evidence of proteolysis activation is increase of the following component of oral liquid:

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

44. A patient has been diagnosed with alkaptonuria. This pathology is caused by deficiency of the following enzyme:

- A. Oxidase of homogentisic acid
- B. Phenylalanine hydroxylase
- C. Glutamate dehydrogenase
- D. Pyruvate dehydrogenase
- E. DOPA decarboxylase

45. An experimental rat got intra-abdominal injection of 10 ml of 40% glucose solution. 60 minutes later the rat passed into a comatose state as a result of dehydration. What is the mechanism of development of this state?

- A. Rise of osmotic pressure of extracellular fluid
- B. Rise of oncotic pressure of extracellular fluid
- C. Reduction of vasopressin secretion
- D. Loss of salts and water
- E. Acid-base disbalance

46. A 62 year old patient with cerebral haemorrhage was admitted to the neurological department in grave condition. Objectively: increase of respiration depth and rate with its following reduction to apnoea, thereafter respiration cycle restores. What respiration type is it?

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

47. Patients suffering from relapsing typhus have fever that can be characterized by several days of high temperature alternating with periods of normal temperature. Such temperature curve is called:

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

48. Poisoning with corrosive sublimate caused acute renal insufficiency. Its progress included four stages: 1) initial, 2) oligoanuria, 4) recovery. Name the third stage of acute renal insufficiency:

- A. Polyuric
- B. Metabolic
- C. Hemodynamic
- D. Ischemic
- E. Pathochemical

49. A 48 year old male patient was admitted to the hospital with acute attack of chronic glomerulonephritis. Examination revealed chronic renal failure. What is the cause of hyperazotemia by chronic renal failure?

- A. Reduction of glomerular filtration
- B. Reduction of tubular reabsorption
- C. Reduction of tubular excretion
- D. Disorder of protein metabolism
- E. Disorder of water-electrolytic metabolism

50. Examination of experimental rats that have been getting only carbohydrate feed

for a long time revealed accumulation of water in tissues. What is the leading pathogenetic mechanism of edema development?

- A. Hypooncotic
- B. Membranogenic
- C. Dysregulatory
- D. Lymphogenous
- E. Hyperosmolar

51. Examination of a patient 24 hours after appendectomy revealed neutrophilic leukocytosis with regenerative shift. What is the most probable mechanism of development of absolute leukocytosis in peripheral blood?

- A. Intensification of leukopoiesis
- B. Redistribution of leukocytes in the organism
- C. Reduction of leukolysis
- D. Slower emigration of leukocytes to the tissues
- E. Immunity activation

52. A patient suffering from chronic myeloleukemia has got the following symptoms of anemia: decreased number of erythrocytes and low haemoglobin concentration, oxyphilic and polychromatophilic normocytes, microcytes. What is the leading pathogenetic mechanism of anemia development?

- A. Substitution of haemoblast
- B. Intravascular hemolysis of erythrocytes
- C. Deficiency of vitamin B_{12}
- D. Reduced synthesis of erythropoietin
- E. Chronic haemorrhage

53. Autopsy of a dead patient revealed that pia mater was dull, there were greenish-yellow overlays covering almost all convexital surface of cerebral hemispheres. Histological examination revealed extreme hyperemia of maters along with diffuse leukocytic infiltration. What is the most probable diagnosis?

- A. Meningococcal infection
- B. Measles
- C. Anthrax
- D. Tuberculosis
- E. Influenza

54. Examination of puncture biopsy material of liver revealed dystrophy of hepatocytes, their necrosis and sclerosis along with disturbance of beam and lobulous structure and formation of pseudolobules of regeneration nodes. What is the most probable diagnosis?

- A. Liver cirrhosis
- B. Chronic hepatitis
- C. Chronic hepatitis
- D. Progressing massive liver necrosis
- E. Acute hepatitis

55. A 6 year old child was delivered to the hospital because of measles pneumonia. On the mucous membrane of a cheek a dentist revealed an ill-defined greish area 2x2,5 cm large. Soft tissues are edematous and foul-smelling. The most probable diagnosis of the dentist should be:

- A. Noma
- B. Gangrenous stomatitis
- C. Pustular stomatitis
- D. Phlegmonous stomatitis
- E. Ulcerous stomatitis

56. A patient has deformation of jaw bones. Histological examination revealed there growth of fibrocellular tumour-like ill-defined tissue with primitive osteogenesis. What disease are these presentations typical for?

- A. Fibrous dysplasia
- B. Ameloblastoma
- C. Osteosarcoma
- D. Eosinophilic granuloma
- E. Parathyroid osteodystrophy

57. A 55 year old man had been suffering from chronic glomerulonephritis. He died from chronic renal failure. Macroscopical examination revealed on the surface of epicardium and pericardium some greyish-white villous depositions. After their removal dilated and plethoric vessels were uncovered. What process took place in the pericardium?

- A. Fibrinous inflammation
- B. Organization
- C. Proliferative inflammation
- D. Haemorrhagic inflammation
- E. Arterial hyperemia

58. Autopsy of a 68 year old man who died from chronic cardiac insufficiency revealed deformed, thickened, conjoined cusps of mitral valve. Along the edge of joining there were small (1-2 mm) thrombs. What form of endocarditis caused development of chronic cardiac insufficiency?

- A. Recurrent verrucous
- B. Diffuse
- C. Acute verrucous
- D. Fibroplastic
- E. Polypoulcerous

59. A 42 year old patient who had been suffering from chronic granulomatous periodontitis and chronic purulent osteomyelitis of his lower jaw for 8 years died from chronic renal insufficiency. What complication of purulent osteomyelitis has developed in kidneys?

- A. Amyloidosis
- B. Hyalinosis
- C. Adipose degeneration
- D. Atrophy
- E. Necrosis of epithelium of convoluted tubules

60. A 5 year old child has the following symptoms: body temperature up to 40°C , acute headache, vomiting, anxiety, shiver. 4 days later there appeared hemorrhagic skin rash, oliguria and adrenal insufficiency that caused death. Bacteriological examination of pharyngeal smears revealed meningococcus. What form of meningococcal infection was it?

- A. Meningococemia
- B. Meningococcal meningitis
- C. Meningoencephalitis
- D. Meningococcal nasopharyngitis
- E. -

61. A 75 year old male patient consulted a surgeon about a brown nonhealing ulcer of shin. Examination of biopsy material revealed diffuse growth of polymorphic atypic cells with brown pigment in their cytoplasm. Pearls reaction was negative. There were also a lot of pathological mitoses and foci of tissue necrosis. What is the most probable diagnosis?

