1. Patient with hypochromic anemia has splitting hair and loss of hair, increased nail brittling and taste alteration. What is the mechanism of the development of these symptoms?

a. Deficiency of vitamin B12
b. Deficiency of vitamin A
c. Decreased production of thyroid hormones
d. Deficiency of iron-containing enzymes
e. Decreased production of parathyrin

2. A 27- year-old woman has dropped penicillin containing eye drops. In few minutes there appeared feeling of itching, burning of the skin, lips and eyelids edema, whistling cough, decreasing of BP. What antibodies take part in the development of this allergic reaction?

a. IgM and IgG
b. IgM and IgD
c. IgG and IgD
d. IgE and IgG
e. IgA and IgM

3. A patient underwent a surgery for excision of a cyst on pancreas. After this he developed haemorrhagic syndrome with apparent disorder of blood coagulation. Development of this complication can be explained by:

a. Reduced number of thrombocytes
b. Insufficient fibrin production
c. Activation of fibrinolytic system
d. Activation of anticoagulation system
e. Activation of Christmas factor

4. A 43-year-old patient has thrombopenia, reduction of fibrinogen, products of degradation of fibrin presented in the blood, petechial haemorrhage along with septic shock. What is the most likely cause of the changes?

a. Haemorrhagic diathesis
b. Autoimmune thrombocytopenia
c. DIC-syndrom
d. Disorder of thrombocytes production
e. Exogenous intoxication

5. Pyruvate concentration in the patient

a. Vitamin C
b. Vitamin E
c. Vitamin D6
d. Vitamin D1
e. Vitamin A

6. Person has stable HR, not more than 40 bpm. What is the pacemaker of the heart rhythm in this person?

a. Atrioventricular node
b. His bundle
c. Purkinye fibers
d. Branches of His bundle
e. Sinoatrial node

7. A 32-year-old patient was admitted to the hospital with gross bloodloss due to auto accident trauma. Ps - 110Bpm, RR- 22 pm, BP- 100/60mm Hg. What changes in the blood will occur in an hour after the bloodloss?

a. Erythropenia
b. Leukopenia
c. Hypoproteinemia
d. Hypovolemia
e. Hypochromia of erythrocytes

8. A 70-year-old patient suffers from atherosclerosis complicated by the lower limb thrombosis that has caused gangrene on his left toes. What is the most likely cause of the thrombosis origin?

a. Prothrombinase activation
b. Transformation of fibrinogen into fibrin
c. Impaired heparin synthesis
d. Thrombocyte adhesion
e. Transformation of prothrombin into thrombin

9. ECG of a 44-year-old patient shows signs of hypertrophy of both ventricles and the right atrium. The patient was diagnosed with the tricuspid valve insufficiency. What pathogenetic variant of cardiac dysfunction is usually observed in case of such insufficiency?

a. Heart overload by resistance
b. Coronary insufficiency
c. Cardiac tamponade
d. Heart overload by volume
e. Primary myocardial insufficiency

10. Shock and signs of acute renal failure (ARF) developed in the patient due to permanent injury. What is the leading cause of development of ARF in the case?

a. Increased pressure in the nephron capsule
b. Urine excretion violation
c. Decreased arterial pressure
d. Increased pressure in the renal arteries
e. Decreased oncotic BP

11. Substitution of the glutamic acid on valine was revealed while examining initial molecular structure. For what inherited pathology is this typical?

a. Minkowsky-Shauffard disease
b. Thalassemia
c. Sickle-cell anemia
d. Favism
e. Hemoglobinosis

12. Inflamation is characterised by increasing penetration of vessels of microcirculation stream, increasing of their fluid dynamic blood pressure. Increasing of the osmotic concentration and dispersity of protein structures present in the intercellular fluid. What kind of edema will appear in this case?

a. Mixed
b. Colloid-osmotic
c. Membranogenic
d. Lymphogenic
e. Hydrodynamic

13. Disorder of the airways passage in small and middle bronchi was revealed in the patient. What disorder of the acid-base equilibrium can be detected in the blood?

a. Metabolic alkalosis
b. --
c. Metabolic acidosis
d. Respiratory alkalosis
e. Respiratory acidosis

14. A 62-year-old patient was admitted to the neurological department due to cerebral haemorrage. Condition is grave. There is observed progression of deepness and frequency of breath that turnes into reduction to apnoea,and the cycle repeates. What respiration type has developed in the patient?

a. Kussmaul respiration
b. Gasping respiration
c. Apneustic respiration
d. Cheyne-Stockes respiration

e. Biots respiration

15. In a 45-year-old patient on ECG it was revealed: sinus rhythm, the number of auricular complexes, exceeds number of ventricular complexes; progressing extension of the P—Q interval from complex to complex; fallout of some ventricular complexes, P waves and QRST complexes are without changes. Name the type of heart rhythm disfunction:

a. Intraatrial block
b. Complete atrioventricular block
c. Synoauricular block
d. Atrioventricular blockade of the I degree
e. Atrioventricular block of the II degree

16. A 57-year-old patient was admitted to the gastroenterological department with suspicion on Zollinger-Ellison syndrom because of rapid increase of gastrin level in the blood serum. What disorder of the secretory function of the stomach is the most likely?

a. Achylia
b. Hyperacid hyposecretion
c. Hyperacid hypersecretion
d. Hypoacid hyposecretion
e. Hypoacid hypersecretion

17. A healthy woman has three sons affected by color blindness who were born after her two marriages. Children both of her husbands are healthy. What is the most possible pattern of inheritance of this disease?

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

18. Upper neck node of sympathetic trunk was removed from the rabbit on experiment. Reddening and increased temperature of the skin of head is observed. What form of peripheral circulation of the blood developed in the rabbit?

a. Metabolic arterial hyperemia
b. Neurotonic arterial hyperemia
c. Neuroparalytic arterial hyperemia
d. Venous hyperemia
e. Stasis

19. A couple came for medical genetic counseling. The man has hemophilia, the woman is healthy and there were no cases of hemophilia in her family. What is the risk of having a sick child in this family?

a. 75%
b. 100%
c. 0
d. 50%
e. 25%

20. Oval and round organelles with double wall are seen at the electron micrograph. The outer membrane is smooth, the inner membrane folded into cristae contain enzyme ATPase synthetase. These are:

a. Lysosomes
b. Golgi complex
c. Mitochondria
d. Centrioles
e. Ribosomes

21. A tissue sample of benign tumor was studied under the electron microscope. A lot of small (15-20

nm) spherical bodies, consisting of 2 unequal subunits were detected. These are:

a. Ribosomes
b. Smooth endoplasmic reticulum
c. Mitochondria
d. Microtubules
e. Golgi complex

22. A woman who was sick with rubella during the pregnancy gave birth to a deaf child with hare lip and cleft palate. This congenital defect is an example of:

a. Patau
b. Down
c. Edward
d. Genocopy
e. Phenocopy

23. A woman who was infected with toxoplasmosis during the pregnancy has a child with multiple congenital defects.This is a result of:

a. Teratogenesis
b. Biological mutogenesis
c. Recombination
d. Chemical mutogenesis
e. Cancerogenesis

24. A patient with tissue trauma was taken a blood sample for the determination of blood clotting parameters. Specify the right sequence of extrinsic pathway activation:

a. III – VIII: TF – Xa
b. III – VIIa – Xa
c. IV – VIII: TF – Xa
d. III – IV – Xa
e. IV – VIIa – Xa

25. In result of the damage of one of the Atomic Power Plant reacttor the run-out of radioelements happened. People in the increased radiation zone were radiated with approximately 250-300 r. They were immediately hospitalized. What changes in the blood count would be typical?

a. Lymphopenia
b. Anemia
c. Neutropenia
d. Thrombopenia
e. Leukopenia

26. Dystrophic changes of the heart muscle are accompanied with cardiac cavity enlargement, decrease of the strength of heart contraction, increased amount of blood, which remains in the heart during systolic phase, overfilled veins. For what state of heart is it characteristic?

a. Myogenic dilatation
b. Emergency stage of hyperfunction and hypertrophy
c. Tamponage of the heart
d. Cardiosclerosis
e. Tonogenic dilatation

27. Transmural myocardial infarction in the patient was complicated with progressive acute left ventricle insufficiency. What is the most typical for this state?

a. Ascites
b. Arterial hypertension
c. Edema of the extremities
d. Cyanosis
e. Edema of the lungs

28. Arterial hypertention is caused by the stenosis of the renal arteries in the patient. Activation of

what system is the main link in the pathogenesys of this form of hypertension?

a. Hypothalamic-pituitary

b. Renin-angiotensin

c. Parasympathetic

d. Sympathoadrenal

e. Kallikrein-kinin

29. A 12-year-old boy often suffers from virus and bacterial infections and eczematous skin lesions. Enlargement of T-lymphocytes and IgM with normal IgA and IgG was revealed on examination. What type of immune system pathology is presented in the patient?

a. Hereditary immundeficiency of the complement system

b. Composite immunedefficiency

c. Brutons hypogammaglobulinemia

d. Hypoplasia of thymus

e. Turners syndrome

30. Patient with diabetes didnt get insulin injection in time that caused hyperglycemic coma (glucose in the blood 50mmol/L). What mechanism is prevalent in the development of the coma?

a. Acidosis

b. Hyperosmia

c. Hypoxia

d. Hypokaliemia

e. Hyponatremia

31. Necrosis focus appeared in the area of hyperemia and skin edema in few hours after burn. What mechanism strengthens destructive events in the inflammation area?

a. Diapedesis of erythrocytes

b. Proliferation of fibroblasts

c. Primary alteration

d. Emigration of lymphocytes

e. Secondary alteration

32. a.

b.

c.

d.

e.

33. On simulation of inflammation of the lower extremity the animal exrerienced raise of the temperature, increase of amount of antibodies and leucocytes in the blood. What substances caused this general reaction of the organism on inflammation?

a. Mineralcorticoid

b. Glucocorticoid

c. Interleukin

d. Leucotriens

e. Somatomedins

34. A 68-year-old woman cant move by the upper and lower right extremities due to insult. Muscle tone of these extremities and reflexes are increased. There are pathological reflexes. What form of the paralysis is it?

a. Dissociation

b. Hemiplegia

c. Tetraplegia

d. Paraplegia

e. Monoplegia

35. After a serious psycho-emotional stress a 45-year-old patient suddenly felt constricting heart pain irradiating to the left arm, neck and left scapula. His face turned pale, the cold sweat stood out on it.

The pain attack was stopped with nitroglycerine. What process has developed in this patient?

a. Psychogenic shock
b. Stomach ulcer perforation
c. Myocardial infarction
d. Stroke
e. Stenocardia

36. Periodic renal colics attackes are observed in the woman with primery hyperparathyroidizm. Ultrasonic examination revealed small stones in the kidneys. What is the cause of the formation of the stones?

a. Hypercholesterinemia
b. Hyperphosphatemia
c. Hypercalcemia
d. Hyperuricemia
e. Hyperkalemia

37. While having the dinner the child choked and aspirated the food. heavy cough has started, skin and mucose are cyanotic, rapid pulse, rear breathing, expiration is prolonged. What disorder of the external breathing developed in the child?

a. Biots breathing
b. Stage of expiratory dyspnea on asphyxia
c. Stenotic breathing
d. Stage of inspiratory dyspnea on asphyxia
e. Alternating breathing

38. Chronic glomerulonephritis was diagnosed in a 34-year-old patient 3 years ago. Edema has developed in the last 6 monthes. What caused it?

a. Hyperosmolarity of plasma
b. Hyperaldosteronism
c. Hyperproduction of vasopressin
d. Disorder of albuminous kidneys function
e. Proteinuria

39. While playing volleyball a sportsman made a jump and landed on the outside edge of his foot. He felt acute pain in the talocrural joint, active movements are limited, passive movements are unlimited but painful. A bit later there appeared a swelling in the area of external ankle, the skin became red and warm. What type of peripheral circulation disturbance is the case?

a. Stasis
b. Venous hyperemia
c. Thrombosis
d. Arterial hyperemia
e. Embolism

40. Having helped to eliminate consequences of a failure at a nuclear power plant, a worker got an irradiation doze of 500 roentgen. He complains of headache, nausea, dizziness. What changes in leukocytes quantity can be expected 10 hours after irradiation?

a. Leukemia
b. Neutrophilic leukocytosis
c. Leukopenia
d. Lymphocytosis
e. Agranulocytosis

41. A 12 y.o. boy who suffers from bronchial asthma has an acute attack of asthma: evident expiratory dyspnea, skin pallor. What type of alveolar ventilation disturbance is it?

a. Restrictive
b. Central
c. Neuromuscular
d. Obstructive

e. Throracodiaphragmatic

42. A 46-year-old patient suffering from the diffuse toxic goiter underwent resection of the thyroid gland. After the surgery the patient presents with appetite loss, dyspepsia, increased neuromuscular excitement. The body weight remained unchanged. Body temperature is normal. Which of the following has caused such a condition in this patient?

a. Increased production of calcitonin
b. Increased production of thyroxin
c. Reduced production of parathormone
d. Increased production of thyroliberin
e. Reduced production of thyroxin

43. To prevent the transplant rejection after organ transplantation it is required to administer hormonotherapy for the purpose of immunosuppression. What hormones are used for this purpose?

a. Sexual hormones
b. Mineralocorticoids
c. Glucocorticoids
d. Catecholamines
e. Thyroid

44. A patient caught a cold after which there appeared facial expression disorder. He cannot close his eyes, raise his eyebrows, bare his teeth. What nerve is damaged?

a. Vagus
b. Glossopharyngeal
c. Infraorbital
d. Facial
e. Trigeminus

45. A group of mountain climbers went through the blood analysis at the height of 3000 m. It revealed decrease of HCO3 to 15 micromole/l (standard is 22-26 micromole/l). What is the mechanism of HCO3 decrease?

a. Intensification of acidogenesis
b. Decrease of ammoniogenesis
c. Decrease of bicarbonate reabsorption in kidneys
d. Hyperventilation
e. Hypoventilation

46. ECG of a patient shows such alterations: P-wave is normal, P-Q-interval is short, ventricular QRST complex is wide, R-wave is double-peak or two-phase. What form of arrhythmia is it?

a. Ciliary arrhythmia
b. WPW syndrome (Wolff-Parkinson-White)
c. Atrioventricular block
d. Fredericks syndrome (atrial flutter)
e. Ventricular fibrillation

47. A patient who suffers from pneumonia has high body temperature. What biologically active substance plays the leading part in origin of this phenomenon?

a. Leukotrienes
b. Interleukin-I
c. Bradykinin
d. Histamine
e. Serotonin

48. A 34 year old woman was diagnosed with hereditary microspherocytic hemolytic anemia (Minkowsky-Shauffard disease). What mechanism caused haemolysis of erythrocytes?

a. Enzymopathy
b. Autoimmune disorder
c. Bone marrow hypoploasia

d. Membranopathy
e. Hemoglobinopathy

49. From the group of children who were eating sweet sappy watermelon two kids developed the signs of poisoning: rapid weakness, dizziness, headache, vomiting, edema, tachycardia, cyanosis of mouth, ears, tips of the fingers cyanosis. High concentration of nitrates was detected. What is the leading mechanism of the pathogenesis of the poisoning in the two children?
a. Insufficiency of catalase
b. Insufficiency of met-Hb-reductase
c. Block cytochrome oxidase
d. Insufficiency of superoxiddismutase
e. Insufficiency glutathione pyroxidase

50. Some years ago a patient underwent resection of pyloric part of stomach. He complains of weakness, periodical dark shadows beneath his eyes, dyspnea. In blood: Hb - 70 g/l, erythrocytes - 3,0x1012/l, colour index - 0,7. What changes of erythrocytes in blood smears are the most typical for this condition?
a. Megalocytes
b. Ovalocytes
c. Macrocytes
d. Microcytes
e. Schizocytes

51. During a prophylactic medical examination a 7-year-old boy was diagnosed with daltonism. His parents are healthy and have normal colour vision, but his grandfather on his mothers side has the same abnormality. What is the type of the abnormality inheritance?
a. Dominant, sex-linked
b. Autosomal recessive
c. Autosomal dominant
d. Recessive, sex-linked
e. Semidominance

52. A 27 y.o. patient put eye drops that contain penicillin. After a few minutes she felt itching and burning of her body, there appeared lip and eye-lid edemata; arterial pressure began to drop. What immunoglobulins took part in the development of this allergic reaction?
a. IgM and IgG
b. IgM and IgD
c. IgG and IgD
d. IgE and IgG
e. IgA and IgM