- A. Melanoma
- B. Local hemosiderosis
- C. Intradermal nevus
- D. Trophic ulcer
- E. Skin cancer

62. Autopsy of a man who had been suffering from hypertension revealed in his brain a cavity with rubiginous walls. What event preceded development of these changes?

- A. Haematoma
- B. Diapedetic haemorrhages
- C. Ischemic infarction
- D. Plasmorrhagias
- E. Abscess

63. Medical examination of the first-year pupils included Mantoux test. 15 pupils out of 35 had negative reaction. What actions should be taken against children with negative reaction?

- A. BCG vaccination
- B. Antitoxin vaccination
- C. Rabies vaccination
- D. Repeat Mantoux test
- E. Examination of blood serum

64. On a certain territory mass death of rodents was registered. It was suspected that their death might have been caused by plague. What serological reaction should be applied for quick identification of antigen of the causative agent of this epizooty?

- A. Precipitation
- B. Agglutination
- C. Passive hemagglutination
- D. Complement binding
- E. Neutralization

65. A 10 year old child underwent Mantoux test (with tuberculin). 48 hours later there appeared a papule up to 8 mm in diameter on the site of tuberculin injection. Tuberculin injection caused the following hypersensitivity reaction:

- A. IV type hypersensitivity reaction
- B. Arthus reaction
- C. Seroreaction
- D. Atopic reaction
- E. II type hypersensitivity reaction

66. A 58 year old female patient had to be prepared to cholecystectomy. Complex of premedication drugs included benzohexonium. What is the function of this drug in anaesthesia?

- A. Functional block of visceral reflexes
- B. Relaxation of skeletal muscles
- C. Relaxation of smooth muscles
- D. Reduction of excitement phase
- E. Intensification of retrograde amnesia

67. A patient had an attack of bronchial asthma in the dentist's office. The attack was arrested by salbutamol. This drug relates to the following group of therapeutic agents:

- A. β_2 -adrenomimetics
- B. α -adrenomimetics
- C. β_1 - β_2 -adrenomimetics
- D. Sympatholytics
- E. α - β -adrenomimetics

68. A patient with acute duodenal ulcer was admitted to the hospital. Analysis of gastric juice revealed hyperfunction of secretion and acid-forming in stomach. Choose a drug that can reduce secretory function of stomach due to inhibition of H_2 -receptors:

- A. Ranitidine
- B. Extract of dry belladonna
- C. Atropine
- D. Methacin
- E. Platyphyllin

69. A patient was administered clonidine to be taken parenterally in case of abrupt rise of arterial pressure. What is its mechanism of action?

- A. Stimulation of central α_2 -adrenoreceptors
- B. Block of nicotinic cholinoreceptors of ganglia
- C. Block of α_1 - and α_2 -adrenoreceptors
- D. Block of α_1 -adrenoreceptors
- E. Stimulation of central imidazole₁-receptors

70. A patient was prescribed a drug with apparent lipophilic properties. What is the main mechanism of its absorption?

- A. Passive diffusion
- B. Filtration
- C. Active transport
- D. Pinocytosis
- E. Binding with transport proteins

71. A patient noticed symptoms of approaching attack of bronchial asthma and took several tablets one by one at short intervals out of the doctor's control. Short-term improvement of his condition came only after taking the first two tablets. Next intakes of a drug didn't improve his condition. Reduction of the drug effectiveness was caused by:

- A. Tachyphylaxis
- B. Cumulation
- C. Addiction
- D. Dependence
- E. Idiosyncrasy

72. A patient with streptococcal infection of gums was prescribed a drug that contained beta-lactam ring in its structure. Which

drug relates to this group?

- A. Benzylpenicillin
- B. Rifampicin
- C. Erythromycin
- D. Streptomycin sulfate
- E. Chloramphenicol

73. It was necessary to determine absolute gustation thresholds of a healthy man for different substances. The lowest threshold will be observed for the following substance:

- A. Quinine
- B. Sodium chloride
- C. Glucose
- D. Saccharose
- E. Citric acid

74. A patient with neck injury was admitted to the hospital. Examination revealed a damaged nerve located anterior to the frontal scalene. What nerve is damaged?

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

75. A 38 year old patient takes aspirin and sulfanilamides. After their intake intensified erythrocyte haemolysis is observed which is caused by deficiency of glucose 6-phosphate dehydrogenase. This pathology is caused by failure of the following coenzyme:

- A. $NADP - H$
- B. $FAD - H_2$
- C. *Pyridoxal phosphate*
- D. $FMN - H_2$
- E. *Ubiquinone*

76. After a road accident a driver has got deformity in the middle third of his left shin and intense pain, especially when he tries to move his left shin. The ends of a triangular bone stick out of a wound, there is great blood loss. What bone might be damaged?

- A. Tibia
- B. Fibula
- C. Femur
- D. Patella
- E. Astragalus

77. A histological specimen presents the tissue that contains cells having no processes and a few tens of nuclei each. One of cell surfaces has a corrugated

zone that provides secretion of hydrolytic elements. What tissue is it?

- A. Osseous tissue
- B. Cartilaginous tissue
- C. Epithelial tissue
- D. Nerve tissue
- E. Muscular tissue

78. Potassium cyanide that is a poison came into a patient's organism and caused death a few minutes after it. The most probable cause of its toxic effect was abnormal activity of:

- A. Cytochrome oxidase
- B. Catalase
- C. *ATP*-synthetase
- D. *NADP* – *H*-dehydrogenase
- E. Haemoglobin synthesis

79. Abnormal chromosome disjunction during meiosis resulted in formation of: an ovum with 22 autosomes and polar body with 24 chromosomes. If such an ovum would be fertilized with a normal spermatozoon (22 + *X*) the child might have the following syndrome:

- A. Turner's syndrome
- B. Klinefelter's syndrome
- C. Trisomy X
- D. Down's syndrome
- E. Edwards' syndrome

80. A patient underwent Caesarean section. During the operation a long incision was made in the uterus wall and the fetus was extracted from uterus. Healing of the sutured myometrium will proceed in the following way:

- A. Formation of a fibrous cicatrix
- B. Formation of smooth muscular tissue
- C. Formation of cross-striated muscle fibers
- D. Proliferation of myosatellitocytes
- E. Hypertrophy of smooth myocytes

81. Rheography of an 18 year old student during exercise showed redistribution of blood flow between organs. The peak blood flow will be observed in the following vessels:

- A. Skeletal muscles
- B. Liver
- C. Cerebrum
- D. Kidneys
- E. Gastrointestinal tract

82. Microscopical examination of exudate obtained from a rat with aseptic peritoni-

tis and mixed with bird's erythrocytes revealed macrophages surrounded by foreign erythrocytes. What stage of phagocytosis is it?

- A. Adherence
- B. Uncomplete phagocytosis
- C. Approaching
- D. Immersion
- E. Intracellular digestion

83. On the 2nd day after myocardium infarction the patient's systolic arterial pressure abruptly dropped down to 60 mm Hg. This was accompanied by tachycardia up to 140 bpm, dyspnea, loss of consciousness. What is the leading mechanism in the pathogenesis of this shock?

- A. Decrease of stroke volume
- B. Intoxication by the products of necrotic degeneration
- C. Decrease of circulating blood volume
- D. Paroxysmal tachycardia
- E. Anaphylactic reaction to myocardial proteins

84. A 35 year old patient complains about permanent thirst, poor appetite. He drinks 9 l water per day. Daily diuresis is increased, urine is colourless, its relative density is 1,005. The most probable cause of this pathology development is damage of:

- A. Hypothalamic nuclei
- B. Epithelium of renal tubuli
- C. Adenohypophysis
- D. Epiphysis
- E. Basal membrane of glomerular capillaries

85. A patient with dysfunction of external respiration has to undergo tracheotomy. The isthmus of thyroid gland is commonly situated on a level with the following tracheal rings:

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

86. Active physical work induces rise of concentration of carbonic acid in blood. This causes deepening and acceleration of respiration thus reducing concentration of carbonic acid and hydrogen ions in blood. This maintains the following process:

- A. Homeostasis
- B. Immunity
- C. Ontogenesis
- D. Orthobiosis
- E. Anabiosis

87. Pathological process of purulent barotitis involves an artery on the anterior wall of tympanic cavity. What artery is it?

- A. *A. carotis interna*
- B. *A. carotis externa*
- C. *A. meningea media*
- D. *A. auricularis posterior*
- E. *A. temporalis superficialis*

88. A 34 year old male patient consulted a doctor about face carbuncle. Objectively: a loose, painless edema of hypodermic tissue; black crust in the centre of carbuncle, vesicular rash around it. Microbiological examination revealed static streptobacilli capable of capsule building. What microorganisms are the causative agents of this disease?

- A. *Bacillus anthracis*
- B. *Staphylococcus aureus*
- C. *Bacillus anthracoides*
- D. *Bacillus subtilis*
- E. *Bacillus megaterium*

89. A 38 year old patient complained that after acute respiratory viral disease she had lost sensation of food contact with the front 2/3 of her tongue as well as pain and temperature sensation (burned her tongue with hot tea). Which nerve and which branch of it was damaged?

- A. Lingual nerve of mandibular branch of trigeminus
- B. Lingual branches of glossopharyngeal nerve
- C. Lingual nerves of sublingual nerve
- D. Tympanichord of facial nerve
- E. Superior laryngeal nerve of vagus

90. Microscopical examination of coronary artery of a 53 year old dead man revealed luminal narrowing of the vessel because of fibrous plaque mixed with lipides. The most probable form of atherosclerosis is:

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

91. A blood sample of a pregnant woman was typed. Erythrocyte-agglutination

reaction was present with standard sera 0α , $\beta(I)$, $B\alpha(III)$, reaction was absent with the serum $A\beta(II)$. The blood under examination relates to the following group:

- A. $A\beta(II)$
- B. $B\alpha(III)$
- C. 0α , $\beta(I)$
- D. $AB(IV)$
- E. -

92. A female patient suffering from acute bronchitis complains about respiratory obstruction and cough with thick viscous sputum. She was prescribed a mucolytic agent that stimulates surfactant synthesis. What mucolytic agent was prescribed?

- A. Ambroxolum
- B. Sodium hydrocarbonate
- C. Morphine hydrochloride
- D. Glaucin
- E. Theophylline

93. Coprological examination of a patient's feces revealed small operculate eggs. It is known from the anamnesis that the patient often consumes fish. What fluke parasitizes in the patient's organism?

- A. Cat liver fluke
- B. Blood fluke
- C. Lung fluke
- D. Liver fluke
- E. Lancet fluke

94. Clinical examination of a female patient revealed reduction of basal metabolism by 40%, gain in body mass, drop of body temperature, face puffiness, sexual disfunctions, inertness and apathy, lowered intelligence. These symptoms are caused by disfunction of the following endocrine gland:

- A. Hypofunction of thyroid gland
- B. Hypofunction of parathyroid glands
- C. Hypophysis hyperfunction
- D. Epiphysis hypofunction
- E. Hyperfunction of thyroid gland

95. During a neuro-surgical operation the occipital areas of cerebral cortex are stimulated. What sensations will the patient have?

- A. Visual
- B. Tactile
- C. Auditory
- D. Olfactory
- E. Gustatory

96. Microscopic study of an endocrine gland revealed that its parenchyma consisted of follicular structures. Their wall was formed by monolayer cubic epithelium, and their cavity was filled up with oxyphilic substance. What hormon is secreted by this gland?

- A.** Thyroxin
- B.** Aldosterone
- C.** Cortisol
- D.** Parathyrin
- E.** Oxytocin

97. During starvation normal rate of glucose is maintained by means of activation of gluconeogenesis. What substance can be used as a substrate for this process?

- A.** Alanine
- B.** Ammonia
- C.** Adenine
- D.** Urea
- E.** Guanine

98. What chnges will be observed in an isolated heart after introduction of adrenaline into the perfusion solution?

- A.** Increase of heart rate and force
- B.** Decrease of heart force
- C.** Increase of heart force
- D.** Diastolic arrest
- E.** Increase of heart rate

99. A sportsman needs to improve his sporting results. He was recommended a drug containing carnitine. What process is activated by this compound in the first place?

- A.** Transport of fatty acids
- B.** Transport of amino acids
- C.** Transport of calcium ions
- D.** Transport of glucose
- E.** Transport of vitamin *K*

100. A patient consulted a doctor about acute pain in the right subcostal area. During examination the doctor noticed yellowed sclera of the patient. Laboratory analyses revealed high activity of alanine-aminotransferase and negative reaction to stercobilin in feces. What disease are these symptoms typical for?

- A.** Cholelithiasis
- B.** Haemolytic jaundice
- C.** Hepatitis
- D.** Chronic colitis
- E.** Chronic gastritis

101. A patient was admitted to a hospital with poisoning with unsound food. His stomach was lavaged with solution of potassium permanganate. What is its mechanism of action?