53. Inflammation of a patients eye was accompanied by accumulation of turbid liquid with high protein at the bottom of anterior chamber that was called hypopyon. What process underlies the changes under observation?
a. Secondary alteration
b. Primary alteration
c. Disturbance of microcirculation
d. Proliferation
e. -

54. A 48 y.o. patient was admitted to the hospital with complaints about weakness, irritability, sleep disturbance. Objectively: skin and scleras are yellow. In blood: conjugated bilirubin, cholalemia. Feces are acholic. Urine is of dark colour (bilirubin). What jaundice is it?
a. Gilberts syndrome
b. Crigler-Najjar syndrome
c. Hemolytic
d. Parenchymatous
e. Mechanic

55. A patient who suffers from severe disorder of water-salt metabolism experienced cardiac arrest in diastole. What is the most probable mechanism of cardiac arrest in diastole?

a. Hyponatremia

b. Hyperkaliemia

c. Organism dehydratation

d. Hypernatremia

e. Hypokaliemia

56. A patient who suffers from heart failure has enlarged liver, edemata of lower extremities, ascites. What is the leading mechanism in the development of this edema?

a. Membranogenic

b. -

c. Colloid osmotic

d. Lymphogenous

e. Hydrodynamic

57. Two weeks after lacunar tonsillitis a 20-year-old man started complaining about general weakness, lower eyelid edemata. After examination the patient was diagnosed with acute glomerulonephritis. What are the most likely pathological changes in the urine formula?

a. Proteinuria

b. Presence of fresh erythrocytes

c. Natriuria

d. Pyuria

e. Cylindruria

58. A 32 y.o. man is tall, he has gynecomastia, adult woman pattern of hair distribution, high voice, mental deficiency, sterility. Provisional diagnosis is Klinefelters syndrome. In order to specify diagnosis it is necessary to analize:

a. Leukogram

b. Blood group

c. Genealogy

d. Caryotype

e. Spermatogenesis

59. Examination of a miner revealed pulmonary fibrosis accompanied by disturbance of alveolar ventilation. What is the main mechanism of this disturbance?

a. Disturbance of neural respiration control

b. Constriction of superior respiratory tracts

c. Limitation of respiratory surface of lungs

d. Limitation of breast mobility

e. Bronchi spasm

60. After transfusion of 200 ml of blood a patient presented with body temperature rise up to 37,9oC. Which of the following substances is the most likely cause of temperature rise?

a. Interleukin-4

b. Interleukin-1

c. Tumour necrosis factor

d. Interleukin-2

e. Interleukin-3

61. A 49 y.o. woman consulted a doctor about heightened fatigue and dyspnea during physical activity. ECG: heart rate is 50/min, PQ is extended, QRS is unchanged, P wave quanity exceeds quantity of QRS complexes. What type of arrhythmia does the patient have?

a. Extrasystole

b. Ciliary arhythmia

c. Sinoatrial block

d. Atrioventricular block

e. Sinus bradycardia

62. a.
b.
c.
d.
e.

63. A patient is followed up in an endocrinological dispensary on account of hyperthyreosis. Weight loss, tachycardia, finger tremor are accompanied by hypoxia symptoms - headache, fatigue, eye flicker. What mechanism of thyroid hormones action underlies the development of hypoxia?
a. Competitive inhibition of respiratory ferments
b. Inhibition of respiratory ferment synthesis
c. Disjunction, oxydation and phosphorilation
d. Intensification of respiratory ferment synthesis
e. Specific binding of active centres of respiratory ferments

64. A 56 y.o. patient has been suffering from thyreotoxicosis for a long time. What type of hypoxia can be developed?
a. Hemic
b. Respiratory
c. Mixed
d. Tissue
e. Circulatory

65. An animal with aortic valve insufficiency got hypertrophy of its left heart ventricle. Some of its parts have local contractures. What substance accumulated in the myocardiocytes caused these contractures?
a. Carbon dioxide
b. Sodium
c. Potassium
d. Lactic acid
e. Calcium

66. A girl is diagnosed with adrenogenital syndrome (pseudohermaphroditism). This pathology was caused by hypersecretion of the following adrenal hormone:
a. Androgen
b. Aldosterone
c. Adrenalin
d. Cortisol
e. Estrogen

67. A patient has extrasystole. ECG shows no P wave, QRS complex is deformed, there is a full compensatory pause. What extrasystoles are these?
a. Atrioventricular
b. Atrial
c. Ventricular
d. Sinus
e. -

68. A 12-year-old teenager has significantly put off weight within 3 months; glucose concentration rose up to 50 millimole/l. He fell into a coma. What is the main mechanism of its development?
a. Hyperosmolar
b. Ketonemic
c. Hypoxic
d. Lactacidemic
e. Hypoglycemic

69. As a result of increased permeability of the erythrocyte membrane in a patient with microspherocytic anaemia (Minkowsky-Shauffard disease) cells receive sodium ions and water.

Erythrocytes take form of spherocytes and can be easily broken down. What is the leading mechanism of erythrocyte damage in this case?

a. Nucleic
b. Electrolytic osmotic
c. Acidotic
d. Calcium
e. Protein

70. A 56 year old patient suffering from cardiac insufficiency has edema of feet and shins, edematous skin is pale and cold. What is the leading mechanism of edema pathogenesis?

a. Disorder of lymph outflow
b. Positive water balance
c. Drop of oncotic pessure in capillaries
d. Increase of capillary permeability
e. Rise of hydrostatic pressure in venules

71. Prophylactic medical examination of a 36 year old driver revealed that his AP was 150/90 mm Hg. At the end of working day he usually hears ear noise, feels slight indisposition that passes after some rest. He was diagnosed with essential hypertension. What is the leading pathogenetic mechanism in this case?

a. Endocrinal
b. Reflexogenic
c. Nephric
d. Humoral
e. Neurogenetic

72. Violation of safety rules resulted in calomel intoxication. Two days later the daily diuresis was 620 ml. A patient experienced headache, vomiting, convulsions, dyspnea, moist rales in lungs. What pathology is it?

a. Pyelonephritis
b. Acute renal insufficiency
c. Uraemic coma
d. Chronic renal insufficiency
e. Glomerulonephritis

73. A newborn child with pylorostenosis has often repeating vomiting accompanied by apathy, weakness, hypertonicity, sometimes convulsions. What disorder form of acid-base balance is it?

a. Excretory acidosis
b. Nongaseous alkalosis
c. Gaseous acidosis
d. Gaseous alkalosis
e. Metabolic acidosis

74. 24 hours after appendectomy blood of a patient presents neutrophilic leukocytosis with regenerative shift. What is the most probable mechanism of leukocytosis development?

a. Amplification of leukopoiesis and decelerated emigration of leukocytes to the tissues
b. Amplification of leukopoiesis
c. Decelerated leukocyte destruction
d. Redistribution of leukocytes in the organism
e. Deceleratied emigration of leukocytes to the tissues

75. A 59 year old patient is a plant manager. After the tax inspection of his plant he felt intense pain behind his breastbone irradiating to his left arm. 15 minutes later his condition came to normal. Which of the possible mechanisms of stenocardia development is the leading in this case?

a. Functional heart overload
b. High catecholamine concentration in blood
c. Intravascular aggregation of blood corpuscles
d. Coronary atherosclerosis

e. Coronary thrombosis

76. Arterial pressure of a surgeon who performed a long operation rised up to 140/110 mm Hg. What changes of humoral regulation could have caused the rise of arterial pressure in this case?

a. Activation of kallikrein kinin system
b. Inhibition of sympathoadrenal system
c. Activation of formation and excretion of aldosterone
d. Activation of renin angiotensive system
e. Activation of sympathoadrenal system

77. A 50-year-old patient complains of thirst, drinking of a lot of water, marked polyuria. Blood glucose is 4,8mmol/L, urine glucose and acetone bodies are absent, urine is colorless, specific gravity is 1,002-1,004. What is the cause of polyuria?

a. Vasopressin insufficiency
b. Insulin insufficiency
c. Thyrotoxicosis
d. Aldosteronism
e. Hypothyroidism

78. A patient was ill with burn disease that was complicated by DIC syndrome. What stage of DIC syndrome can be suspected if it is known that the patients blood coagulates in less than 3 minutes?

a. Hypocoagulation
b. Transition phase
c. Hypercoagulation
d. Fibrinolysis
e. Terminal

79. A 55 y.o. woman consulted a doctor about having continuous cyclic uterine hemorrhages for a year, weakness, dizziness. Examination revealed skin pallor. Hemogram: Hb- 70 g/l, erythrocytes - 3,2x1012/l, color index - 0,6, leukocytes - 6,0x109/l, reticulocytes - 1%; erythrocyte hypochromia. What anemia is it?

a. Aplastic anemia
b. Hemolytic anemia
c. Chronic posthemorrhagic anemia
d. B12-folate-deficiency anemia
e. Iron-deficiency anemia

80. A 56 year old patient came to a hospital with complaints about general weakness, tongue pain and burning, sensation of limb numbness. In the past he underwent resection of forestomach. In blood: Hb- 80 g/l; erythrocytes - 2,0x1012/l; colour index - 1,2, leukocytes - 3,5x109/l. What anemia type is it?

a. Hemolytic
b. Aplastic
c. Iron-deficient
d. B12-folate deficient
e. Posthemorrhagic

81. The patient with acute miocardial infarction was given intravenously different solutions during 8 hours with medical dropper 1500ml and oxygen intranasally. He died because of pulmonary edema. What caused the pulmonary edema?

a. Volume overload of the left ventricular
b. Allergic reaction
c. Inhalation of the oxygen
d. Neurogenic reaction
e. Decreased oncotic pressure due to hemodilution

82. A 25 year old Palestinian woman complains of weakness, dizziness, dyspnea. In anamnesis: periodically exacerbating anemia. In blood: Hb - 60 g/l, erythrocytes - 2,5x1012/l, reticulocytes -

35o/oo, anisocytosis and poikilocytosis of erythrocytes, a lot of target cells and polychromatophils. What type of anemia is it?

a. Sickle-cell anemia
b. Addison-Biermer disease
c. Glucose 6-phosphate dehydrogenase-deficient anemia
d. Thalassemia
e. Minkowsky-Shauffard disease

83. A 23 y.o. patient complains of weakness, temperature rise up to 38-40°C. Objectively: liver and spleen are enlarged. Hemogram: Hb- 100 g/l, erythrocytes - 2,9x1012/l, leukocytes - 4,4x109/l, thrombocytes - 48x109/l, segmentonuclear neutrophils - 17%, lymphocytes - 15%, blast cells - 68%. All cytochemical reactions are negative. Make a hematological conclusion:

a. Chronic myeloleukosis
b. Acute lymphoblastic leukosis
c. Acute erythromyelosis
d. Undifferentiated leukosis
e. Acute myeloblastic leukosis

84. Inflammatory processes cause synthesis of protein of acute phase in an organism. What substances stimulate their synthesis?

a. Biogenic amins
b. Angiotensin
c. Immunoglobulins
d. Interferons
e. Interleukin-1

85. A chemical burn caused esophagus stenosis. Difficulty of ingestion led to the abrupt loss of weight. In blood: erythrocytes -3,0x1012/l, Hb - 106 g/l, crude protein - 57 g/l. What type of starvation is it?

a. Water
b. Absolute
c. Proteinic
d. Complete
e. Incomplete

86. A 42 year old woman with neuralgia of trifacial nerve complains about periodical reddening of the right part of her face and neck, sense of warmth gush, increased skin sensitivity. These effects can be explained by the following type of arterial hyperemia:

a. Neurotonic
b. Metabolic
c. Reactive
d. Functional
e. Neuroparalytic

87. A patient who suffers from acute myocarditis has clinical signs of cardiogenic shock. What of the under-mentioned pathogenetic mechanisms plays the main part in shock development?

a. Reduction of diastolic flow to the heart
b. Depositing of blood in organs
c. Disturbance of pumping ability of heart
d. Decrease of vascular tone
e. Increase of peripheral vascular resistance

88. On the 6th day of treatment a patient with acute renal insufficiency developed polyuria. Diuresis intensification at the beginning of polyuria stage of acute renal insufficiency is caused by:

a. Growth of natriuretic factor
b. Volume expansion of circulating blood
c. Renewal of filtration in nephrons
d. Reduction of aldosteron content in plasma

e. Reduction of vasopressin content in plasma

89. A 30 year old woman has face edemata. Examination revealed proteinuria (5,87 g/l), hypoproteinemia, dysproteinemia, hyperlipidemia. What condition is the set of these symptoms typical for?

a. Chronic pyelonephritis
b. Nephritic syndrome
c. Nephrotic syndrome
d. Acute renal failure
e. Chronic renal failure

90. A patient with nephrotic syndrome has massive edemata of his face and limbs. What is the leading pathogenetic mechanism of edemata development?

a. Lymphostasis
b. Increase of lymph outflow
c. Increase of vascular permeability
d. Rise of hydrodynamic blood pressure
e. Drop of oncotic blood pressure

91. A patient staying in the pulmonological department was diagnosed with pulmonary emphysema accompanied by reduced elasticity of pulmonary tissue. What type of respiration is observed?

a. Expiratory dyspnea
b. Superficial respiration
c. Periodic respiration
d. Infrequent respiration
e. Inspiratory dyspnea

92. An unconscious young man with signs of morphine poisoning entered admission office. His respiration is shallow and infrequent which is caused by inhibition of respiratory centre. What type of respiratory failure is it?

a. Ventilative dysregulatory
b. Ventilative restrictive
c. Diffusive
d. Perfusive
e. Ventilative obstructive

93. A 62 year old patient who previously worked as stoker was admitted to a hospital with complaints about general weakness, abrupt weight loss, hoarse voice, dyspnea, dry cough. Laryngoscopy revealed a tumour in the pharynx that invaded vocal cords and epiglottis. What is the most probable cause of tumour development?

a. Polycyclic aromatic carbohydrates
b. Aromatic amines and amides
c. Ionizing radiation
d. Retroviruses
e. Nitrosamines

94. Tuberculine was injected intraperitoneally to the animal sensibilized with tuberculine. Venous hyperemia and peritonial edema were detected on the laparotomy in 24 hours. Increased amount of lymphocytes and monocytes were in the smear-print from the peritonium. What pathological process is in the animal?

a. Aseptic inflammation
b. Allergic inflammation
c. Suppurative inflammation
d. Serous inflammation
e. Fibrinous inflammation

95. Daltonism was diagnosed in a 7-year-old boy while prophylactic medical examination. Parents are healthy, color vision is normal. Grandfather from the mothers side has the same disorder. What is the

type of inheriting of this anomaly?

a. Autosomal-dominant

b. Recessive, connected with sex

c. Incomplete domination

d. Dominant, connected with sex

e. Autosomal-recessive

96. A married couple came to the genetic counseling. The husband suffers from the insulin-dependant diabetes, the wife is healthy. What is the probability that this couple will have an insulin-dependant child?

a. Higher than throughout the population

b. Lower than throughout the population

c. 50%

d. 100%

e. The same as throughout the population

97. A patient who had been working hard under conditions of elevated temperature of the environment, has now a changed quantity of blood plasma proteins. What penomenon is the case?

a. Absolute hypoproteinemia

b. Absolute hyperproteinemia

c. Relative hyperproteinemia

d. Disproteinemia

e. Paraproteinemia

98. An experimental rat with extremity paralysis has no tendon and cutaneous reflexes, muscle tone is decreased, but muscles of the affected extremity maintain their ability to react with excitation to the direct action of continious current. What type of paralysis is it?

a. Flaccid peripheral

b. Spastic peripheral

c. Extrapyramidal

d. Spastic central

e. Flaccid central

99. A 28 year old man had a gunshot wound of shin that resulted in an ulcer from the side of the injury. What is the main factor of neurodystrophy pathogenesis in this case?

a. Tissue damage

b. Traumatization of peripheral nerve

c. Microcirculation disturbance

d. Psychical stress

e. Infection

100. A 45 year old patient was admitted to the cardiological department. ECG data: negative P wave overlaps QRS complex, diastolic interval is prolonged after extrasystole. What type of extrasystole is it?

a. Atrial

b. Sinus

c. Atrioventricular

d. Ventricular

e. Bundle-branch

101. A rabbits nerve that innervates the right ear was cut and its right superior cervical ganglion was removed. Immediately after operation the temperature of ear skin was measured. It was revealed that the temperature of the rabbits ear skin on the side of denervation was by 1,5 degree C higher than on the opposite intact side. What of the following is the most probable explanation of the above-mentioned effects?

a. Arterial neuroparalytic hyperemia

b. Atrerial hyperemia induced by metabolic factors

c. Physiological arterial hyperemia

d. Reactive arterial hyperemia
e. Arterial neurotopical hyperemia

102. Two hours after an exam a student had a blood count done and it was revealed that he had leukocytosis without significant leukogram modifications. What is the most probable mechanism of leukocytosis development?
a. Deceleration of leukocyte migration to the tissues
b. Leukopoiesis intensification and deceleration of leukocyte lysis
c. Leukopoiesis intensification
d. Deceleration of leukocyte lysis
e. Redistribution of leukocytes in the organism

103. A patient presents with icteritiousness of skin, scleras and mucous membranes. Blood plasma the total bilirubin is increased, stercobilin is increased in feces, urobilin is increased in urine. What type of jaundice is it?
a. Haemolytic
b. Parenchymatous
c. Cholestatic
d. Obturational
e. Gilberts disease

104. Hepatitis has led to the development of hepatic failure. Mechanism of edemata formation is activated by the impairment of the following liver function:
a. Glycogen-synthetic
b. Protein-synthetic
c. Chologenetic
d. Barrier
e. Antitoxic

105. As a result of a trauma a patient has developed traumatic shock that led to the following disorders: AP is 140/90 mm Hg, Ps is 120 bpm. The patient is fussy, talkative, pale. Such state relates to the following shock phase:
a. Latent period
b. Torpid
c. -
d. Erectile
e. Terminal

106. Examination of a patient admitted to the surgical department with symptoms of acute appendicitis revealed the following changes in the white blood cells: the total count of leukocytes is 16cdot109/l. Leukocyte formula: basophils - 0, eosinophils - 2%, juvenile forms - 2%, stabnuclear - 8%, segmentonuclear - 59%, lymphocytes - 25%, monocytes- 4%. The described changes can be classified as:
a. Neutrophilic leukemoid reaction
b. Neutrophilia with hyperregenerative left shift
c. Neutrophilia with right shift
d. Neutrophilia with degenerative left shift
e. Neutrophilia with regenerative left shift

107. A patient being treated for viral hepatitis type B got symptoms of hepatic insufficiency. What blood changes indicative of protein metabolism disorder will be observed in this case?
a. Proteinic blood composition is unchanged
b. Absolute hyperglobulinemia
c. Absolute hyperalbuminemia
d. Absolute hyperfibrinogenemia
e. Absolute hypoalbuminemia

108. A patient was stung by a bee. Examination revealed that his left hand was hot, pink, edematic,

there was a big red blister on the site of sting. What is the leading mechanism of edema development?

a. Drop of oncotic pressure in tissue
b. Drop of osmotic pressure in tissue
c. Reduced vessel filling
d. Injury of vessels caused by the sting
e. Increased vessel permeability

109. A patient suffering from pheochromocytoma complains of thirst, dry mouth, hunger. Blood test for sugar revealed hyperglycemia. What type of hyperglycemia is it?

a. Somatotropic
b. Hypoinsulinemic
c. Hypercorticoid
d. Alimentary
e. Adrenal

110. A patient suffering from stenocardia was taking nitroglycerine which caused restoration of blood supply of myocardium and relieved pain in the cardiac area. What intracellular mechanism provides restoration of energy supply of insulted cells?

a. Increased permeability of membranes
b. Reduction of ATP resynthesis
c. Intensification of ATP resynthesis
d. Intensification of oxygen transporting into the cell
e. Intensification of RNA generation

111. A couple had a child with Downs disease. Mother is 42 years old. This disease is most probably caused by the following impairment of prenatal development:

a. Specific fetopathy
b. Gametopathy
c. Embryopathy
d. Blastopathy
e. Non-specific fetopathy

112. There are several groups of molecular mechanisms playing important part in pathogenesis of insult to cells which contributes to the pathology development. What processes are stimulated by proteinic damage mechanisms?

a. Phospholipase activation
b. Lipid peroxidation
c. Enzyme inhibition
d. Osmotic membrane distension
e. Acidosis

113. A child was born with cleft palate. Examination revealed aorta defects and reduced number of T-lymphocytes in blood. What immunodeficient syndrome is it?

a. Louis-Bar
b. Swiss-type
c. Wiskott-Aldrich
d. Chediak-Higashi
e. DiGeorge

114. Examination of a child who frequently suffers from infectious diseases revealed that IgG concentration in blood serum was 10 times less than normal, IgA and IgM concentration was also significantly reduced. Analysis showed also lack of B-lymphocytes and plasmocytes. What disease are these symptoms typical for?

a. Swiss-type agammaglobulinemia
b. Louis-Bar syndrome
c. Di George syndrome
d. Brutons disease

e. Dysimmunoglobulinemia

115. A driver who got a trauma in a road accident and is shocked has reduction of daily urinary output down to 300 ml. What is the main pathogenetic factor of such diuresis change?

a. Decreased number of functioning glomerules
b. Secondary hyperaldosteronism
c. Drop of oncotic blood pressure
d. Increased vascular permeability
e. Drop of arterial pressure

116. Examination of a 42 year old patient revealed a tumour of adenohypophysis. Objectively: the patients weight is 117 kg, he has moon-like hyperemic face, red-blue striae of skin distension on his belly. Osteoporosis and muscle dystrophy are present. AP is 210/140 mm Hg. What is the most probable diagnosis?

a. Conns disease
b. Cushings syndrome
c. Cushings disease
d. Diabetes mellitus
e. Essential hypertension

117. Examination of a 12 year old boy with developmental lag revealed achondroplasia: disproportional constitution with evident shortening of upper and lower limbs as a result of growth disorder of epiphyseal cartilages of long tubal bones. This disease is:

a. Inherited, sex-linked
b. Inherited, recessive
c. Inherited, dominant
d. Congenital
e. Acquired

118. A patient was diagnosed with autoimmune hemolytic cytotoxic anemia. What substances are antigens in II type allergic reactions?

a. Hormones
b. Antibiotics
c. Modified receptors of cell membranes
d. Serum proteins
e. Inflammation modulators

119. A patient suffers from the haemorrhagic syndrome that shows itself in frequent nasal bleedings, posttraumatic and spontaneous intracutaneous and intra-articular haemorrhages. After a laboratory study a patient was diagnosed with the type B haemophilia. This disease is provoked by the deficiency of the following factor of blood coagulation:

a. IX
b. XI
c. VII
d. V
e. VIII

120. A 58-year-old patient suffers from the cerebral atherosclerosis. Examination revealed hyperlipoidemia. What class of lipoproteins will most probably show increase in concentration in this patient?

a. Chylomicrons
b. Cholesterol
c. High-density lipoproteins
d. Fatty acid complexes with albumins
e. Low-density lipoproteins

121. In course of a preventive examination of a miner a doctor revealed changes of cardiovascular fitness which was indicative of cardiac insufficiency at the compensation stage. What is the main

proof of cardiac compensation?

a. Myocardium hypertrophy

b. Rise of arterial pressure

c. Cyanosis

d. Dyspnea

e. Tachycardia

122. A 47 year old man with myocardium infarction was admitted to the cardiological department. What changes of cellular composition of peripheral blood are induced by necrotic changes in the myocardium?

a. Eosinophilic leukocytosis

b. Monocytosis

c. Neutrophilic leukocytosis

d. Thrombocytopenia

e. Lymphopenia

123. A patient with skin mycosis has disorder of cellular immunity. The most typical characteristic of it is reduction of the following index:

a. B-lymphocytes

b. Plasmocytes

c. Immunoglobulin G

d. Immunoglobulin E

e. T-lymphocytes

124. A patient with massive burns developed acute renal insufficiency characterized by a significant and rapid deceleration of glomerular filtration. What is the mechanism of its development?

a. Rise of pressure of tubular fluid

b. Renal artery embolism

c. Damage of glomerular filter

d. Reduction of functioning nephron number

e. Reduction of renal blood flow

125. A child is pale, pastose, muscular tissue is bad developed, lymph nodes are enlarged. He often suffers from angina and pharyngitis, blood has signs of lymphocytosis. The child is also predisposed to autoallergic diseases. What type of diathesis can be presumed in this case?

a. Gouty

b. Exudative

c. Lymphohypoplastic

d. Asthenic

e. Hemorrhagic

126. Parents of a 3 year old child have been giving him antibiotics with purpose of preventing enteric infections for a long time. A month later the childs condition changed for the worse. Blood examination revealed apparent leukopenia and granulocytopenia. What is the most probable mechanism of blood changes?

a. Redistributive

b. Autoimmune

c. Myelotoxic

d. Age-specific

e. Hemolytic

127. A patient ill with enteritis accompanied by massive diarrhea has low water rate in the extracellular space, high water rate inside the cells and low blood osmolarity. What is such disturbance of water-electrolytic metabolism called?

a. Hyperosmolar hyperhydration

b. Hypo-osmolar hypohydration

c. Osmolar hypohydration

d. Hyperosmolar hypohydration

e. Hypo-osmolar hyperhydration

128. A patient with obliterating atherosclerosis underwent sympathectomy of femoral artery in the region of femoral trigone. What type of arterial hyperemia was induced by the operation?

a. Reactive
b. Neurotonic
c. Functional
d. Neuroparalytic
e. Metabolic

129. A 15 year old girl has pale skin, glossitis, gingivitis. Blood count: erythrocytes - 3,3x1012/l, hemoglobin - 70 g/l, colour index - 0,5. Examination of blood smear revealed hypochromia, microcytosis, poykilocytosis. What type of anemia is it?

a. Hemolytic
b. Thalassemia
c. B12-folic acid-deficient
d. Sickle-cell
e. Iron-deficient

130. A 70 year old man is ill with vascular atherosclerosis of lower extremities and coronary heart disease. Examination revealed disturbance of lipidic blood composition. The main factor of atherosclerosis pathogenesis is the excess of the following lipoproteins:

a. High-density lipoproteins
b. Cholesterol
c. Low-density lipoproteins
d. Intermediate density lipoproteins
e. Chylomicrons

131. A patient ill with essential arterial hypertension had a hypertensic crisis that resulted in an attack of cardiac asthma. What is the leading mechanism of cardiac insufficiency in this case?

a. Heart overload caused by high pressure
b. Absolute coronary insufficiency
c. Blood supply disturbance
d. Myocardium damage
e. Heart overload caused by increased blood volume

132. A 5 year old child is ill with measles. Blood analysis revealed increase of total number of leukocytes up to 13x109/l. Leukogram: basophils - 0, eosinophils - 1, myelocytes - 0, juvenile neutrophils - 0, band neutrophils - 2, segmented neutrophils - 41, lymphocytes - 28, monocytes - 28. Name this phenomenon:

a. Eosinopenia
b. Neutropenia
c. Agranulocytosis
d. Lymphocytosis
e. Monocytosis

133. Rats being under stress have muscular hypertonia and high arterial pressure, high glucose concentration in blood and intensified secretion of corticotropin and corticosteroids. In what stress phase are these animals?

a. Shock phase
b. Exhaustion
c. Antishock phase
d. Erectile
e. Terminal

134. After taking poor-quality food a patient developed repeated episodes of diarrhea. On the next day he presented with decreased arterial pressure, tachycardia, extrasystole. Blood pH is 7,18. These abnormalities were caused by the development of:

a. Metabolic alkalosis
b. Nongaseous acidosis
c. Nongaseous alkalosis
d. Gaseous acidosis
e. Gaseous alkalosis

135. A patient was admitted to the infectious department. His symptoms: dry skin, decreased skin turgor, rice-water stool. The patient was diagnosed with cholera. What disorder of water-electrolytic balance is most often observed in this disease?
a. Isoosmotic hypohydration
b. Hypoosmotic hypohydration
c. Hypoosmotic hyperhydration
d. Hyperosmotic hypohydration
e. Hyperosmotic hyperhydration

136. A 45 year old woman is ill with breast cancer. Her left arm has symptoms of lymphatic system insufficiency - limb edema, lymph node enlargement. What form of lymphatic circulation insufficiency is it?
a. Dynamic insufficiency
b. Combined insufficiency
c. -
d. Mechanic insufficiency
e. Resorption insufficiency

137. Patient with hypochromic anemia has splitting hair and loss of hair, increased nail brittling and taste alteration. What is the mechanism of the development of these symptoms?
a. Deficiency of vitamin A
b. Decreased production of thyroid hormones
c. Deficiency of vitamin B12
d. Decreased production of parathyrin
e. Deficiency of iron-containing enzymes

138. A 27- year-old woman has dropped penicillin containing eye drops. In few minutes there appeared feeling of itching, burning of the skin, lips and eyelids edema, whistling cough, decreasing of BP. What antibodies take part in the development of this allergic reaction?
a. IgA and IgM
b. IgM and IgG
c. IgE and IgG
d. IgM and IgD
e. IgG and IgD

139. A 43-year-old patient has thrombopenia, reduction of fibrinogen, products of degradation of fibrin presented in the blood, petechial haemorrhage along with septic shock. What is the most likely cause of the changes?
a. Autoimmune thrombocytopenia
b. Disorder of thrombocytes production
c. Exogenous intoxication
d. DIC-syndrom
e. Haemorrhagic diathesis

140. Pyruvate concentration in the patient’s urine has increased 10 times from normal amount. What vitamin deficiency can be the reason of this change:
a. Vitamin B1
b. Vitamin A
c. Vitamin B6
d. Vitamin E
e. Vitamin C

141. Person has stable HR, not more than 40 bpm. What is the pacemaker of the heart rhythm in this person?

a. His bundle
b. Sinoatrial node
c. Atrioventricular node
d. Branches of His bundle
e. Purkinye fibers

142. A 32-year-old patient was admitted to the hospital with gross bloodloss due to auto accident trauma. Ps - 110Bpm, RR- 22 pm, BP- 100/60mm Hg. What changes in the blood will occur in an hour after the bloodloss?

a. Hypovolemia
b. Hypochromia of erythrocytes
c. Hypoproteinemia
d. Leukopenia
e. Erythropenia

143. A 70-year-old patient suffers from atherosclerosis complicated by the lower limb thrombosis that has caused gangrene on his left toes. What is the most likely cause of the thrombosis origin?

a. Impaired heparin synthesis
b. Thrombocyte adhesion
c. Transformation of prothrombin into thrombin
d. Prothrombinase activation
e. Transformation of fibrinogen into fibrin

144. ECG of a 44-year-old patient shows signs of hypertrophy of both ventricles and the right atrium. The patient was diagnosed with the tricuspid valve insufficiency. What pathogenetic variant of cardiac dysfunction is usually observed in case of such insufficiency?

a. Heart overload by volume
b. Primary myocardial insufficiency
c. Cardiac tamponade
d. Coronary insufficiency
e. Heart overload by resistance

145. Shock and signs of acute renal failure (ARF) developed in the patient due to permanent injury. What is the leading cause of development of ARF in the case?

a. Urine excretion violation
b. Increased pressure in the renal arteries
c. Decreased oncotic BP
d. Decreased arterial pressure
e. Increased pressure in the nephron capsule

146. Inflamation is characterised by increasing penetration of vessels of microcirculation stream, increasing of their fluid dynamic blood pressure. Increasing of the osmotic concentration and dispersity of protein structures present in the intercellular fluid. What kind of edema will appear in this case?

a. Hydrodynamic
b. Lymphogenic
c. Membranogenic
d. Mixed
e. Colloid-osmotic

147. Disorder of the airways passage in small and middle bronchi was revealed in the patient. What disorder of the acid-base equilibrium can be detected in the blood?

a. Metabolic acidosis
b. Metabolic alkalosis
c. --
d. Respiratory acidosis

e. Respiratory alkalosis

148. A 62-year-old patient was admitted to the neurological department due to cerebral haemorrage. Condition is grave. There is observed progression of deepness and frequency of breath that turnes into reduction to apnoea,and the cycle repeates. What respiration type has developed in the patient?

a. Gasping respiration
b. Apneustic respiration
c. Kussmaul respiration
d. Biots respiration
e. Cheyne-Stockes respiration

149. In a 45-year-old patient on ECG it was revealed: sinus rhythm, the number of auricular complexesexceeds number of ventricular complexes; progressing extension of the P-Q interval from complex to complex; fallout of some ventricular complexes; P waves and QRST complexes are without changes. Name the type of heart rhythm disfunction

a. Synoauricular block
b. Intraatrial block
c. Complete atrioventricular block
d. Atrioventricular block of the II degree
e. Atrioventricular blockade of the I degree