- A.** Release of atomic oxygen
- B.** Release of chlorine
- C.** Release of iodine
- D.** Disturbance of synthesis of respiratory chain enzymes
- E.** Destruction of bacteria membranes

102. A patient complained about ear noise and pain sensations. Objectively: the patient has acute respiratory disease, rhinitis. The infection penetrated into the tympanic cavity through the following opening of the pharynx:

- A.** Pharyngeal opening of auditory tube
- B.** Tympanic opening of auditory tube
- C.** Choanae
- D.** Fauces
- E.** Aperture of larynx

103. A 3 month old infant has got a white deposition on the mucous membrane of his mouth, tongue and lips. The doctor suspected candidosis. What nutrient medium should be used for inoculation of the material under examination in order to confirm this diagnosis?

- A.** Sabouraud
- B.** Endo
- C.** Loewenstein-Jensen
- D.** Roux
- E.** Clauberg

104. Specific prophylaxis involved application of a vaccine containing microorganisms and exotoxin detoxicated by formalin. It relates to the following type of vaccine:

- A.** Combined
- B.** Genetically engineered
- C.** Anatoxin
- D.** Chemical
- E.** Live

105. A 70 year old patient suffering from cardiac insufficiency has been uncontrolledly taking digoxin that resulted in extrasystole, vomiting, vision impairment, anxiety, sleep disturbance, reduction of diuresis. Application of drugs relating to the following group will be pathogenetically reasonable in this case:

- A. Donators of sulfhydic groups
- B. Stimulants of β_1 -adrenoreceptors
- C. Angiotensin II receptor blockers
- D. Potassium channel blockers
- E. Donators of nitrogen oxide

106. A patient suffering from hepatocerebral degeneration has low concentration of ceruloplasmin in blood serum. What element accumulation will be observed in liver, cerebrum and kidneys of the patient?

- A. Cuprum
- B. Calcium
- C. Sodium
- D. Potassium
- E. Ferrum

107. Electron-microscope investigation of cortical substance of a kidney reveals some structures lined with prismatic epithelium that normally has brush border and deep plicae of plasmolemma in its basal part. There is a big number of mitochondrions between these plicae. These structures belong to the following part of a nephron:

- A. Proximal tubule
- B. Distal convoluted tubule
- C. Henle's loop
- D. Renal corpuscle
- E. Distal straight tubule

108. Intralobular capillaries of a liver specimen have wide irregular lumen. Basal membrane is absent in the major part of the capillary. What type of capillaries is it?

- A. Sinusoid
- B. Visceral
- C. Somatic
- D. Precapillaries
- E. Postcapillaries

109. In order to speed up healing of the thermal injury it is required to prescribe a drug that facilitates epithelization of skin and mucous membranes. What drug is it?

- A. Retinol acetate
- B. Tocopherol acetate
- C. Nicotinic acid
- D. Ergocalciferol
- E. Ascorbic acid

110. A patient with ventricular arrhythmia was admitted to the cardiological department. What drug should be administered?

- A. Amiodarone
- B. Amlodipine
- C. Drotaverine
- D. Aminazine
- E. Proserin

111. After restoration of blood circulation in damaged tissue accumulation of lactate comes to a stop and speed of glucose consumption slows down. These metabolic changes are caused by activation of the following process:

- A. Aerobic glycolysis
- B. Anaerobic glycolysis
- C. Lipolysis
- D. Gluconeogenesis
- E. Glycogen biosynthesis

112. Researches of the latest decades established that immediate "executors" of cell apoptosis are special enzymes called caspases. Generation of one of them proceeds with participation of cytochrome C. What is its function in a normal cell?

- A. Enzyme of respiratory chain of electron transport
- B. Enzyme of tricarboxylic acid cycle
- C. Enzyme of beta-oxidation of fatty acids
- D. Component of H^+ ATP system
- E. Component of pyruvate-dehydrogenase system

113. A patient with essential hypertension was admitted to the cardiological department. In order to lower arterial pressure a doctor prescribed a drug that blocks β_1 and β_2 -adrenoreceptors. What drug is it?

- A. Propranolol
- B. Proserin
- C. Celecoxib
- D. Prednisolone
- E. Indometacin

114. A patient with myocardium infarction was delivered to the resuscitation department. What drug should be injected to the patient for prophylaxis of pain shock?

- A. Promedol
- B. Analgin
- C. Paracetamol
- D. Celecoxib
- E. Naloxone

115. A patient with myocardium infarction was admitted to the resuscitation department. What drug should be injected to the patient in order to prevent

thrombosis?

- A. Heparin
- B. Chingamin
- C. Thyroxine
- D. Biseptol-480
- E. Dimedrol

116. A 28 year old woman consulted a doctor about sterility. Examination revealed underdeveloped ovaries and uterus, irregular menstrual cycle. Study of sex chromatin revealed 2 Barr's bodies in most somatic cells. What chromosome disease is the most probable in this case?

- A. Triplo-X syndrome
- B. Edwards' syndrome
- C. Patau's syndrome
- D. Klinefelter's syndrome
- E. Turner's syndrome

117. Treatment of many diseases involves use of cocarboxylase (thiamine pyrophosphate) for supplying cells with energy. What metabolic process is activated in this case?

- A. Oxidizing decarboxylation of pyruvate
- B. Glutamate deamination
- C. Amino acids decarboxylation
- D. Decarboxylation of biogenic amines
- E. Detoxication of harmful substances in liver

118. A patient with apparent icteritiousness of skin, sclera and mucous membranes was admitted to the hospital. The patient's urine was of brown ale colour, analysis revealed presence of direct bilirubin. Feces had low concentration of bile pigments. What type of jaundice is it?

- A. Obturative
- B. Parenchymatous
- C. Haemolytic
- D. Conjugated
- E. Absorbtion

119. A patient suffers from chronic left-ventricular insufficiency. What drug should be prescribed?

- A. Digoxin
- B. Bemegrade
- C. Etimizol
- D. Vinpocetine
- E. Pyracetam

120. Medical ambulance delivered a 2 year old girl to the children's department. Objectively: the child is inert, apathetic.

Liver is enlarged, study of biopsy material revealed glycogen excess. Blood glucose rate is below normal. The most probable cause of hypoglycemia is:

- A. Low activity of glycogen phosphorylase
- B. High activity of glucokinase
- C. Low activity of glucose 6-phosphatase
- D. Low activity of glucose 1-phosphate uridine transferase
- E. Low activity of glycogen synthase

121. A 22 year old woman has been taking sulfanilamides for a long time that led to symptoms of hemolytic anaemia caused by hereditary disturbance of synthesis of glucose 6-phosphate dehydrogenase. This enzyme of pentose-phosphate cycle is responsible for generation of:

- A. $NADP - H_2$
- B. NAD
- C. FAD
- D. FMN
- E. ATP

122. A patient suffering from non-insulin-dependent diabetes mellitus was prescribed glibenclamid internally. What is the mechanism of its hypoglycemic action?