150. A 57-year-old patient was admitted to the gastroenterological department with suspicion on Zollinger-Ellison syndrom because of rapid increase of gastrin level in the blood serum. What disorder of the secretory function of the stomach is the most likely?

a. Hyperacid hypersecretion
b. Achylia
c. Hypoacid hypersecretion
d. Hypoacid hyposecretion
e. Hyperacid hyposecretion

151. Upper neck node of sympathetic trunk was removed from the rabbit on experiment. Reddening and increased temperature of the skin of head is observed. What form of peripheral circulation of the blood developed in the rabbit?

a. Neurotonic arterial hyperemia
b. Venous hyperemia
c. Stasis
d. Neuroparalytic arterial hyperemia
e. Metabolic arterial hyperemia

152. A couple came for medical genetic counseling. The man has hemophilia, the woman is healthy and there were no cases of hemophilia in her family. What is the risk of having a sick child in this family?

a. 75%
b. 100%
c. 0%
d. 50%
e. 25%

153. A tissue sample of benign tumor was studied under the electron microscope. A lot of small (15-20 nm) spherical bodies, consisting of 2 unequal subunits were detected. These are:

a. Smooth endoplasmic reticulum
b. Golgi complex
c. Ribosomes
d. Microtubules
e. Mitochondria

154. A woman who was sick with rubella during the pregnancy gave birth to a deaf child with hare lip and cleft palate. This congenital defect is an example of:

a. Patau’s syndrome
b. Down’s syndrome
c. Edward’s syndrome
d. Genocopy
e. Phenocopy

155. A woman who was infected with toxoplasmosis during the pregnancy has a child with multiple congenital defects.This is a result of:
a. Recombination
b. Teratogenesis
c. Biological mutogenesis
d. Cancerogenesis
e. Chemical mutogenesis

156. A patient with tissue trauma was taken a blood sample for the determination of blood clotting parameters. Specify the right sequence of extrinsic pathway activation
a. III – VIII: TF – Xa
b. III – VIIa – Xa
c. IV – VIII: TF – Xa
d. III – IV – Xa
e. IV – VIIa – Xa

157. A patient with the symptoms of acute alcoholic poisoning was brought to the hospital. What carbohydrates metabolism changes are typical for this condition?
a. The anaerobic glucose metabolism predominates in muscles
b. The anaerobic breakage of glucose is increased in muscles
c. The gluconeogenesis is increased in liver
d. The breakage of glycogen is increased in liver
e. The gluconeogenesis velocity in liver is decreased

158. Dystrophic changes of the heart muscle are accompanied with cardiac cavity enlargement, decrease of the strength of heart contraction, increased amount of blood, which remains in the heart during systolic phase, overfilled veins. For what state of heart is it characteristic?
a. Cardiosclerosis
b. Tamponage of the heart
c. Tonogenic dilatation
d. Emergency stage of hyperfunction and hypertrophy
e. Myogenic dilatation

159. Transmural myocardial infarction in the patient was complicated with progressive acute left ventricle insufficiency. What is the most typical for this state?
a. Edema of the lungs
b. Cyanosis
c. Arterial hypertension
d. Ascites
e. Edema of the extremities

160. Arterial hypertention is caused by the stenosis of the renal arteries in the patient. Activation of what system is the main link in the pathogenesys of this form of hypertension?
a. Kallikrein-kinin
b. Hypothalamic-pituitary
c. Sympathoadrenal
d. Parasympathetic
e. Renin-angiotensin

161. A 12-year-old boy often suffers from viral and bacterial infections and eczematous skin lesions. Enlargement of T-lymphocytes and IgM with normal IgA and IgG was revealed on examination. What type of immune system pathology is presented in the patient?

a. Brutons hypogammaglobulinemia
b. Hypoplasia of thymus
c. Composite immunedefficiency
d. Turners syndrome
e. Hereditary immundeficiency of the complement system

162. Patient with diabetes didnt get insulin injection in time that caused hyperglycemic coma (glucose in the blood 50mmol/L). What mechanism is prevalent in the development of the coma?
a. Hyponatremia
b. Acidosis
c. Hypokaliemia
d. Hypoxia
e. Hyperosmia

163. Necrosis focus appeared in the area of hyperemia and skin edema in few hours after burn. What mechanism strengthens destructive events in the inflammation area?
a. Primary alteration
b. Diapedesis of erythrocytes
c. Proliferation of fibroblasts
d. Secondary alteration
e. Emigration of lymphocytes

164. Processes of repolarisation are disturbed in ventricular myocardium in examined person. It will cause amplitude abnormalities of configuration and duration of the wave:
a. Q
b. S
c. P
d. T
e. R

165. On simulation of inflammation of the lower extremity the animal exrerienced raise of the temperature, increase of amount of antibodies and leucocytes in the blood. What substances caused this general reaction of the organism on inflammation?
a. Glucocorticoid
b. Leucotriens
c. Somatomedins
d. Interleukin
e. Mineralcorticoid

166. A 68-year-old woman cant move by the upper and lower right extremities due to insult. Muscle tone of these extremities and reflexes are increased. There are pathological reflexes. What form of the paralysis is it?
a. Paraplegia
b. Monoplegia
c. Dissociation
d. Hemiplegia
e. Tetraplegia

167. Periodic renal colics attackes are observed in the woman with primery hyperparathyroidizm. Ultrasonic examination revealed small stones in the kidneys. What is the cause of the formation of the stones?
a. Hyperuricemia
b. Hyperkalemia
c. Hyperphosphatemia
d. Hypercholesterinemia
e. Hypercalcemia

168. While having the dinner the child choked and aspirated the food. Meavy cough has started, skin

and mucose are cyanotic, rapid pulse, rear breathing, expiration is prolonged. What disorder of the external breathing developed in the child?

a. Stenotic breathing
b. Stage of inspiratory dyspnea on asphyxia
c. Stage of expiratory dyspnea on asphyxia
d. Alternating breathing
e. Biots breathing

169. Chronic glomerulonephritis was diagnosed in a 34-year-old patient 3 years ago. Edema has developed in the last 6 monthes. What caused it?

a. Disorder of albuminous kidneys function
b. Hyperproduction of vasopressin
c. Proteinuria
d. Hyperosmolarity of plasma
e. Hyperaldosteronism

170. While playing volleyball a sportsman made a jump and landed on the outside edge of his foot. He felt acute pain in the talocrural joint, active movements are limited, passive movements are unlimited but painful. A bit later there appeared a swelling in the area of external ankle, the skin became red and warm. What type of peripheral circulation disturbance is the case?

a. Venous hyperemia
b. Thrombosis
c. Stasis
d. Embolism
e. Arterial hyperemia

171. Having helped to eliminate consequences of a failure at a nuclear power plant, a worker got an irradiation doze of 500 roentgen. He complains of headache, nausea, dizziness. What changes in leukocytes quantity can be expected 10 hours after irradiation?

a. Neutrophilic leukocytosis
b. Leukopenia
c. Leukemia
d. Agranulocytosis
e. Lymphocytosis

172. A 12 y.o. boy who suffers from bronchial asthma has an acute attack of asthma: evident expiratory dyspnea, skin pallor. What type of alveolar ventilation disturbance is it?

a. Central
b. Neuromuscular
c. Restrictive
d. Throracodiaphragmatic
e. Obstructive

173. A 46-year-old patient suffering from the diffuse toxic goiter underwent resection of the thyroid gland. After the surgery the patient presents with appetite loss, dyspepsia, increased neuromuscular excitement. The body weight remained unchanged. Body temperature is normal. Which of the following has caused such a condition in this patient?

a. Increased production of thyroliberin
b. Reduced production of thyroxin
c. Increased production of thyroxin
d. Increased production of calcitonin
e. Reduced production of parathormone

174. ECG of a patient shows such alterations: P-wave is normal, P-Q-interval is short, ventricular QRST complex is wide, R-wave is double-peak or two-phase. What form of arrhythmia is it?

a. Ventricular fibrillation
b. Ciliary arrhythmia
c. Fredericks syndrome (atrial flutter)

d. Atrioventricular block

e. WPW syndrome (Wolff-Parkinson-White)

175. A 34 year old woman was diagnosed with hereditary microspherocytic hemolytic anemia (Minkowsky-Shauffard disease). What mechanism caused haemolysis of erythrocytes?

a. Hemoglobinopathy

b. Enzymopathy

c. Membranopathy

d. Autoimmune disorder

e. Bone marrow hypoploasia

176. From the group of children who were eating sweet sappy watermelon two kids developed the signs of poisoning: rapid weakness, dizziness, headache, vomiting, edema, tachycardia, cyanosis of mouth, ears, tips of the fingers cyanosis. High concentration of nitrates was detected. What is the leading mechanism of the pathogenesis of the poisoning in the two children?

a. Block cytochrome oxidase

b. Insufficiency of superoxiddismutase

c. Insufficiency of met-Hb-reductase

d. Insufficiency glutathione pyroxidase

e. Insufficiency of catalase

177. 2 years ago a patient underwent resection of pyloric part of stomach. He complains of weakness, periodical dark shadows beneath his eyes, dyspnea. In blood: Hb - 70 g/l, erythrocytes - 3,0×1012/l, colour index - 0,7. What changes of erythrocytes in blood smears are the most typical for this condition?

a. Ovalocytes

b. Macrocytes

c. Megalocytes

d. Schizocytes

e. Microcytes

178. During a prophylactic medical examination a 7-year-old boy was diagnosed with daltonism. His parents are healthy and have normal colour vision, but his grandfather on his mother’s side has the same abnormality. What is the type of the abnormality inheritance?

a. Recessive, sex-linked

b. Semidominance

c. Autosomal dominant

d. Autosomal recessive

e. Dominant, sex-linked

179. A 27 y.o. patient put eye drops that contain penicillin. After a few minutes she felt itching and burning of her body, there appeared lip and eye-lid edemata; arterial pressure began to drop. What immunoglobulins took part in the development of this allergic reaction?

a. IgA and IgM

b. IgM and IgG

c. IgE and IgG

d. IgM and IgD

e. IgG and IgD

180. Inflammation of a patients eye was accompanied by accumulation of turbid liquid with high protein at the bottom of anterior chamber that was called hypopyon. What process underlies the changes under observation?

a. Proliferation

b. -

c. Primary alteration

d. Secondary alteration

e. Disturbance of microcirculation

181. A 48 y.o. patient was admitted to the hospital with complaints about weakness, irritability, sleep disturbance. Objectively: skin and scleras are yellow. In blood: conjugated bilirubin, cholalemia. Feces are acholic. Urine is of dark colour (bilirubin). What jaundice is it?

a. Crigler-Najjar syndrome
b. Mechanic
c. Parenchymatous
d. Hemolytic
e. Gilberts syndrome

182. A patient who suffers from severe disorder of water-salt metabolism experienced cardiac arrest in diastole. What is the most probable mechanism of cardiac arrest in diastole?

a. Hypernatremia
b. Hypokaliemia
c. Hyponatremia
d. Hyperkaliemia
e. Organism dehydratation

183. A patient who suffers from heart failure has enlarged liver, edemata of lower extremities, ascites. What is the leading mechanism in the development of this edema?

a. Hydrodynamic
b. Lymphogenous
c. -
d. Membranogenic
e. Colloid osmotic

184. Two weeks after lacunar tonsillitis a 20-year-old man started complaining about general weakness, lower eyelid edemata. After examination the patient was diagnosed with acute glomerulonephritis. What are the most likely pathological changes in the urine formula?

a. Pyuria
b. Natriuria
c. Cylindruria
d. Presence of fresh erythrocytes
e. Proteinuria

185. A 32 y.o. man is tall, he has gynecomastia, adult woman pattern of hair distribution, high voice, mental deficiency, sterility. Provisional diagnosis is Klinefelters syndrome. In order to specify diagnosis it is necessary to analize:

a. Blood group
b. Genealogy
c. Leukogram
d. Spermatogenesis
e. Caryotype

186. After transfusion of 200 ml of blood a patient presented with body temperature rise up to 37,9oC. Which of the following substances is the most likely cause of temperature rise?

a. Interleukin-3
b. Interleukin-4
c. Interleukin-2
d. Tumour necrosis factor
e. Interleukin-1

187. A 49 y.o. woman consulted a doctor about heightened fatigue and dyspnea during physical activity. ECG: heart rate is 50/min, PQ is extended, QRS is unchanged, P wave quanity exceeds quantity of QRS complexes. What type of arrhythmia does the patient have?

a. Sinus bradycardia
b. Extrasystole
c. Atrioventricular block
d. Ciliary arhythmia

e. Sinoatrial block

188. A woman has been applying a new cosmetic preparation for a week that resulted in eye-lid inflammation accompanied by hyperemia, infiltration and painfulness. What type of allergic reaction was developed?

a. II
b. I
c. IV
d. III
e. V

189. A patient is followed up in an endocrinological dispensary on account of hyperthyreosis. Weight loss, tachycardia, finger tremor are accompanied by hypoxia symptoms - headache, fatigue, eye flicker. What mechanism of thyroid hormones action underlies the development of hypoxia?

a. Intensification of respiratory ferment synthesis
b. Specific binding of active centres of respiratory ferments
c. Inhibition of respiratory ferment synthesis
d. Competitive inhibition of respiratory ferments
e. Disjunction, oxydation and phosphorilation

190. A 56 y.o. patient has been suffering from thyreotoxicosis for a long time. What type of hypoxia can be developed?

a. Tissue
b. Circulatory
c. Mixed
d. Respiratory
e. Hemic

191. An animal with aortic valve insufficiency got hypertrophy of its left heart ventricle. Some of its parts have local contractures. What substance accumulated in the myocardiocytes caused these contractures?

a. Calcium
b. Lactic acid
c. Sodium
d. Carbon dioxide
e. Potassium

192. A patient has extrasystole. ECG shows no P wave, QRS complex is deformed, there is a full compensatory pause. What extrasystoles are these?

a. -
b. Ventricular
c. Atrioventricular
d. Atrial
e. Sinus

193. A 12-year-old teenager has significantly put off weight within 3 months; glucose concentration rose up to 50 millimolel. He fell into a coma. What is the main mechanism of its development?

a. Hypoglycemic
b. Lactacidemic
c. Hypoxic
d. Hyperosmolar
e. Ketonemic

194. A 56 year old patient suffering from cardiac insufficiency has edema of feet and shins, edematous skin is pale and cold. What is the leding mechanism of edema pathogenesis?

a. Disorder of lymph outflow
b. Positive water balance
c. Drop of oncotic pessure in capillaries

d. Increase of capillary permeability
e. Rise of hydrostatic pressure in venules

195. A disaster fighter at a nuclear power plant developed hemorrhagic syndrome on the background of acute radiation disease. What is the most important factor of syndrome pathogenesis?
a. Decreased activity of coagulative factors
b. Thrombocytopenia
c. Increased activity of fibrinolysis factors
d. Vascular wall damage
e. Increased activity of anticoagulative system factors

196. Prophylactic medical examination of a 36 year old driver revealed that his AP was 150/90 mm Hg. At the end of working day he usually hears ear noise, feels slight indisposition that passes after some rest. He was diagnosed with essential hypertension. What is the leading pathogenetic mechanism in this case?
a. Reflexogenic
b. Neurogenetic
c. Humoral
d. Nephric
e. Endocrinal

197. Violation of safety rules resulted in calomel intoxication. Two days later the daily diuresis was 620 ml. A patient experienced headache, vomiting, convulsions, dyspnea, moist rales in lungs. What pathology is it?
a. Chronic renal insufficiency
b. Glomerulonephritis
c. Pyelonephritis
d. Acute renal insufficiency
e. Uraemic coma

198. A newborn child with pylorostenosis has often repeating vomiting accompanied by apathy, weakness, hypertonicity, sometimes convulsions. What disorder form of acid-base balance is it?
a. Metabolic acidosis
b. Excretory acidosis
c. Gaseous alkalosis
d. Gaseous acidosis
e. Nongaseous alkalosis

199. 24 hours after appendectomy blood of a patient presents neutrophilic leukocytosis with regenerative shift. What is the most probable mechanism of leukocytosis development?
a. Redistribution of leukocytes in the organism
b. Deceleratied emigration of leukocytes to the tissues
c. Amplification of leukopoiesis and decelerated emigration of leukocytes to the tissues
d. Amplification of leukopoiesis
e. Decelerated leukocyte destruction

200. A 59 year old patient is a plant manager. After the tax inspection of his plant he felt intense pain behind his breastbone irradiating to his left arm. 15 minutes later his condition came to normal. Which of the possible mechanisms of stenocardia development is the leading in this case?
a. Coronary atherosclerosis
b. Coronary thrombosis
c. Functional heart overload
d. High catecholamine concentration in blood
e. Intravascular aggregation of blood corpuscles

201. Arterial pressure of a surgeon who performed a long operation rised up to 140/110 mm Hg. What changes of humoral regulation could have caused the rise of arterial pressure in this case?
a. Activation of renin angiotensive system

b. Activation of formation and excretion of aldosterone
c. Activation of sympathoadrenal system
d. Activation of kallikrein kinin system
e. Inhibition of sympathoadrenal system

202. A 50-year-old patient complains of thirst, drinking of a lot of water, marked polyuria. Blood glucose is 4,8 mmol/L, urine glucose and acetone bodies are absent, urine is colorless, specific gravity is 1,002-1,004. What is the cause of polyuria?
a. Thyrotoxicosis
b. Vasopressin insufficiency
c. Insulin insufficiency
d. Hypothyroidism
e. Aldosteronism

203. A patient was ill with burn disease that was complicated by DIC syndrome. What stage of DIC syndrome can be suspected if it is known that the patients blood coagulates in less than 3 minutes?
a. Transition phase
b. Fibrinolysis
c. Terminal
d. Hypercoagulation
e. Hypocoagulation

204. A 55 y.o. woman consulted a doctor about having continuous cyclic uterine hemorrhages for a year, weakness, dizziness. Examination revealed skin pallor. Hemogram: Hb- 70 g/l, erythrocytes - 3,2*10^12/l, color index - 0,6, leukocytes - 6,0*10^9/l, reticulocytes - 1%; erythrocyte hypochromia. What anemia is it?
a. Chronic posthemorrhagic anemia
b. Aplastic anemia
c. Iron-deficiency anemia
d. B12-folate-deficiency anemia
e. Hemolytic anemia

205. A 56 year old patient came to a hospital with complaints about general weakness, tongue pain and burning, sensation of limb numbness. In the past he underwent resection of forestomach. In blood: Hb- 80 g/l; erythrocytes - 2,0×1012/l; colour index - 1,2, leukocytes - 3,5×109/l. What anemia type is it?
a. Hemolytic
b. Aplastic
c. Iron-deficient
d. B12-folate deficient
e. Posthemorrhagic

206. A 25 year old Palestinian woman complains of weakness, dizziness, dyspnea. In anamnesis: periodically exacerbating anemia. In blood: Hb - 60 g/l, erythrocytes - 2,5×1012/l, reticulocytes - 35o/oo, anisocytosis and poikilocytosis of erythrocytes, a lot of target cells and polychromatophils. What type of anemia is it?
a. Sickle-cell anemia
b. Addison-Biermer disease
c. Glucose 6-phosphate dehydrogenase-deficient anemia
d. Thalassemia
e. Minkowsky-Shauffard disease

207. A 23 y.o. patient complains of weakness, temperature rise up to 38-40oC. Objectively: liver and spleen are enlarged. Hemogram: Hb- 100 g/l, erythrocytes - 2,9×1012/l, leukocytes - 4,4×109/l, thrombocytes – 48×109/l, segmentonuclear neutrophils - 17%, lymphocytes - 15%, blast cells - 68%. All cytochemical reactions are negative. Make a hematological conclusion:
a. Undifferentiated leukosis
b. Acute myeloblastic leukosis

c. Acute erythromyelosis
d. Acute lymphoblastic leukosis
e. Chronic myeloleukosis

208. Inflammatory processes cause synthesis of protein of acute phase in an organism. What substances stumulate their synthesis?
a. Immunoglobulins
b. Biogenic amins
c. Angiotensin
d. Interleukin-1
e. Interferons

209. A chemical burn caused esophagus stenosis. Difficulty of ingestion led to the abrupt loss of weight. In blood: 3,0×1012/l, Hb - 106 g/l, crude protein - 57 g/l. What type of starvation is it?
a. Water
b. Absolute
c. Proteinic
d. Complete
e. Incomplete

210. A 42 year old woman with neuralgia of trifacial nerve complains about periodical reddening of the right part of her face and neck, sense of warmth gush, increased skin sensitivity. These effects can be explained by the following type of arterial hyperemia:
a. Reactive
b. Neurotonic
c. Metabolic
d. Neuroparalytic
e. Functional

211. A patient who suffers from acute myocarditis has clinical signs of cardiogenic shock. What of the under-mentioned pathogenetic mechanisms plays the main part in shock development?
a. Increase of peripheral vascular resistance
b. Disturbance of pumping ability of heart
c. Reduction of diastolic flow to the heart
d. Depositing of blood in organs
e. Decrease of vascular tone

212. On the 6th day of treatment a patient with acute renal insufficiency developed polyuria. Diuresis intensification at the beginning of polyuria stage of acute renal insufficiency is caused by:
a. Reduction of vasopressin content in plasma
b. Renewal of filtration in nephrons
c. Growth of natriuretic factor
d. Volume expansion of circulating blood
e. Reduction of aldosteron content in plasma

213. A 30 year old woman has face edemata. Examination revealed proteinuria (5,87 g/l), hypoproteinemia, dysproteinemia, hyperlipidemia. What condition is the set of these symptoms typical for?
a. Nephrotic syndrome
b. Chronic pyelonephritis
c. Chronic renal failure
d. Acute renal failure
e. Nephritic syndrome

214. A patient with nephrotic syndrome has massive edemata of his face and limbs. What is the leading pathogenetic mechanism of edemata development?
a. Rise of hydrodynamic blood pressure
b. Increase of vascular permeability

c. Drop of oncotic blood pressure
d. Lymphostasis
e. Increase of lymph outflow

215. A patient staying in the pulmonological department was diagnosed with pulmonary emphysema accompanied by reduced elasticity of pulmonary tissue. What type of respiration is observed?
a. Superficial respiration
b. Inspiratory dyspnea
c. Expiratory dyspnea
d. Infrequent respiration
e. Periodic respiration

216. An unconscious young man with signs of morphine poisoning entered admission office. His respiration is shallow and infrequent which is caused by inhibition of respiratory centre. What type of respiratory failure is it?
a. Ventilative obstructive
b. Perfusive
c. Diffusive
d. Ventilative dysregulatory
e. Ventilative restrictive

217. A 62 year old patient who previously worked as stoker was admitted to a hospital with complaints about general weakness, abrupt weight loss, hoarse voice, dyspnea, dry cough. Laryngoscopy revealed a tumour in the pharynx that invaded vocal cords and epiglottis. What is the most probable cause of tumour development?
a. Retroviruses
b. Ionizing radiation
c. Nitrosamines
d. Aromatic amines and amides
e. Polycyclic aromatic carbohydrates

218. Tuberculine was injected intraperitoneally to the animal sensibilized with tuberculine. Venous hyperemia and peritonial edema were detected on the laparotomy in 24 hours. Increased amount of lymphocytes and monocytes were in the smear-print from the peritonium. What pathological process is in the animal?
a. Suppurative inflammation
b. Serous inflammation
c. Allergic inflammation
d. Fibrinous inflammation
e. Aseptic inflammation

219. A married couple came to the genetic counseling. The husband suffers from the insulin-dependant diabetes, the wife is healthy. What is the probability that this couple will have an insulin-dependant child?
a. 50%
b. Higher than throughout the population
c. Lower than throughout the population
d. The same as throughout the population
e. 100%

220. A patient who had been working hard under conditions of elevated temperature of the environment, has now a changed quantity of blood plasma proteins. What penomenon is the case?
a. Disproteinemia
b. Paraproteinemia
c. Absolute hyperproteinemia
d. Absolute hypoproteinemia
e. Relative hyperproteinemia

221. An infant has pylorospasm, weakness, hypodynamia, convulsions as a result of frequent vomiting. What kind of acid-base disbalance is it?

a. Gaseous alkalosis
b. Excretory alkalosis
c. Metabolic acidosis
d. Excretory acidosis
e. Exogenous nongaseous acidosis

222. An experimental rat with extremity paralysis has no tendon and cutaneous reflexes, muscle tone is decreased, but muscles of the affected extremity maintain their ability to react with excitation to the direct action of continious current. What type of paralysis is it?

a. Flaccid central
b. Spastic central
c. Extrapyramidal
d. Flaccid peripheral
e. Spastic peripheral

223. A 28 year old man had a gunshot wound of shin that resulted in an ulcer from the side of the injury. What is the main factor of neurodystrophy pathogenesis in this case?

a. Infection
b. Tissue damage
c. Psychical stress
d. Microcirculation disturbance
e. Traumatization of peripheral nerve

224. A 45 year old patient was admitted to the cardiological department. ECG data: negative P wave overlaps QRS complex, diastolic interval is prolonged after extrasystole. What type of extrasystole is it?

a. Sinus
b. Ventricular
c. Bundle-branch
d. Atrioventricular
e. Atrial

225. A rabbits nerve that innervates the right ear was cut and its right superior cervical ganglion was removed. Immediately after operation the temperature of ear skin was measured. It was revealed that the temperature of the rabbits ear skin on the side of denervation was by 1,5oC higher than on the opposite intact side. What of the following is the most probable explanation of the above-mentioned effects?

a. Arterial neuroparalytic hyperemia
b. Atrerial hyperemia induced by metabolic factors
c. Physiological arterial hyperemia
d. Reactive arterial hyperemia
e. Arterial neurotopical hyperemia

226. Two hours after an exam a student had a blood count done and it was revealed that he had leukocytosis without significant leukogram modifications. What is the most probable mechanism of leukocytosis development?

a. Leukopoiesis intensification and deceleration of leukocyte lysis
b. Redistribution of leukocytes in the organism
c. Deceleration of leukocyte lysis
d. Leukopoiesis intensification
e. Deceleration of leukocyte migration to the tissues

227. A patient presents with icteritiousness of skin, scleras and mucous membranes. Blood plasma the total bilirubin is increased, stercobilin is increased in feces, urobilin is increased in urine. What type of jaundice is it?

a. Cholestatic

b. Haemolytic
c. Parenchymatous
d. Gilberts disease
e. Obturational

228. Hepatitis has led to the development of hepatic failure. Mechanism of edemata formation is activated by the impairment of the following liver function:
a. Protein-synthetic
b. Chologenetic
c. Glycogen-synthetic
d. Antitoxic
e. Barrier

229. As a result of a trauma a patient has developed traumatic shock that led to the following disorders: AP is 140/90 mm Hg, Ps is 120 bpm. The patient is fussy, talkative, pale. Such state relates to the following shock phase:
a. Erectile
b. Terminal
c. -
d. Torpid
e. Latent period

230. Examination of a patient admitted to the surgical department with symptoms of acute appendicitis revealed the following changes in the white blood cells: the total count of leukocytes is 16*10^9/l. Leukocyte formula: basophils - 0, eosinophils - 2%, juvenile forms - 2%, stabnuclear - 8%, segmentonuclear - 59%, lymphocytes - 25%, monocytes- 4%. The described changes can be classified as:
a. Neutrophilia with right shift
b. Neutrophilic leukemoid reaction
c. Neutrophilia with hyperregenerative left shift
d. Neutrophilia with regenerative left shift
e. Neutrophilia with degenerative left shift

231. A patient being treated for viral hepatitis type B got symptoms of hepatic insufficiency. What blood changes indicative of protein metabolism disorder will be observed in this case?
a. Absolute hyperfibrinogenemia
b. Absolute hyperalbuminemia
c. Absolute hypoalbuminemia
d. Proteinic blood composition is unchanged
e. Absolute hyperglobulinemia

232. A patient was stung by a bee. Examination revealed that his left hand was hot, pink, edematic, there was a big red blister on the site of sting. What is the leading mechanism of edema development?
a. Drop of osmotic pressure in tissue
b. Increased vessel permeability
c. Injury of vessels caused by the sting
d. Reduced vessel filling
e. Drop of oncotic pressure in tissue

233. A patient suffering from pheochromocytoma complains of thirst, dry mouth, hunger. Blood test for sugar revealed hyperglycemia. What type of hyperglycemia is it?
a. Hypoinsulinemic
b. Adrenal
c. Alimentary
d. Hypercorticoid
e. Somatotropic

234. A couple had a child with Downs disease. Mother is 42 years old. This disease is most probably caused by the following impairment of prenatal development:

a. Gametopathy
b. Embryopathy
c. Specific fetopathy
d. Non-specific fetopathy
e. Blastopathy

235. There are several groups of molecular mechanisms playing important part in pathogenesis of insult to cells which contributes to the pathology development. What processes are stimulated by proteinic damage mechanisms?

a. Acidosis
b. Enzyme inhibition
c. Phospholipase activation
d. Lipid peroxidation
e. Osmotic membrane distension

236. A child was born with cleft palate. Examination revealed aorta defects and reduced number of T-lymphocytes in blood. What immunodeficient syndrome is it?

a. Chediak-Higashi
b. Wiskott-Aldrich
c. DiGeorge
d. Louis-Bar
e. Swiss-type

237. Examination of a child who frequently suffers from infectious diseases revealed that IgG concentration in blood serum was 10 times less than normal, IgA and IgM concentration was also significantly reduced. Analysis showed also lack of B-lymphocytes and plasmocytes. What disease are these symptoms typical for?

a. Dysimmunoglobulinemia
b. Swiss-type agammaglobulinemia
c. Brutons disease
d. Louis-Bar syndrome
e. Di George syndrome

238. Examination of a 42 year old patient revealed a tumour of adenohypophysis. Objectively: the patients weight is 117 kg, he has moon-like hyperemic face, red-blue striae of skin distension on his belly. Osteoporosis and muscle dystrophy are present. AP is 210/140 mm Hg. What is the most probable diagnosis?

a. Diabetes mellitus
b. Essential hypertension
c. Cushings syndrome
d. Conns disease
e. Cushings disease

239. A patient was diagnosed with autoimmune hemolitic cytotoxic anemia. What substances are antigens in II type allergic reactions?

a. Serum proteins
b. Inflammation modulators
c. Antibiotics
d. Hormones
e. Modified receptors of cell membranes

240. A patient suffers from the haemorrhagic syndrome that shows itself in frequent nasal bleedings, posttraumatic and spontaneous intracutaneous and intra-articular haemorrhages. After a laboratory study a patient was diagnosed with the type B haemophilia. This disease is provoked by the deficit of the following factor of blood coagulation:

a. VIII

b. V
c. VII
d. IX
e. XI

241. A 58-year-old patient suffers from the cerebral atherosclerosis. Examination revealed hyperlipoidemia. What class of lipoproteins will most probably show increase in concentration in this patients blood serum?
a. Cholesterol
b. Low-density lipoproteins
c. Fatty acid complexes with albumins
d. High-density lipoproteins
e. Chylomicrons

242. In course of a preventive examination of a miner a doctor revealed changes of cardiovascular fitness which was indicative of cardiac insufficiency at the compensation stage. What is the main proof of cardiac compensation?
a. Cyanosis
b. Myocardium hypertrophy
c. Rise of arterial pressure
d. Tachycardia
e. Dyspnea

243. A 47 year old man with myocardium infarction was admitted to the cardiological department. What changes of cellular composition of peripheral blood are induced by necrotic changes in the myocardium?
a. Neutrophilic leukocytosis
b. Eosinophilic leukocytosis
c. Lymphopenia
d. Thrombocytopenia
e. Monocytosis

244. A patient with skin mycosis has disorder of cellular immunity. The most typical characteristic of it is reduction of the following index:
a. T-lymphocytes
b. Immunoglobulin E
c. Plasmocytes
d. B-lymphocytes
e. Immunoglobulin G

245. A patient with massive burns developed acute renal insufficiency characterized by a significant and rapid deceleration of glomerular filtration. What is the mechanism of its development?
a. Renal artery embolism
b. Reduction of renal blood flow
c. Reduction of functioning nephron number
d. Damage of glomerular filter
e. Rise of pressure of tubular fluid

246. A child is pale, pastose, muscular tissue is bad developed, lymph nodes are enlarged. He often suffers from angina and pharyngitis, blood has signs of lymphocytosis. The child is also predisposed to autoallergic diseases. What type of diathesis can be presumed in this case?
a. Lymphohypoplastic
b. Gouty
c. Hemorrhagic
d. Asthenic
e. Exudative

247. A patient ill with enteritis accompanied by massive diarrhea has low water rate in the

extracellular space, high water rate inside the cells and low blood osmolarity. What is such disturbance of water-electrolytic metabolism called?