- A. It stimulates generation of endogenous insulin by beta cells
- B. It inhibits gluconeogenesis in liver
- C. It intensifies utilization of glucose by peripheral tissues
- D. It inhibits glucose absorption in the bowels
- E. It inhibits alpha glucosidase and polysaccharide breakdown

123. During the preventive examination of a miner a doctor revealed changes in cardiovascular fitness being evidence of cardiac insufficiency at a stage of compensation. What is the main evidence of compensation of cardiac activity?

- A. Myocardium hypertrophy
- B. Tachycardia
- C. Rise of arterial pressure
- D. Dyspnea
- E. Cyanosis

124. A typical symptom of cholera is great loss of water and sodium ions. What mechanism underlies development of diarrhea in this case?

- A.** Activation of adenylate cyclase of enterocytes
- B.** Increased secretion of renin by the cells of renal arterioles
- C.** Aldosterone oxidation in adrenal cortex
- D.** Inhibition of vasopressin synthesis in hypothalamus
- E.** Increased corticotropin synthesis

125. A newborn has signs of dyspepsia after milk feeding. Symptoms of dyspepsia disappear when milk is substituted for glucose solution. The newborn has low activity of the following enzyme:

- A.** Lactase
- B.** Invertase
- C.** Maltase
- D.** Amylase
- E.** Isomaltase

126. A 35 year old man got a trauma that resulted in complete rupture of spinal cord at a level of the first cervical segment. What changes of respiration will be observed?

- A.** Respiration will come to a standstill
- B.** Respiration won't change
- C.** Respiration will become diaphragmatic
- D.** Respiration will become frequent and shallow
- E.** Respiration will become infrequent and deep

127. During an experiment the median part of an animal's cochlea was damaged. This resulted in impaired perception of acoustic vibrations of the following frequency:

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

128. A man got poisoned with mushrooms. They contain muscarine that stimulates muscarinic cholinoreceptors. What symptom is typical for poisoning with inedible mushrooms?

- A.** Miosis
- B.** Mydriasis
- C.** Bronchi dilation
- D.** Heart rate rise
- E.** Arterial pressure rise

129. A patient suffering from syphilis was prescribed a drug the action of which based upon disturbed generation of murein leading to death of the causati-

ve agent. What drug is it?

- A.** Benzylpenicillin sodium salt
- B.** Bijochinol
- C.** Ciprofloxacin
- D.** Azithromycin
- E.** Doxycycline hydrochloride

130. A patient suffering from chronic bronchitis takes a synthetic mucolytic drug that stimulates sputum liquefaction. What drug is it?

- A.** Acetylcysteine
- B.** Diazepam
- C.** Heparin
- D.** Furosemide
- E.** Enalapril

131. A microspecimen of parotid gland presents secretory acines with serous cells that synthesize mostly enzymes. According to the chemical composition classification, the parotid gland relates to the following glands:

- A.** Serous
- B.** Mucous
- C.** Seromucous
- D.** Enzymatic
- E.** -

132. After mouth opening the mouth closed reflexory. What receptors initiate this reflex?

- A.** Proprioceptors of elevator muscles of mandible
- B.** Proprioceptors of depressor muscles of mandible
- C.** Gustatory receptors
- D.** Periodontium receptors
- E.** Mechanoreceptors of oral mucous membrane

133. After continuous treatment with antibiotics a patient got symptoms of stomatitis. Examination of specimens of oral mucous membrane revealed some oval polymorphous Gram-positive microorganisms arranged in clusters. What microorganism may be the cause of such manifestations?

- A.** *C.albicans*
- B.** *C.perfringens*
- C.** *S.aureus*
- D.** *S.pyogenes*
- E.** *C.pylori*

134. After mouth closing and teeth clenching the mouth opens reflexory. What receptots initiate this reflex?

- A. Receptors of periodontium
- B. Proprioceptors of depressor muscles of lower jaw
- C. Proprioceptors of elevator muscles of lower jaw
- D. Gustatory receptors
- E. Mechanoreceptors of oral mucous membrane

135. Examination of a female patient revealed low activity of lipoprotein lipase which hydrolyzes chylomicron triglycerides on the surface of endothelium of adipose tissue capillaries. What biochemical disorders should be expected?

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

136. A child has physical and mental retardation, serious abnormalities in connective tissue of internal organs; urine contains keratan sulfates. This is caused by metabolic disorder of the following substance:

- A. Glycosaminoglycan
- B. Collagen
- C. Elastin
- D. Fibronectin
- E. Hyaluronic acid

137. A 40 year old female patient has enlarged thyroid gland. On palpation the gland is dense, its surface is slightly tuberos. Histological examination of gland sample revealed diffuse infiltration of tissue by the cells, formation of lymphoid follicles. What disease is it?

- A. Autoimmune thyroiditis
- B. Endemic goiter
- C. Sporadic goiter
- D. Diffuse toxic goiter
- E. Riedel's disease

138. A 30 year old woman has been continuously using lipstick with a fluorescent substance that led to development of a limited erythema on the prolabium, slight peeling, and later small transversal sulci and fissures. Microscopical examination of the affected zone revealed in the connective tissue sensitized lymphocytes and macrophages, effects of cytolysis. What type of immunological hypersensitivity has developed on the lip?

- A. IV type (cellular cytotoxicity)
- B. I type (reagin type)
- C. II type (antibody cytotoxicity)
- D. III type (immune complex cytotoxicity)
- E. Granulomatosis

139. A patient suffering from essential arterial hypertension got hypertensive crisis that caused an attack of cardiac asthma. What is the leading mechanism of cardiac insufficiency in this case?

- A. Cardiac overload due to increased resistance
- B. Cardiac overload due to increased blood volume
- C. Absolute coronary insufficiency
- D. Myocardium damage
- E. Disturbed blood inflow to the heart

140. A patient who has been taking a certain drug for a long time cannot discontinue the use of it because this causes psychic and somatic disfunctions. The syndrome occurring at refraining from the use of a drug is called:

- A. Abstinence
- B. Sensitization
- C. Idiosyncrasy
- D. Tachyphylaxis
- E. Cumulation

141. A 43 year old female patient was admitted to the hospital with complaints of pain in the right subcostal area, skin itch. Examination revealed hypalgesia and hemolysis, skin icteritiousness, bradycardia, hypotonia. What is the most probable cause of these symptoms?

- A. Cholemia
- B. Intensification of erythrocyte haemolysis
- C. Diabetes mellitus
- D. Parenchymatous jaundice
- E. Hepatocellular jaundice

142. A patient underwent partial removal of a structure of central nervous system by medical indications. This resulted in development of atony, astasia, intention tremor, ataxia, adiadochokinesis. What structure of CNS was partially removed?