a. Hypo-osmolar hyperhydration
b. Hyperosmolar hyperhydration
c. Hyperosmolar hypohydration
d. Osmolar hypohydration
e. Hypo-osmolar hypohydration

248. A patient with obliterating atherosclerosis underwent sympathectomy of femoral artery in the region of femoral trigone. What type of arterial hyperemia was induced by the operation?

a. Functional
b. Neuroparalytic
c. Metabolic
d. Reactive
e. Neurotonic

249. A 15 year old girl has pale skin, glossitis, gingivitis. Blood count: erythrocytes - 3,3×1012/l, hemoglobin - 70 g/l, colour index - 0,5. Examination of blood smear revealed hypochromia, microcytosis, poikilocytosis. What type of anemia is it?

a. B12-folic acid-deficient
b. Hemolytic
c. Thalassemia
d. Iron-deficient
e. Sickle-cell

250. A 5 year old child is ill with measles. Blood analysis revealed increase of total number of leukocytes up to 13*10^9/l. Leukogram: basophils - 0, eosinophils - 1, myelocytes - 0, juvenile neutrophils - 0, band neutrophils - 2, segmented neutrophils - 41, lymphocytes - 28, monocytes - 28. Name this phenomenon:

a. Agranulocytosis
b. Eosinopenia
c. Neutropenia
d. Monocytosis
e. Lymphocytosis

251. Rats being under stress have muscular hypertonia and high arterial pressure, high glucose concentration in blood and intensified secretion of corticotropin and corticosteroids. In what stress phase these animals are?

a. Shock phase
b. Exhaustion
c. Antishock phase
d. Erectile
e. Terminal

252. After taking poor-quality food a patient developed repeated episodes of diarrhea. On the next day he presented with decreased arterial pressure, tachycardia, extrasystole. Blood pH is 7,18. These abnormalities were caused by the development of:

a. Gaseous alkalosis
b. Metabolic alkalosis
c. Gaseous acidosis
d. Nongaseous alkalosis
e. Nongaseous acidosis

253. A patient has been diagnosed with influenza. His condition became drastically worse after taking antipyretic drugs. His consciousness is confused, AP is 80/50 mm Hg, Ps is 140/m, body temperature droped down to 35,8oC. What complication developed in this patient?

a. Hyperthermia
b. Acidosis

c. Alkalosis
d. Collapse
e. Hypovolemia

254. A patient was admitted to the infectious department. His symptoms: dry skin, decreased skin turgor, rice-water stool. The patient was diagnosed with cholera. What disorder of water-electrolytic balance is most often observed in this disease?
a. Hyperosmotic hypohydration
b. Hypoosmotic hyperhydration
c. Hyperosmotic hyperhydration
d. Hypoosmotic hypohydration
e. Isoosmotic hypohydration

255. A 25 year old man has spent a long time in the sun under high air humidity. As a result of it his body temperature rose up to 39C. What pathological process is it?
a. Burn disease
b. Hyperthermia
c. Hypothermia
d. Infectious fever
e. Noninfectious fever

256. A 26 year old man is in the torpid shock phase as a result of a car accident. In blood: 3,2×109/l. What is the leading mechanism of leukopenia development?
a. Redistribution of leukocytes in bloodstream
b. Disturbed going out of mature leukocytes from the marrow into the blood
c. Intensified elimination of leukocytes from the organism
d. Lysis of leukocytes in the blood-forming organs
e. Leikopoiesis inhibition

257. Patient with hypochromic anemia has splitting hair and loss of hair, increased nail brittling and taste alteration. What is the mechanism of the development of these symptoms?
a. Deficiency of iron-containing enzymes
b. Decreased production of parathyrin
c. Decreased production of thyroid hormones
d. Deficiency of vitamin A
e. Deficiency of vitamin B12

258. A patient underwent a surgery for excision of a cyst on pancreas. After this he developed haemorrhagic syndrome with apparent disorder of blood coagulation. Development of this complication can be explained by:
a. Activation of fibrinolytic system
b. Reduced number of thrombocytes
c. Activation of Christmas factor
d. Activation of anticoagulation system
e. Insufficient fibrin production

259. A 43-year-old patient has thrombopenia, reduction of fibrinogen, products of degradation of fibrin presented in the blood, petechial haemorrhage along with septic shock. What is the most likely cause of the changes?
a. DIC-syndrom
b. Haemorrhagic diathesis
c. Exogenous intoxication
d. Disorder of thrombocytes production
e. Autoimmune thrombocytopenia

260. Pyruvate concentration in the patient’s urine has increased 10 times from normal amount. What vitamin deficiency can be the reason of this change:
a. Vitamin E

b. Vitamin B6
c. Vitamin C
d. Vitamin A
e. Vitamin B1

261. Person has stable HR, not more than 40 bpm. What is the pacemaker of the heart rhythm in this person?
a. Branches of His bundle
b. Purkinge fibers
c. Sinoatrial node
d. His bundle
e. Atrioventricular node

262. A 32-year-old patient was admitted to the hospital with gross bloodloss due to auto accident trauma. Ps – 110 Bpm, RR- 22 pm, BP- 100/60mm Hg. What changes in the blood will occur in an hour after the bloodloss?
a. Hypoproteinemia
b. Hypovolemia
c. Hypochromia of erythrocytes
d. Erythropenia
e. Leukopenia

263. ECG of a 44-year-old patient shows signs of hypertrophy of both ventricles and the right atrium. The patient was diagnosed with the tricuspid valve insufficiency. What pathogenetic variant of cardiac dysfunction is usually observed in case of such insufficiency?
a. Primary myocardial insufficiency
b. Heart overload by resistance
c. Heart overload by volume
d. Coronary insufficiency
e. Cardiac tamponade

264. Shock and signs of acute renal failure (ARF) developed in the patient due to permanent injury. What is the leading cause of development of ARF in the case?
a. Decreased oncotic BP
b. Decreased arterial pressure
c. Increased pressure in the nephron capsule
d. Urine excretion violation
e. Increased pressure in the renal arteries

265. Substitution of the glutamic acid on valine was revealed while examining initial molecular structure. For what inherited pathology is this typical?
a. Favism
b. Hemoglobinosis
c. Thalassemia
d. Minkowsky-Shauffard disease
e. Sickle-cell anemia

266. Inflamation is characterised by increasing penetration of vessels of microcirculation stream, increasing of their fluid dynamic blood pressure. Increasing of the osmotic concentration and dispersity of protein structures present in the intercellular fluid. What kind of edema will appear in this case?
a. Lymphogenic
b. Membranogenic
c. Hydrodynamic
d. Colloid-osmotic
e. Mixed

267. A healthy woman has three sons affected by color blindness who were born after her two

marriages. Children both of her husbands are healthy. What is the most possible pattern of inheritance of this disease?

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

268. A couple came for medical genetic counseling. The man has hemophilia, the woman is healthy and there were no cases of hemophilia in her family. What is the risk of having a sick child in this family?

a. 100%
b. 50%
c. 25%
d. 0
e. 75%

269. Oval and round organelles with double wall are seen at the electron micrograph. The outer membrane is smooth, the inner membrane folded into cristae contain enzyme ATPase synthetase. These are:

a. Golgi complex
b. Centrioles
c. Ribosomes
d. Mitochondria
e. Lysosomes

270. A tissue sample of benign tumor was studied under the electron microscope. A lot of small (15-20 nm) spherical bodies, consisting of 2 unequal subunits were detected. These are:

a. Golgi complex
b. Microtubules
c. Mitochondria
d. Ribosomes
e. Smooth endoplasmic reticulum

271. A woman who was sick with rubella during the pregnancy gave birth to a deaf child with hare lip and cleft palate. This congenital defect is an example of:

a. Phenocopy
b. Genocopy
c. Down’s syndrome
d. Patau’s syndrome
e. Edward’s syndrome

272. A patient with tissue trauma was taken a blood sample for the determination of blood clotting parameters. Specify the right sequence of extrinsic pathway activation

a. III – VIIa – Xa
b. IV – VIII: TF – Xa
c. III – VIII: TF – Xa
d. IV – VIIa – Xa
e. III – IV – Xa

273. A patient with the symptoms of acute alcoholic poisoning was brought to the hospital. What carbohydrates metabolism changes are typical for this condition?

a. The gluconeogenesis velocity in liver is decreased
b. The breakage of glycogen is increased in liver
c. The anaerobic breakage of glucose is increased in muscles
d. The anaerobic glucose metabolism predominates in muscles
e. The gluconeogenesis is increased in liver

274. In result of the damage of one of the Atomic Power Plant reactor the run-out of radioelements happened. People in the increased radiation zone were radiated with approximately 250-300 r. They were immediately hospitalized. What changes in the blood count would be typical?

a. Leukopenia
b. Thrombopenia
c. Neutropenia
d. Lymphopenia
e. Anemia

275. Dystrophic changes of the heart muscle are accompanied with cardiac cavity enlargement, decrease of the strength of heart contraction, increased amount of blood, which remains in the heart during systolic phase, overfilled veins. For what state of heart is it characteristic?

a. Tamponage of the heart
b. Myogenic dilatation
c. Emergency stage of hyperfunction and hypertrophy
d. Tonogenic dilatation
e. Cardiosclerosis

276. Transmural myocardial infarction in the patient was complicated with progressive acute left ventricle insufficiency. What is the most typical for this state?

a. Cyanosis
b. Edema of the extremities
c. Edema of the lungs
d. Ascites
e. Arterial hypertension

277. Arterial hypertention is caused by the stenosis of the renal arteries in the patient. Activation of what system is the main link in the pathogenesys of this form of hypertension?

a. Renin-angiotensin
b. Parasympathetic
c. Hypothalamic-pituitary
d. Kallikrein-kinin
e. Sympathoadrenal

278. A 12-year-old boy often suffers from virus and bacterial infections and eczematous skin lesions. Enlargement of T-lymphocytes and IgM with normal IgA and IgG was revealed on examination. What type of immune system pathology is presented in the patient?

a. Composite immunedefficiency
b. Brutons hypogammaglobulinemia
c. Hereditary immundeficiency of the complement system
d. Turners syndrome
e. Hypoplasia of thymus

279. Patient with diabetes didnt get insulin injection in time that caused hyperglycemic coma (glucose in the blood 50mmol/L). What mechanism is prevalent in the development of the coma?

a. Hyperosmia
b. Hypoxia
c. Acidosis
d. Hyponatremia
e. Hypokaliemia

280. Processes of repolarisation are disturbed in ventricular myocardium in examined person. It will cause amplitude abnormalities of configuration and duration of the wave:

a. T
b. R
c. P
d. S
e. Q

281. On simulation of inflammation of the lower extremity the animal exrerienced raise of the temperature, increase of amount of antibodies and leucocytes in the blood. What substances caused this general reaction of the organism on inflammation?

a. Interleukin
b. Mineralcorticoid
c. Somatomedins
d. Leucotriens
e. Glucocorticoid

282. A 68-year-old woman cant move by the upper and lower right extremities due to insult. Muscle tone of these extremities and reflexes are increased. There are pathological reflexes. What form of the paralysis is it?

a. Tetraplegia
b. Paraplegia
c. Hemiplegia
d. Monoplegia
e. Dissociation

283. After a serious psycho-emotional stress a 45-year-old patient suddenly felt constricting heart pain irradiating to the left arm, neck and left scapula. His face turned pale, the cold sweat stood out on it. The pain attack was stopped with nitroglycerine. What process has developed in this patient?

a. Stroke
b. Myocardial infarction
c. Stenocardia
d. Psychogenic shock
e. Stomach ulcer perforation

284. While having the dinner the child choked and aspirated the food. Meavy cough has started, skin and mucose are cyanotic, rapid pulse, rear breathing, expiration is prolonged. What disorder of the external breathing developed in the child?

a. Stage of expiratory dyspnea on asphyxia
b. Stenotic breathing
c. Biots breathing
d. Alternating breathing
e. Stage of inspiratory dyspnea on asphyxia

285. While playing volleyball a sportsman made a jump and landed on the outside edge of his foot. He felt acute pain in the talocrural joint, active movements are limited, passive movements are unlimited but painful. A bit later there appeared a swelling in the area of external ankle, the skin became red and warm. What type of peripheral circulation disturbance is the case?

a. Embolism
b. Stasis
c. Arterial hyperemia
d. Venous hyperemia
e. Thrombosis

286. To prevent the transplant rejection after organ transplantation it is required to administer hormonotherapy for the purpose of immunosuppression. What hormones are used for this purpose?

a. Glucocorticoids
b. Sexual hormones
c. Thyroid
d. Catecholamines
e. Mineralocorticoids

287. A patient with a history of chronic glomerulonephritis presents with azotemia, oliguria, hypo- and isosthenuria, proteinuria. What is the leading factor in the pathogenesis of these symptoms development under chronic renal failure?

a. Intensification of sodium reabsorption

b. Mass decrease of active nephrons
c. Tubular hyposecretion
d. Intensification of glomerular filtration
e. Disturbed permeability of glomerular membranes

288. After an attack of bronchial asthma a patient had his peripheral blood tested. What changes can be expected?
a. Eosinophilia
b. Lymphocytosis
c. Erythrocytosis
d. Thrombocytopenia
e. Leukopenia

289. After the traumatic tooth extraction a patient is complaining of acute, dull, poorly-localized pain in gingiva, body temperature rise up to 37,5°C. The patient has been diagnosed with alveolitis. Specify the kind of pain in this patient:
a. Epicritic
b. Heterotopic
c. Phantom
d. Protopathic
e. Visceral

290. A 50 year old patient suffers from essential hypertension. After a physical stress he experienced muscle weakness, breathlessness, cyanosis of lips, skin and face. Respiration was accompanied by distinctly heard bubbling rales. What mechanism underlies the development of this syndrome?
a. Cardiac tamponade
b. Acute left-ventricular failure
c. Chronic left-ventricular failure
d. Chronic right-ventricular failure
e. Collapse

291. A patient with obliterating endarteritis underwent ganglionic sympathectomy. What type of arterial hyperaemia should have developed as a result of the surgery?
a. Neurotonic
b. Functional
c. Reactive
d. Neuroparalytic
e. Metabolic

292. A group of mountain climbers went through the blood analysis at the height of 3000 m. It revealed decrease of HCO3 to 15 micromole/l (standard is 22-26 micromole/l). What is the mechanism of HCO3 decrease?
a. Decrease of bicarbonate reabsorption in kidneys
b. Hyperventilation
c. Hypoventilation
d. Intensification of acidogenesis
e. Decrease of ammoniogenesis

293. A patient who suffers from pneumonia has high body temperature. What biologically active substance plays the leading part in origin of this phenomenon?
a. Serotonin
b. Leukotrienes
c. Histamine
d. Bradykinin
e. Interleukin-I

294. A 34 year old woman was diagnosed with hereditary microspherocytic hemolytic anemia (Minkowsky-Shauffard disease). What mechanism caused haemolysis of erythrocytes?

a. Bone marrow hypoploasia
b. Membranopathy
c. Hemoglobinopathy
d. Enzymopathy
e. Autoimmune disorder

295. From the group of children who were eating sweet sappy watermelon two kids developed the signs of poisoning: rapid weakness, dizziness, headache, vomiting, edema, tachycardia, cyanosis of mouth, ears, tips of the fingers cyanosis. High concentration of nitrates was detected. What is the leading mechanism of the pathogenesis of the poisoning in the two children?
a. Insufficiency glutathione pyroxidase
b. Insufficiency of catalase
c. Insufficiency of superoxiddismutase
d. Block cytochrome oxidase
e. Insufficiency of met-Hb-reductase

296. 2 years ago a patient underwent resection of pyloric part of stomach. He complains of weakness, periodical dark shadows beneath his eyes, dyspnea. In blood: Hb - 70 g/l, erythrocytes - 3,01012l, colour index - 0,7. What changes of erythrocytes in blood smears are the most typical for this condition?
a. Macrocytes
b. Microcytes
c. Schizocytes
d. Megalocytes
e. Ovalocytes

297. During a prophylactic medical examination a 7-year-old boy was diagnosed with daltonism. His parents are healthy and have normal colour vision, but his grandfather on his mother’s side has the same abnormality. What is the type of the abnormality inheritance?
a. Autosomal dominant
b. Recessive, sex-linked
c. Semidominance
d. Dominant, sex-linked
e. Autosomal recessive

298. A 27 y.o. patient put eye drops that contain penicillin. After a few minutes she felt itching and burning of her body, there appeared lip and eye-lid edemata; arterial pressure began to drop. What immunoglobulins took part in the development of this allergic reaction?
a. IgG and IgD
b. LgE and lgG
c. IgA and IgM
d. IgM and IgG
e. IgM and IgD

299. Inflammation of a patients eye was accompanied by accumulation of turbid liquid with high protein at the bottom of anterior chamber that was called hypopyon. What process underlies the changes under observation?
a. Disturbance of microcirculation
b. Secondary alteration
c. -
d. Proliferation
e. Primary alteration

300. A patient who suffers from severe disorder of water-salt metabolism experienced cardiac arrest in diastole. What is the most probable mechanism of cardiac arrest in diastole?
a. Organism dehydratation
b. Hypernatremia
c. Hyperkaliemia

d. Hypokaliemia
e. Hyponatremia

301. Two weeks after lacunar tonsillitis a 20-year-old man started complaining about general weakness, lower eyelid edemata. After examination the patient was diagnosed with acute glomerulonephritis. What are the most likely pathological changes in the urine formula?
a. Natriuria
b. Proteinuria
c. Presence of fresh erythrocytes
d. Cylindruria
e. Pyuria

302. A 32 y.o. man is tall, he has gynecomastia, adult woman pattern of hair distribution, high voice, mental deficiency, sterility. Provisional diagnosis is Klinefelters syndrome. In order to specify diagnosis it is necessary to analize:
a. Spermatogenesis
b. Leukogram
c. Caryotype
d. Blood group
e. Genealogy

303. Examination of a miner revealed pulmonary fibrosis accompanied by disturbance of alveolar ventilation. What is the main mechanism of this disturbance?
a. Bronchi spasm
b. Limitation of respiratory surface of lungs
c. Disturbance of neural respiration control
d. Constriction of superior respiratory tracts
e. Limitation of breast mobility

304. After transfusion of 200 ml of blood a patient presented with body temperature rise up to 37,9oC. Which of the following substances is the most likely cause of temperature rise?
a. Interleukin-2
b. Interleukin-3
c. Interleukin-4
d. Interleukin-1
e. Tumour necrosis factor

305. A 49 y.o. woman consulted a doctor about heightened fatigue and dyspnea during physical activity. ECG: heart rate is 50/min, PQ is extended, QRS is unchanged, P wave quantity exceeds quantity of QRS complexes. What type of arrhythmia does the patient have?
a. Extrasystole
b. Ciliary arhythmia
c. Sinoatrial block
d. Atrioventricular block
e. Sinus bradycardia

306. A woman has been applying a new cosmetic preparation for a week that resulted in eye-lid inflammation accompanied by hyperemia, infiltration and painfulness. What type of allergic reaction was developed?
a. I
b. III
c. V
d. IV
e. II

307. A patient is followed up in an endocrinological dispensary on account of hyperthyreosis. Weight loss, tachycardia, finger tremor are accompanied by hypoxia symptoms - headache, fatigue, eye flicker. What mechanism of thyroid hormones action underlies the development of hypoxia?

a. Inhibition of respiratory ferment synthesis
b. Intensification of respiratory ferment synthesis
c. Specific binding of active centres of respiratory ferments
d. Disjunction, oxydation and phosphorilation
e. Competitive inhibition of respiratory ferments

308. A 56 y.o. patient has been suffering from thyreotoxicosis for a long time. What type of hypoxia can be developed?
a. Respiratory
b. Mixed
c. Hemic
d. Circulatory
e. Tissue

309. An animal with aortic valve insufficiency got hypertrophy of its left heart ventricle. Some of its parts have local contractures. What substance accumulated in the myocardiocytes caused these contractures?
a. Lactic acid
b. Potassium
c. Calcium
d. Carbon dioxide
e. Sodium

310. After a serious psychoemotional stress a 48 year old patient suddenly developed acute heart ache irradiating to the left arm. Nitroglycerine relieved pain after 10 minutes. What is the leading pathogenetic mechanism of this process development?
a. Compression of coronary vessels
b. Increase in myocardial oxygen consumption
c. Dilatation of peripheral vessels
d. Obstruction of coronary vessels
e. Spasm of coronary arteries

311. A 12-year-old teenager has significantly put off weight within 3 months; glucose concentration rose up to 50 millimole/l. He fell into a coma. What is the main mechanism of its development?
a. Hypoglycemic
b. Lactacidemic
c. Hypoxic
d. Hyperosmolar
e. Ketonemic

312. A 56 year old patient suffering from cardiac insufficiency has edema of feet and shins, edematous skin is pale and cold. What is the leading mechanism of edema pathogenesis?
a. Rise of hydrostatic pressure in venules
b. Increase of capillary permeability
c. Positive water balance
d. Disorder of lymph outflow
e. Decrease of oncotic pessure in capillaries

313. A disaster fighter at a nuclear power plant developed hemorrhagic syndrome on the background of acute radiation disease. What is the most important factor of syndrome pathogenesis?
a. Increased activity of anticoagulative system factors
b. Decreased activity of coagulative factors
c. Vascular wall damage
d. Increased activity of fibrinolysis factors
e. Thrombocytopenia

314. Prophylactic medical examination of a 36 year old driver revealed that his AP was 150/90 mm Hg. At the end of working day he usually hears ear noise, feels slight indisposition that passes after

some rest. He was diagnosed with essential hypertension. What is the leading pathogenetic mechanism in this case?

a. Nephric
b. Endocrinal
c. Reflexogenic
d. Neurogenetic
e. Humoral

315. Blood analysis of a patient with jaundice reveals conjugated bilirubinemia, increased concentration of bile acids. There is no stercobilinogen in urine. What type of jaundice is it?

a. Cythemolytic jaundice
b. Obstructive jaundice
c. Parenchymatous jaundice
d. Hepatocellular jaundice
e. Hemolytic jaundice

316. Violation of safety rules resulted in calomel intoxication. Two days later the daily diuresis was 620 ml. A patient complained of headache, vomiting, convulsions, dyspnea, moist rales in lungs. What pathology is it?

a. Pyelonephritis
b. Acute renal insufficiency
c. Uraemic coma
d. Chronic renal insufficiency
e. Glomerulonephritis

317. 24 hours after appendectomy patients blood analysis showed neutrophilic leukocytosis with regenerative shift. What is the most probable mechanism of leukocytosis development?

a. Amplification of leukopoiesis
b. Decelerated leukocyte destruction
c. Amplification of leukopoiesis and decelerated emigration of leukocytes to the tissues
d. Deceleratied emigration of leukocytes to the tissues
e. Redistribution of leukocytes in the organism

318. A 59 year old patient is a plant manager. After the tax inspection of his plant he felt intense pain behind his breastbone irradiating to his left arm. 15 minutes later his condition came to normal. Which of the possible mechanisms of stenocardia development is the leading in this case?

a. High catecholamine concentration in blood
b. Intravascular aggregation of blood corpuscles
c. Functional heart overload
d. Coronary thrombosis
e. Coronary atherosclerosis

319. Arterial pressure of a surgeon who performed a long operation rised up to 140/110 mm Hg. What changes of humoral regulation could have caused the rise of arterial pressure in this case?

a. Activation of formation and excretion of aldosterone
b. Activation of kallikrein kinin system
c. Inhibition of sympathoadrenal system
d. Activation of sympathoadrenal system
e. Activation of renin angiotensive system

320. A 50-year-old patient complains of thirst, drinking of a lot of water, marked polyuria. Blood glucose is 4,8 mmol/L, urine glucose and acetone bodies are absent, urine is colorless, specific gravity is 1,002-1,004. What is the cause of polyuria?

a. Insulin insufficiency
b. Hypothyroidism
c. Vasopressin insufficiency
d. Aldosteronism
e. Thyrotoxicosis

321. A patient was ill with burn disease that was complicated by DIC syndrome. What stage of DIC syndrome can be suspected if it is known that the patients blood coagulates in less than 3 minutes?

a. Hypercoagulation
b. Hypocoagulation
c. Terminal
d. Fibrinolysis
e. Transition phase

322. A 55 y.o. woman consulted a doctor about having continuous cyclic uterine hemorrhages for a year, weakness, dizziness. Examination revealed skin pallor. Hemogram: Hb- 70 g/l, erythrocytes - 3,2 x1012/l, color index - 0,6, leukocytes - 6,0 x 109/l, reticulocytes - 1%; erythrocyte hypochromia. What anemia is it?

a. Aplastic anemia
b. Hemolytic anemia
c. Chronic posthemorrhagic anemia
d. B12-folate-deficiency anemia
e. Iron-deficiency anemia

323. A 56 year old patient came to a hospital with complaints about general weakness, tongue pain and burning, sensation of limb numbness. In the past he underwent resection of fore stomach. In blood: Hb- 80 g/l; erythrocytes - 2,01x1012/l; colour index - 1,2, leukocytes - 3,5x109/l. What type anemia is it?

a. Aplastic
b. Iron-deficient
c. Hemolytic
d. Posthemorrhagic
e. B-12-foliate deficient

324. The patient with acute miocardial infarction was given intravenously different solutions during 8 hours with medical dropper 1500 ml and oxygen intranasally. He died because of pulmonary edema. What caused the pulmonary edema?

a. Decreased oncotic pressure due to hemodilution
b. Neurogenic reaction
c. Inhalation of the oxygen
d. Volume overload of the left ventricular
e. Allergic reaction

325. A 23 y.o. patient complains of weakness, temperature rise up to 38-40°C. Objectively: liver and spleen are enlarged. Hemogram: Hb- 100 g/l, erythrocytes - 2,9x1012/l, leukocytes - 4,4x109/l, thrombocytes – 48x109/l, segmentonuclear neutrophils - 17%, lymphocytes - 15%, blast cells - 68%. All cytochemical reactions are negative. Make a hematological conclusion:

a. Undifferentiated leukosis
b. Acute myeloblastic leukosis
c. Acute erythromyelosis
d. Acute lymphoblastic leukosis
e. Chronic myeloleukosis

326. Inflammatory processes cause synthesis of protein of acute phase in an organism. What substances stumulate their synthesis?

a. Interferons
b. Immunoglobulins
c. Interleukin-1
d. Biogenic amins
e. Angiotensin

327. A chemical burn caused esophagus stenosis. Difficulty of ingestion led to the abrupt loss of weight. In blood: 3,01012/l, Hb - 106 g/l, crude protein - 57 g/l. What type of starvation is it?

a. Proteinic

b. Water
c. Absolute
d. Incomplete
e. Complete

328. A 42 year old woman with neuralgia of trifacial nerve complains about periodical reddening of the right part of her face and neck, sense of warmth gush, increased skin sensitivity. These effects can be explained by the following type of arterial hyperemia:
a. Neuroparalytic
b. Functional
c. Reactive
d. Neurotonic
e. Metabolic

329. A patient who suffers from acute myocarditis has clinical signs of cardiogenic shock. What of the under-mentioned pathogenetic mechanisms plays the main part in shock development?
a. Disturbance of pumping ability of heart
b. Reduction of diastolic flow to the heart
c. Increase of peripheral vascular resistance
d. Decrease of vascular tone
e. Depositing of blood in organs

330. On the 6th day of treatment a patient with acute renal insufficiency developed polyuria. Diuresis intensification at the beginning of polyuria stage of acute renal insufficiency is caused by:
a. Renewal of filtration in nephrons
b. Growth of natriuretic factor
c. Reduction of vasopressin content in plasma
d. Reduction of aldosteron content in plasma
e. Volume expansion of circulating blood

331. A 30 year old woman has face edemata. Examination revealed proteinuria (5,87 g/l), hypoproteinemia, dysproteinemia, hyperlipidemia. What condition is the set of these symptoms typical for?
a. Acute renal failure
b. Chronic renal failure
c. Nephritic syndrome
d. Chronic pyelonephritis
e. Nephrotic syndrome

332. A patient staying in the pulmonological department was diagnosed with pulmonary emphysema accompanied by reduced elasticity of pulmonary tissue. What type of respiration is observed?
a. Periodic respiration
b. Expiratory dyspnea
c. Superficial respiration
d. Inspiratory dyspnea
e. Infrequent respiration

333. A patient has been diagnosed with acute glomerulonephritis that developed after he had had streptococcal infection. It is most likely that the affection of basal glomerular membrane is caused by an allergic reaction of the following type:
a. Anaphylactic
b. Delayed
c. Stimulating
d. Immune complex
e. Cytotoxic

334. Examination of patients with periodontitis revealed the interdependence between the rate of affection of periodontal tissues and the amount of lysozymes in saliva and gingival liquid. These

results can be obtained during studying the following protection system of an organism:

a. Tolerance

b. Non-specific resistance

c. Cellular immunity

d. Humoral immunity

e. Autoresponsiveness

335. A 62 year old patient who previously worked as stoker was admitted to a hospital with complaints about general weakness, abrupt weight loss, hoarse voice, dyspnea, dry cough. Laryngoscopy revealed a tumour in the pharynx that invaded vocal cords and epiglottis. What is the most probable cause of tumour development?

a. Nitrosamines

b. Retroviruses

c. Ionizing radiation

d. Polycyclic aromatic carbohydrates

e. Aromatic amines and amides

336. Tuberculine was injected intraperitoneally to the animal sensibilized with tuberculine. Venous hyperemia and peritonial edema were detected on the laparotomy in 24 hours. Increased amount of lymphocytes and monocytes were in the smear-print from the peritonium. What pathological process is in the animal?

a. Fibrinous inflammation

b. Aseptic inflammation

c. Serous inflammation

d. Suppurative inflammation

e. Allergic inflammation

337. Daltonism was diagnosed in a 7-year-old boy while prophylactic medical examination. Parents are healthy, color vision is normal. Grandfather from the mothers side has the same disorder. What is the type of inheriting of this anomaly?

a. Autosomal-recessive

b. Autosomal-dominant

c. Dominant, connected with sex

d. Incomplete domination

e. Recessive, connected with sex

338. A patient who had been working hard under conditions of elevated temperature of the environment, has now a changed quantity of blood plasma proteins. What penomenon is the case?

a. Absolute hyperproteinemia

b. Disproteinemia

c. Paraproteinemia

d. Relative hyperproteinemia

e. Absolute hypoproteinemia

339. A 28 year old man had a gunshot wound of shin that resulted in an ulcer from the side of the injury. What is the main factor of neurodystrophy pathogenesis in this case?

a. Traumatization of peripheral nerve

b. Microcirculation disturbance

c. Tissue damage

d. Infection

e. Psychical stress

340. Blood test of a patient suffering from atrophic gastritis gave the following results: RBCs - 2,0*10^12/l, Hb- 87 g/l, colour index - 1,3, WBCs - 4,0*10^9/l, thrombocytes - 180*10^9/l. Anaemia migh have been caused by the following substance deficiency:

a. Zinc

b. Vitamin B12

c. Vitamin K

d. Vitamin A
e. Iron

341. A rabbits nerve that innervates the right ear was cut and its right superior cervical ganglion was removed. Immediately after operation the temperature of ear skin was measured. It was revealed that the temperature of the rabbits ear skin on the side of denervation was by 1,50C higher than on the opposite intact side. What of the following is the most probable explanation of the above-mentioned effects?
a. Reactive arterial hyperemia
b. Physiological arterial hyperemia
c. Arterial neurotopical hyperemia
d. Atrerial hyperemia induced by metabolic factors
e. Arterial neuroparalytic hyperemia

342. Hepatitis has led to the development of hepatic failure. Mechanism of edemata formation is activated by the impairment of the following liver function:
a. Barrier
b. Antitoxic
c. Glycogen-synthetic
d. Protein-synthetic
e. Chologenetic

343. As a result of a road accident a 26-year-old man is in the torpid phase of shock. Blood count: leukocytes - 3,2x109/l. What is the leading mechanism of leukopenia development?
a. Faulty release of mature leukocytes from the bone marrow into the blood
b. Leukopoiesis inhibition
c. Leukocyte redistribution in the bloodstream
d. Leukocyte destruction in the hematopietic organs
e. Increased excretion of the leukocytes from the organism

344. Examination of a patient admitted to the surgical department with symptoms of acute appendicitis revealed the following changes in the white blood cells: the total count of leukocytes is 16*10^9/l. Leukocyte formula: basophils - 0, eosinophils - 2%, juvenile forms - 2%, stabnuclear - 8%, segmentonuclear - 59%, lymphocytes - 25%, monocytes- 4%. The described changes can be classified as:
a. Neutrophilia with hyperregenerative left shift
b. Neutrophilia with regenerative left shift
c. Neutrophilia with degenerative left shift
d. Neutrophilia with right shift
e. Neutrophilic leukemoid reaction