- A. Cerebellum
- B. Amygdaloid complex
- C. Hippocampus
- D. Basal ganglions
- E. Motor cortex

143. Blood analysis of a patient suffering from jaundice revealed increase of total

bilirubin by its indirect fraction. Urine and feces have intense colouring. What is the most probable mechanism of these abnormalities?

- A. Increased haemolysis of erythrocytes
- B. Obstruction of bile outflow from the liver
- C. Damage of liver parenchyma
- D. Impaired generation of direct bilirubin
- E. Impaired transformation of urobilinogen in the liver

144. What contraction of upper extremity muscles will be observed during holding (but not moving) a load in a certain position?

- A. Isometric
- B. Isotonic
- C. Auxotonic
- D. Concentric
- E. Excentric

145. A patient has roundish ulcers on his face, inflammation and enlargement of lymph nodes. These symptoms turned up as a result of mosquito bites. Laboratory examination of discharge from the ulcers revealed unicellular aflagellar organisms. What is the most probable diagnosis?

- A. Dermatotropic leishmaniasis
- B. Toxoplasmosis
- C. Scabies
- D. Trypanosomiasis
- E. Myasis

146. A patient has been suffering from diabetes mellitus for 5 years. As a result of not keeping to a diet the patient passed into a comatose state. Emergency doctor injected him glucose. The patient's state got better. What is the most probable type of coma in this case?

- A. Hypoglycemic
- B. Acidotic
- C. Hyperglycemic
- D. Hepatic
- E. Hypothyreoid

147. A patient was admitted to the infectious diseases department. His skin was dry, with low turgor; he had rice-water stool. The patient was diagnosed with cholera. This disease is ordinarily accompanied by the following disorder of water-electrolytic balance:

- A. Isoosmotic hypohydration
- B. Hyperosmotic hyperhydration
- C. Hypoosmotic hypohydration
- D. Hyperosmotic hypohydration
- E. Hypoosmotic hyperhydration

148. A specimen of connective tissue of derma was stained with Sudan III and hematoxylin. There are clusters of big polygonal cells that turned orange. Their nuclei are flattened and located on periphery. What tissue is it?

- A. White adipose
- B. Brown adipose
- C. Reticular connective
- D. Hyaline cartilaginous
- E. Lamellar osseous

149. For the purpose of anaesthetization a patient got injection of local anesthetic. A few minutes later the patient got dyspnea and tachycardia; he lost consciousness. What type of shock is it?

- A. Anaphylactic
- B. Cardiogenic
- C. Haemorrhagic
- D. Traumatic
- E. Burn

150. A new-born child has hyperemia, edema of the oral mucous membrane, small erosions with viscous mucopus. Smears from the mucopus contain a lot of leukocytes with Gram-negative diplococci. The same microorganisms can be found also beyond the leukocytes. What is the most probable diagnosis?

- A. Gonococcal stomatitis
- B. Toxoplasmosis
- C. Congenital syphilis
- D. Staphylococcal stomatitis
- E. Blennorrhoea

151. Examination of a tissue sample of enlarged cervical lymph nodes taken from a young woman revealed proliferation of lymphocytes, reticular cells, macrophages, big and small Hodgkin's cells, multinuclear Sternberg-Reed cells. There were also multiple eosinophils, single foci of caseous necrosis of the node tissue. What is the most probable diagnosis?

- A. Lymphogranulomatosis
- B. Tuberculosis
- C. Acute leukosis
- D. Lymphosarcoma
- E. Metastasis of lung cancer

152. Microscopical study of discharges

from urethra of a patient suffering from acute urethritis revealed bean-shaped microorganisms up to 1 micrometer in diameter arranged in pairs and placed inside the leukocytes. What microorganisms are these?

- A. Gonococci
- B. Meningococci
- C. Tetracocci
- D. Streptococci
- E. Staphylococci

153. A patient with fracture of femoral bone in the area of surgical neck got symptoms of acute dextroventricular insufficiency as a result of pulmonary embolism. What type of embolism is it?

- A. Fat
- B. Metastatic
- C. Gas
- D. Air
- E. Tissue

154. A patient has dislocation of his mandible that caused impairment of salivation and gustatory sensitivity of anterior 2/3 of his tongue. What nerve was damaged?

- A. Tympanichord
- B. Greater petrosal nerve
- C. Lesser petrosal nerve
- D. Deep petrosal nerve
- E. Sublingual nerve

155. A 40 year old male patient died from cerebral edema. In anamnesis the face carbuncle was registered. Autopsy revealed hyperemia and edema of cerebral tissue. White matter of the left hemisphere had two cavities 6x5,5 and 5x4,5 cm large filled with yellowish-green cream-like fluid. Walls of the cavities were built up by nerve tissue with irregular rands. What complication of carbuncle was it?

- A. Acute abscesses
- B. Chronic abscesses
- C. Empyema
- D. Colliquative necroses
- E. Cysts

156. A dentist was examining oral cavity of a 9 year old child in the buccal surface of gingiva in the area of the lower canine he revealed a red, soft, node-like formation 1 cm in diameter that started immediately bleeding when touched. Microscopical examination revealed that this formation consisted of many small vessels

like venules and capillaries separated by thin layers of connective tissue, with focal infiltration by lymphoid and plasmatic cells. Such changes are typical for:

- A. Angiomatous epulis
- B. Capillary hemangioma
- C. Radicular granuloma
- D. Fibrous epulis
- E. Papilloma

157. In the surgical department of a dental clinic cases of hospital-acquired staphylococcal infection were registered which was caused by strains with multiple drug resistance. Such feature can be identified by presence of:

- A. R-plasmids
- B. F-plasmids
- C. Temperate bacteriophages
- D. Exotoxins
- E. Virulent bacteriophages

158. Roentgenological examination of a patient revealed a deformity of the inferior wall of the right eye socket. What paranasal sinus was most probably damaged?

- A. Right maxillary sinus
- B. Sphenoidal sinus
- C. Frontal sinus
- D. Right ethmoidal labyrinth
- E. Left ethmoidal labyrinth

159. During examination a dentist revealed cervical caries of right inferior incisors as well as enlargement of a certain group of lymph nodes. What lymph nodes are enlarged?

- A. Submental
- B. Occipital
- C. Superficial cervical
- D. Deep cervical
- E. Facial

160. Examination of a tubular organ revealed that its middle membrane consisted of solid hyaline rings. What epithelium lines mucous membrane of this organ?