345. A patient was stung by a bee. Examination revealed that his left hand was hot, pink, edematic, there was a big red blister on the site of sting. What is the leading mechanism of edema development?
a. Injury of vessels caused by the sting
b. Reduced vessel filling
c. Increased vessel permeability
d. Drop of oncotic pressure in tissue
e. Drop of osmotic pressure in tissue

346. 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. Gentamicin sulfate
b. Nystatin
c. Ampicillin
d. Doxycycline hydrochloride
e. Metronidazole

347. A patient suffering from pheochromocytoma complains of thirst, dry mouth, hunger. Blood test for sugar revealed hyperglycemia. What type of hyperglycemia is it?

a. Adrenal
b. Alimentary
c. Hypoinsulinemic
d. Somatotropic
e. Hypercorticoid

348. There are several groups of molecular mechanisms playing important part in pathogenesis of insult to cells which contributes to the pathology development. What processes are stimulated by proteinic damage mechanisms?

a. Lipid peroxidation
b. Osmotic membrane distension
c. Acidosis
d. Enzyme inhibition
e. Phospholipase activation

349. A child was born with cleft palate. Examination revealed aorta defects and reduced number of T-lymphocytes in blood. What immunodeficient syndrome is it?

a. DiGeorge
b. Chediak-Higashi
c. Swiss-type
d. Louis-Bar
e. Wiskott-Aldrich

350. Examination of a child who frequently suffers from infectious diseases revealed that IgG concentration in blood serum was 10 times less than normal, IgA and IgM concentration was also significantly reduced. Analysis showed also lack of B-lymphocytes and plasmocytes. What disease are these symptoms typical for?

a. Brutons disease
b. Dysimmunoglobulinemia
c. Di George syndrome
d. Louis-Bar syndrome
e. Swiss-type agammaglobulinemia

351. A driver who got a trauma in a road accident and is shocked has reduction of daily urinary output down to 300 ml. What is the main pathogenetic factor of such diuresis change?

a. Drop of arterial pressure
b. Increased vascular permeability
c. Secondary hyperaldosteronism
d. Decreased number of functioning glomerules
e. Drop of oncotic blood pressure

352. Examination of a 12 year old boy with developmental lag revealed achondroplasia: disproportional constitution with evident shortening of upper and lower limbs as a result of growth disorder of epiphyseal cartilages of long tubal bones. This disease is:

a. Acquired
b. Inherited, dominant
c. Inherited, sex-linked
d. Inherited, recessive
e. Congenital

353. A patient was diagnosed with autoimmune hemolitic cytotoxic anemia. What substances are antigens in II type allergic reactions?

a. Antibiotics
b. Serum proteins
c. Inflammation modulators
d. Modified receptors of cell membranes

e. Hormones

354. A patient suffers from the haemorrhagic syndrome that shows itself in frequent nasal bleedings, posttraumatic and spontaneous intracutaneous and intra-articular haemorrhages. After a laboratory study a patient was diagnosed with the type B haemophilia. This disease is provoked by the deficit of the following factor of blood coagulation:

a. XI
b. VIII
c. IX
d. V
e. VII

355. A 58-year-old patient suffers from the cerebral atherosclerosis. Examination revealed hyperlipoidemia. What class of lipoproteins will most probably show increase in concentration in this patient's blood serum?

a. Low-density lipoproteins
b. Fatty acid complexes with albumins
c. Cholesterol
d. Chylomicrons
e. High-density lipoproteins

356. A 67 year old patient complains of periodic heart ache, dyspnea during light physical activities. ECG reveals extraordinary contractions of heart ventricles. Such arrhythmia is called:

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

357. In course of a preventive examination of a miner a doctor revealed changes of cardiovascular fitness which was indicative of cardiac insufficiency at the compensation stage. What is the main proof of cardiac compensation?

a. Tachycardia
b. Dyspnea
c. Cyanosis
d. Myocardium hypertrophy
e. Rise of arterial pressure

358. A 47 year old man with myocardium infarction was admitted to the cardiological department. What changes of cellular composition of peripheral blood are induced by necrotic changes in the myocardium?

a. Thrombocytopenia
b. Lymphopenia
c. Monocytosis
d. Eosinophilic leukocytosis
e. Neutrophilic leukocytosis

359. An infectious disease unit admitted a patient with signs of jaundice caused by hepatitis virus. Select an indicator that is specific only for parenchymatous jaundice:

a. Cholaemia
b. Urobilinuria
c. Hyperbilirubinemia
d. Bilirubinuria
e. Increase in ALT and AST rate

360. A patient with skin mycosis has disorder of cellular immunity. The most typical characteristic of it is reduction of the following index:

a. Immunoglobulin G

b. B-lymphocytes
c. Plasmocytes
d. T-lymphocytes
e. Immunoglobulin E

361. A child is pale, pastose, muscular tissue is bad developed, lymph nodes are enlarged. He often suffers from angina and pharyngitis, blood has signs of lymphocytosis. The child is also predisposed to autoallergic diseases. What type of diathesis can be presumed in this case?
a. Hemorrhagic
b. Lymphohypoplastic
c. Gouty
d. Exudative
e. Asthenic

362. A 26 year old pregnant woman is treated at an in-patient hospital. After a continuous attack of vomiting it was found reduced volume of her circulating blood. What kind of changes in general blood volume will appear?
a. Oligocythemic hypervolemia
b. Polycythemic hypovolemia
c. Oligocythemic hypovolemia
d. Simple hypovolemia
e. Polycythemic hypervolemia

363. Parents of a 3 year old child have been giving him antibiotics with purpose of preventing enteric infections for a long time. A month later the childs condition changed for the worse. Blood examination revealed apparent leukopenia and granulocytopenia. What is the most probable mechanism of blood changes?
a. Hemolytic
b. Myelotoxic
c. Redistributive
d. Autoimmune
e. Age-specific

364. A patient ill with enteritis accompanied by massive diarrhea has low water rate in the extracellular space, high water rate inside the cells and low blood osmolarity. What is such disturbance of water-electrolytic metabolism called?
a. Osmolar hypohydration
b. Hyperosmolar hypohydration
c. Hypo-osmolar hypohydration
d. Hypo-osmolar hyperhydration
e. Hyperosmolar hyperhydration

365. A 15 year old girl has pale skin, glossitis, gingivitis. Blood count: erythrocytes - 3,3 x 1012/l, hemoglobin - 70 g/l, colour index - 0,5. Examination of blood smear revealed hypochromia, microcytosis, poikilocytosis. What type of anemia is it?
a. Iron-deficient
b. Sickle-cell
c. Thalassemia
d. Hemolytic
e. B12-folic acid-deficient

366. A 70 year old man is ill with vascular atherosclerosis of lower extremities and coronary heart disease. Examination revealed disturbance of lipidic blood composition. The main factor of atherosclerosis pathogenesis is the excess of the following lipoproteins:
a. Chylomicrons
b. Low-density lipoproteins
c. High-density lipoproteins
d. Cholesterol

e. Intermediate density lipoproteins

367. A patient ill with essential arterial hypertension had a hypertensic crisis that resulted in an attack of cardiac asthma. What is the leading mechanism of cardiac insufficiency in this case?

a. Heart overload caused by increased blood volume
b. Myocardium damage
c. Blood supply disturbance
d. Heart overload caused by high pressure
e. Absolute coronary insufficiency

368. Rats being under stress have muscular hypertonia and high arterial pressure, high glucose concentration in blood and intensified secretion of corticotropin and corticosteroids. In what stress phase are these animals?

a. Terminal
b. Antishock phase
c. Shock phase
d. Exhaustion
e. Erectile

369. A patient has been diagnosed with influenza. His condition became drastically worse after taking antipyretic drugs. His consciousness is confused, AP is 80/50 mm Hg, Ps is 140/m, body temperature droped down to 35,8°C. What complication developed in this patient?

a. Acidosis
b. Alkalosis
c. Hyperthermia
d. Hypovolemia
e. Collapse

370. A 45 year old woman is ill with breast cancer. Her left arm has symptoms of lymphatic system insufficiency - limb edema, lymph node enlargement. What form of lymphatic circulation insufficiency is it?

a. Combined insufficiency
b. -
c. Dynamic insufficiency
d. Resorption insufficiency
e. Mechanic insufficiency

371. A 25 year old man has spent a long time in the sun under high air humidity. As a result of it his body temperature rose up to 39oC. What pathological process is it?

a. Hypothermia
b. Infectious fever
c. Hyperthermia
d. Noninfectious fever
e. Burn disease

372. A 26 year old man is in the torpid shock phase as a result of a car accident. In blood: 3,2109/l. What is the leading mechanism of leukopenia development?

a. Leikopoiesis inhibition
b. Lysis of leukocytes in the blood-forming organs
c. Intensified elimination of leukocytes from the organism
d. Redistribution of leukocytes in bloodstream
e. Disturbed going out of mature leukocytes from the marrow into the blood

373. A patient was hospitalized in a comatose state. The patient has a 5-yearlong history of diabetes mellitus type 2. Objectively respiration is noisy, deep, with acetone breath odor. Blood glucose is 15.2 mmol/L, ketone bodies - 100 micromol/L. These signs are characteristic of the following diabetes complication:

a. Hyperglycemic coma

b. Hepatic coma
c. Ketoacidotic coma
d. Hypoglycemic coma
e. Hyperosmolar coma

374. A 63-year-old man suffers from esophageal carcinoma, presents with metastases into the mediastinal lymph nodes and cancerous cachexia. What pathogenetic stage of neoplastic process is observed in the patient?
a. Promotion
b. Initiation
c. -
d. Progression
e. Transformation

375. After a prolonged attack of severe headache the patient lost mobility in his left arm and leg. Muscle tone is decreased in the affected limbs, the muscles are spasmed, spinal tendon reflexes are acutely intensified, reflex zones are increased. What nervous system disorder can be observed in this patient?
a. Flaccid paralysis
b. Reflex paralysis
c. Peripheral paralysis
d. Extrapyramidal paralysis
e. Central paralysis

376. Hematologic study shows the following pattern: erythrocytes - 2, 8 · 1012/L, Hb - 80 g/L, color index - 0.85, reticulocytes - 0,1%, platelets - 160 thousand per microliter, leukocytes - 60 · 109/L. Basocytes - 2%, eosinophils - 8%, promyelocytes - 5%, myelocytes - 5%, juvenile - 16%, stab neutrophils - 20%, segmented neutrophils - 34%, lymphocytes - 5%, monocytes - 5%. This clinical presentation indicates the following blood pathology:
a. Hypoplastic anemia
b. Acute myeloleukemia
c. Chronic myeloleukemia
d. Undifferentiated leukemia
e. Hemolytic anemia

377. Antileukocytic antibodies are detected in the blood of a patient with leukopenia. What type of Coombs-Gell hypersensitivity reaction developed in this case?
a. Immune complex-mediated
b. Cytotoxic
c. Anaphylactic
d. Stimulating
e. Delayed-type hypersensitivity

378. A patient with obliterating endarteritis has undergone a ganglionic sympathectomy. Positive therapeutic effect of this surgery is associated with development of arterial hyperemia of the lower limbs, which can be described as:
a. Neurotonic
b. Reactive
c. Working
d. Neuroparalytic
e. Metabolic

379. In an experiment a laboratory rat was subjected to a stress factor (electric current), which resulted in muscular hypotonia, arterial hypotension, hypothermia, and hypoglycemia in the animal. What period of general adaptation syndrome is it?
a. -
b. Shock phase
c. Resistance stage

d. Antishock phase
e. Exhaustion stage

380. A 14-year-old adolescent has diphtheria. During the peak of the disease against the background of acute drop in body temperature and tachycardia the blood pressure is 70/50 mm Hg. What type of vascular tone disturbance is it?
a. -
b. Somatoform autonomic dysfunction
c. Essential hypotension
d. Acute hypotension
e. Chronic hypotension

381. 24 hours after an appendectomy the patient's blood test shows neutrophilic leukocytosis with a regenerative shift. What is the most likely mechanism of absolute leukocytosis development in the patient's peripheral blood?
a. Leukocyte redistribution
b. Deceleration of leukocyte migration to the tissues
c. Immunity activation
d. Intensification of leukopoiesis
e. Decreased leukocyte disintegration

382. A 59-year-old man, a business manager, developed intense burning retrosternal pain that irradiates to the left arm. The pain occurred in the evening after the tax audit. 15 minutes later the patient's condition normalized. What mechanism of angina pectoris development is leading in this patient? Патологічна фізіологія 11
a. Increased level of blood catecholamines
b. Intravascular aggregation of blood cells
c. Functional cardiac overload
d. Coronary artery thrombosis
e. Coronary atherosclerosis

383. A 30-year-old person has been stung by a bee. The stung area exhibits edema, hyperemia, and elevated temperature. What is the initial pathogenetic factor of inflammatory edema in this case?
a. Increase of capillary blood pressure
b. Disturbed lymphatic efflux
c. Increase of osmotic pressure in the inflammation focus
d. Decrease of oncotic blood pressure
e. Increase of microvascular permeability

384. A 30-year-old woman developed facial edemas. Examination detected proteinuria (5.87 g/L), hypoproteinemia, dysproteinemia, and hyperlipidemia. Such combination of signs is characteristic of:
a. Acute kidney failure
b. Chronic kidney failure
c. Nephritic syndrome
d. Chronic pyelonephritis
e. Nephrotic syndrome

385. An uconscious young man in the state of morphine intoxication has been brought into an admission room. The patient's respiration is slow and shallow due to suppression of the respiratory center. What kind of respiratory failure occurred in this case?
a. Ventilatory obstruction
b. Perfusion
c. Diffusion
d. Ventilatory disregulation
e. Ventilatory restriction

386. A man has been working for a long time in oil processing. What type of carcinogens does he encounter at his workplace?

a. Amino-azo compounds
b. Biological carcinogens
c. Amines
d. Polycyclic aromatic hydrocarbons
e. Nitrosamines

387. A patient has been suffering from bronchial asthma for 15 years. What changes in the patient's leukogram can be expected in this case?
a. Eosinophilia
b. Leukocytosis
c. Left shift
d. Leukopenia
e. Basophilia

388. A married couple came for a genetic counseling. The husband suffers from insulinindependent diabetes mellitus, while the wife is healthy. What is the probability of their child developing insulin-independent diabetes mellitus?
a. Higher than in the population
b. Lower than in the population
c. 50%
d. 100%
e. The same as in the population

389. A laboratory rat with chronic kidney failure presents with osteoporosis, pathologic calcification of the internal organs, and arterial hypertension. These disturbances are associated with increased activity of the following hormone:
a. Parathyroid hormone
b. Triiodothyronine
c. Adrenaline
d. Calcitonin
e. Thyroxin

390. A patient is diagnosed with severe B12- deficiency anemia resulting in disturbed hematopoiesis and appearance of atypical erythrocytes in the blood. The patient has a history of total gastric resection. This diagnosis can be confirmed if the following cells are present in the peripheral blood:
a. Megalocytes
b. Elliptocytes
c. Anulocytes
d. Normocytes
e. Microcytes

391. A patient with asphyxia after a brief respiratory arrest developed single infrequent respirations with passive expiration, after which he stopped breathing completely. What type of respiration was observed in this case?
a. Cheyne-Stokes respiration
b. Biot respiration
c. Apneustic respiration
d. Kussmaul respiration
e. Gasping respiration

392. A 3-year-old child has been brought by ambulance to the intensive care unit of the infectious diseases hospital. On examination the child is in severe condition, skin and mucosa are dry, tissue turgor is reduced. The patient's history states that profuse diarrhea and recurrent vomiting were observed throughout the previous day after the child had eaten food products of poor quality. What type of salt and water imbalance is likely to have developed in the patient?
a. Isoosmolar dehydration
b. Isoosmolar hyperhydration
c. Hypoosmolar hyperhydration

d. Hypoosmolar dehydration
e. Hyperosmolar hyperhydration

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

a. Complete atrioventricular block
b. Second-degree atrioventricular block
c. Intraventricular block
d. Intraatrial block
e. First-degree atrioventricular block

394. A 40-year-old man with impaired venous patency in the lower limbs developed edemas. What mechanism plays the main role in the development of this disturbance?

a. Decreased gradient of osmotic pressure between blood and tissue
b. Positive fluid balance
c. Elevated filtration pressure
d. Disturbed humoral regulation of watermineral balance
e. Hypoproteinemia