- A. Multinuclear prismatic ciliated
- B. Monolayer prismatic glanduous
- C. Monolayer prismatic with a limbus
- D. Multilayer squamous nonkeratinous
- E. Monolayer cubic

161. What method should be applied for sterilization of heatproof and moistureproof stomatological instruments in order to ensure total destruction of vi-

ruses, vegetative and spore forms of microorganisms?

- A. Autoclaving
- B. Boiling
- C. Pasteurization
- D. Tyndallization
- E. Burning in the flame of gas burner

162. A female patient was admitted to the hospital with pleuritis. Which area of pleural cavity contains most exudate?

- A. Costodiaphragmatic recess
- B. Phrenicomedial recess
- C. Costomediastinal recess
- D. Under the pleural cupula
- E. Under the pulmonary radix

163. A 10 month old child has high excitability, sleep disturbance, amyotonia, retarded dentition, teeth erupt with inadequate enamel calcification. These changes are caused by deficiency of the following vitamin:

- A. Cholecalciferol
- B. Riboflavin
- C. Thiamine
- D. Retinol
- E. Nicotinamide

164. Examination of nasal cavity revealed deviation of the posterior part of nasal septum. What bone is affected?

- A. Vomer
- B. Medial plate of pterygoid process
- C. Lateral plate of pterygoid process
- D. Perpendicular plate of ethmoid bone
- E. Vertical plate of palatine bone

165. During embryogenesis the epithelial band also known as vestibular plate gives rise to development of vestibule of mouth. What biological mechanism of the programmed death of cells provides growth of buccolabial sulcus from epithelial plate?

- A. Apoptosis
- B. Necrosis
- C. Meiosis
- D. Paraneurosis
- E. Amitosis

166. Roentgenological examination of mandible of a 27 year old man revealed a focus of osseous tissue destruction. Histological examination revealed a tumour consisting of odontogenous epithelium cords, immature connective tissue and dysplastic dentin rests. What tumour is

it?

- A. Dentinoma
- B. Ameloblastic fibro-odontoma
- C. Odontoameloblastoma
- D. Odontogenous fibroma
- E. Complex odontoma

167. A male patient underwent an operation on account of inguinal hernia. During the operation a surgeon damaged content of the inguinal canal. What structure was damaged?

- A. *Funiculus spermaticus*
- B. *Urachus*
- C. *Lig. teres uteri*
- D. *Lig. inguinale*
- E. -

168. A patient with fracture of the greater wing of sphenoid bone was admitted to the craniocerebral department. The fracture line went through the spinous foramen. What vessel was damaged?

- A. Middle meningeal artery
- B. Superficial artery
- C. Lateral pterygoid artery
- D. Anterior deep temporal artery
- E. Posterior deep temporal artery

169. A patient has allergic rhinitis with profuse mucous discharges, itching, frequent sneezing. What drug should be chosen if you know that it selectively blocks histamine receptors?

- A. Loratadine
- B. Mesatonum
- C. Adrenaline hydrochloride
- D. Naphthizin
- E. Prednisolone

170. A patient with myocardium infarction was admitted to the cardiological department. In order to relieve his pain it was decided to potentiate action of fentanyl by a certain neuroleptic. What is the most suitable neuroleptic for neuroleptanalgesia?

- A. Droperidol
- B. Aminazine
- C. Triftazine
- D. Haloperidol
- E. Sulpiride

171. During examination of a child's oral cavity a pediatrician established presence of inferior medial incisors. The child's development is normal. How old is the child?

- A. 6-7 months
- B. 8-9 months
- C. 10-12 months
- D. 13-14 months
- E. -

172. A 23 year old man got perforation of hard palate. There was also a solid well-defined formation. Post-operative microscopical examination of this formation revealed a large focus of caseous necrosis surrounded by granulation tissue with endovasculitis and cellular infiltrate consisting mainly of plasmocytes but also of lymphocytes and epithelioid cells. What is the most probable diagnosis?

- A. Syphilis
- B. Tuberculosis
- C. Scleroma
- D. Sarcoma
- E. Lepra

173. A young woman has entered a production unit where strongly smelled of paints and varnishes and had bronchospasm. This reflex was provoked by irritation of the following receptors:

- A. Irritant
- B. Juxtaglomerular
- C. Pleural receptors
- D. Central chemoreceptors
- E. Peripheral chemoreceptors

174. A histological specimen presents an organ that has both cortical and medullary substance. Cortical substance consists of an external zone that contains lymph nodules as well as of a paracortical zone. Medullary substance contains medullary cords, sinuses and trabecules. What organ possesses these morphological signs?

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

175. A ventral root of spinal cord was damaged as a result of a trauma. The following processes of the following neurons were damaged:

- A. Axons of motor neurons
- B. Dendrites of motor neurons
- C. Axons of sensory neurons
- D. Dendrites of sensory neurons
- E. Dendrites of internuncial neurons

176. A 7 year old child has angina.

A smear from the tonsil surface was inoculated on blood agar. 24 hours later there had grown colonies of streptococci. Nutrient medium turned transparent around them. This study revealed presence of the following pathogenous factor:

- A. Hemolysin
- B. Endotoxin
- C. Neuraminidase
- D. Beta-lactamase
- E. Leukocidin

177. Hurtnup's disease is caused by point mutation of only one gene. This results in abnormal absorption of tryptophane in the intestine as well as its abnormal reabsorption in renal tubules. This causes synchronous disorders in digestive and urinary excretion systems. What genetic phenomenon is observed in this case?

- A. Pleiotropy
- B. Complementary interaction
- C. Polymery
- D. Codominance
- E. Semidominance

178. A patient with Itsenko-Cushing syndrome has persistent hyperglycemia and glycosuria, hypertension, osteoporosis, obesity. Increased synthesis and hypersecretion of the following hormone will be observed in this case:

- A. Cortisol
- B. Adrenaline
- C. Glucagon
- D. Thyroxin
- E. Aldosterone

179. A patient was delivered to the admission ward with poisoning with an insecticide of anticholinesterase action. What drug able to block muscarinic cholinoreceptors should be prescribed?

- A. Atropine sulfate
- B. Pilocarpine hydrochloride
- C. Dithylinum
- D. Benzohexonium
- E. Mesatonum

180. A 15 year old girl was delivered to the hospital with inflammation of vermiform appendix. Blood analysis revealed signs of anaemia. Her feces contained lemon-shaped helminthic eggs (50x30 micrometer) with "plugs" on the poles. What type of helminth is it?

- A. Trichuris
- B. Pinworm
- C. Hookworm
- D. Echinococcus
- E. Hymenolepis nana

181. Prophylactic medical examination of a 7 year old boy revealed that the boy had Lesch-Nyhan syndrome (only boys can be affected). His parents are healthy but his grandfather by his mother's side has the same diagnosis. What is the type of disease inheritance?

- A. Recessive, sex-linked
- B. Dominant, sex-linked
- C. Autosomally recessive
- D. Autosomally dominant
- E. Semidominance

182. Endoscopic examination of duodenum revealed a tumour of the major papilla. This pathological formation is localized in the following part of duodenum:

- A. Descending part
- B. Superior part
- C. Horizontal part
- D. Ascending part
- E. Superior flexure

183. Autopsy revealed that the upper lobe of the right lung was enlarged, grey, airless; surface of incision was dripping with turbid liquid; pleura had a lot of fibrinous plicae. Microscopical examination of alveoles revealed exudate containing neutrophils, desquamated alveolocytes and fibrin fibres. Bronchus wall was intact. What is the most probable diagnosis?

- A. Croupous pneumonia
- B. Interstitial pneumonia
- C. Pulmonary abscess
- D. Focal pneumonia
- E. Influenzal pneumonia

184. Examination of mountain climbers who have spent a long time in a high-altitude region revealed increase of erythrocyte number (over $6 \cdot 10^{12}/l$) and haemoglobin concentration (over 170 g/l). What mechanism caused this phenomenon?

- A. Intensified production of erythropoietin by the kidneys
- B. Weakening of erythrocyte haemolysis in bloodstream
- C. Improved ability of tissue for oxygen utilization
- D. Intensified processes of anoxic energy production
- E. Weakening of intracellular erythrocyte haemolysis

185. A 60 year old patient complains of tongue burning, excessive salivation and glossalgia effects that came 5 days after he started using a metal dental bridge. Objectively: mucous membrane of oral cavity is edematic and hyperemic. What form of stomatitis is it?

- A. Catarrhal
- B. Purulent
- C. Ulcerous
- D. Gangrenous
- E. Fibrinous

186. A patient underwent extraction of a tooth with oval crown and two tubercles on its masticatory surface. Its root is strongly flattened in mesiodistal direction, its apex is bifurcated. What tooth was extracted?

- A. First superior premolar
- B. First inferior premolar
- C. Canine
- D. Second superior premolar
- E. Second inferior premolar

187. Analysis of a dentist's urine obtained at the end of his working day revealed protein concentration at the rate of 0,7 g/l. His morning urine hadn't such changes. What is this phenomenon called?

- A. Functional proteinuria
- B. Organic proteinuria
- C. Nonselective proteinuria
- D. Extrarenal proteinuria
- E. Hematuria

188. As a result of a trauma a patient has got disfunction of lachrymal gland. What nerve is responsible for its secretion?

- A. *N. petrosus major*
- B. *N. petrosus minor*
- C. *Chorda tympany*
- D. *N. auricularis magnus*
- E. *N. occipitalis minor*

189. Pathological material taken from a patient suffering from pulpitis was inoculated onto Kitt-Tarozzi cultural

medium. It is planned to find the following microorganisms:

- A. Anaerobic
- B. Acid-resistant
- C. Acidophilic
- D. Haemolytic
- E. Aerobic

190. The 16th tooth of a patient is missing. X-ray picture shows in the depth of alveolar process rarefaction of bone and a well-defined cavity that contained the underdeveloped tooth crown. Microscopical examination revealed that the cavity wall was lined with stratified squamous epithelium and enclosed within a fibrous capsule. Make a diagnosis:

- A. Follicular gnathic cyst
- B. Radicular gnathic cyst
- C. Cyst of the incisive canal
- D. Cystic ameloblastoma of jaw
- E. Primordial gnathic cyst

191. A 52 year old patient suffering from cancer of the lower jaw underwent a course of radiation therapy. The tumour has remitted. Which mechanism of cell destruction ensures efficiency of radiation therapy most of all?

- A. Generation of free radicals
- B. Hyperthermia
- C. Lysis by natural killer cells
- D. Vessel thrombosis
- E. Mutagenesis

192. A histological specimen presents a developed tooth that has a coating resistant to acids, but it can be found only on the lateral surfaces of the tooth. What coating is meant?

- A. Cuticle
- B. Dentine
- C. Enamel pellicle
- D. Enamel
- E. Cement

193. A sensory nerve ganglion consists of roundish neurocytes with one process that divides into axon and dendrite at a certain distance from perikaryon. What are such cells called?

- A. Pseudounipolar
- B. Unipolar
- C. Bipolar
- D. Multipolar
- E. Apolar

194. Roentgenological examination of a

patient revealed a cyst enclosing a tooth in its cavity in the area of the premolar. Microscopical examination revealed that the cyst wall consisted of connective tissue and was lined with multilayer squamous epithelium. What is the most probable diagnosis?

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

195. A patient consulted a dentist about itching and burning in the oral cavity; high temperature. The patient was diagnosed with trichomonal gingivostomatitis. What drug should be chosen for his treatment?

- A. Metronidazole
- B. Ampicillin
- C. Doxycycline hydrochloride
- D. Gentamicin sulfate
- E. Nystatin

196. A patient with a tumour in the area of superior tubercles of quadrigeminal plate has lost pupillary reflex. This is most probably caused by dysfunction of the following nucleus of cranial nerves:

- A. Accessory nucleus of oculomotor nerve
- B. Motor nucleus of oculomotor nerve
- C. Motor nucleus of abducent nerve
- D. Motor nucleus of trochlear nerve
- E. Motor nucleus of accessory nerve

197. What preventive medications should be injected to a patient with open maxillofacial trauma provided that he has never got prophylactic vaccination before?

- A. Antitetanus immunoglobulin and anatoxin
- B. Anticonvulsive drugs and anatoxin
- C. Antitetanus serum and antibiotics
- D. Diphtheria, tetanus toxoids and pertussis vaccine and antibiotics
- E. Tetanus anatoxin and antibiotics

198. Microscopic examination of periodontium revealed plethoric vessels, edema of connective tissue along with infiltration by single neutrophils. What type of exudative inflammation in the periodontium is it?

- A. Serous
- B. Purulent
- C. Putrid
- D. Fibrinous
- E. Catarrhal

199. Histological study of an extirpated pulp revealed some cylindrical cells in its peripheral layer. What are these cells called?

- A. Odontoblasts
- B. Fibroblasts
- C. Monocytes
- D. Ameloblasts
- E. Myofibroblasts

200. During examination of a patient a dentist revealed carious cavities on the front teeth that don't have accessory antagonists. What teeth are meant?

- A. Inferior medial incisors
- B. Inferior lateral incisors
- C. Superior lateral incisors
- D. Superior medial incisors
- E. Superior canines