

1. A female patient suffers from chronic glomerulonephritis. Urine analysis revealed proteinuria, hematuria, leukocyturia. Proteinuria indicates disturbance of the following process in kidneys:

- a. Tubular reabsorption
- b. Tubular secretion
- c. Glomerular filtration**
- d. Tubular secretion and reabsorption
- e. Renal blood flow

2. Examination of the lower limbs of a 40-year-old patient with coronary artery disease and vascular disease of lower limbs (obliterating endarteritis) revealed skin pallor and dystrophy, local temperature decrease, sense shock, pain. The patient is likely to have the following disorder of the peripheral blood circulation:

- a. Arterial hyperaemia
- b. Obstruction ischemia**
- c. Angiospastic ischemia
- d. Compression ischemia
- e. Venous hyperaemia

3. A 45-year-old patient complains of nausea, foul-smelling eructation, periodic vomiting, meteorism. Fractional analysis of the secretory function of stomach revealed the absence of hydrochloric acids and some enzymes. The patient has the following pathology of the gastrointestinal tract:

- a. Anacidic state
- b. Achylia**
- c. Hypoacidic state
- d. Hypochlorhydria
- e. Achlorhydria

4. A 56 y.o. patient complains of periodical pain attacks in the heart area irradiating to his left arm, sometimes to the left scapula. These pain attacks can be relieved by nitroglycerine. What heart pathology can be suspected?

- a. Myocarditis
- b. Myocardium infarction
- c. Stenocardia**
- d. Endocarditis
- e. Pericarditis

5. A 54 y.o. patient with stomach ulcer complains about great weakness, dyspnea caused by the slightest physical exercise. Blood count: erythrocytes -  $1,44 \times 10^12/l$ , Hb- 66 g/l, colour index - 1,4. What anemia are these changes of peripheral blood count typical for?

- a. Acute posthemorrhagic
- b. Iron-deficiency
- c. B12-deficiency**
- d. Acquired hemolytic
- e. Chronic posthemorrhagic

6. What intracardiac compensation mechanism is actuated under conditions of cardiac insufficiency and causes blood volume overload?

- a. Tachycardia
- b. Myocardium hypertrophy
- c. Increase of respiratory rate
- d. Heterometric**
- e. Homeometric

7. A patient was diagnosed with anacytic gastritis. What enzyme activity will be reduced?

- a. Lipase
- b. Amylase
- c. Pepsin**
- d. Chomotrypsin

e. Trypsin

8. A child with evident hypotrophy got edema on his lower extremities, ascites. What is the main mechanism of pathogenesis of cachectic edema?

- a. Rise of oncotic pressure of intercellular fluid
- b. Rise of hydrostatic blood pressure

c. Drop of oncotic pressure of blood plasma

- d. Increased permeability of vascular wall
- e. Disturbance of lymph outflow

9. What disease of blood coagulation system is based upon abrupt deceleration of blood coagulation due to disturbed formation of plasma thromboplastin (VIII factor deficit)?

- a. Hemorrhagic purpura

b. Hemophilia

- c. Hemorrhagic vasculitis
- d. Thrombocytopenic purpura
- e. Symptomatic thrombocytopenia

10. In order to estimate antibiotic susceptibility of a patient doctors introduced him intracutaneously 0,2 ml of penicilline solution. Ten minutes after introduction there appeared hyperemy and edema. What type does this reaction relate to (according to Coombs and Gells classification)?

- a. Reaction of Arthus phenomenon type
- b. Cytotoxic reaction

c. Anaphylactic reaction

- d. Delayed-type hypersensitivity
- e. Tuberculin reaction

11. Examination of a patient revealed an increase in low-density lipoprotein concentration in blood serum. The patient can be expected to have the following disease:

- a. Glomerulonephritis
- b. Pneumonia
- c. Atherosclerosis

- d. Acute pancreatitis
- e. Gastritis

12. As a result of spine injury a female patient has no voluntary movements of her lower limbs. This disorder is called:

- a. Paraparesis
- b. Paraplegia

- c. Monoplegia
- d. Tetraplegia
- e. Hemiplegia

13. What classification criterion incorporates the following types of anemias: posthemorrhagic, hemolytic and anemia induced by disturbed hematogenesis?

- a. Hematogenesis type
- b. Etiology
- c. Pathogenesis

- d. Bone marrow regenerability
- e. Colour index

14. A 40 year old woman has been suffering from profuse uterine bleedings for a long time. Blood count: Hb- 90 g/l, erythrocytes -  $3,9 \times 10^12$  l, colour index - 0,6. What is the main cause of hypochromic anemia?

- a. Deficiency of vitamin B12
- b. Insufficient iron content in food ration
- c. Increased consumption of iron
- d. Nonassimilability of iron

e. Iron loss with blood

15. A patient suffering from gastric ulcer for a long time has dramatic emaciation, skin pallor, appetite loss, aversion to meat products. Biopsy of mucous membrane of stomach revealed cellular atypia.

What pathology are these symptoms typical for?

a. Helminthic invasion

b. Malignant tumour of stomach

c. Polyposis

d. Benign tumour of stomach

e. Hypertrophic gastritis

16. A patient had cerebral haemorrhage that made impossible active motions of left arm and leg.

Muscle tone of these limbs is increased, their spinal reflexes are intensified, reflex zones are increased. What type of CNS disorder is it?

a. Central paralysis

b. Spinal shock

c. Reflex paralysis

d. Atonic paralysis

e. Peripheral paralysis

17. A patient had an attack of calculous cholecystitis that was accompanied by saponated feces, steatorrhea. These changes are the evidence of disturbance of the following stage of lipometabolism:

a. Adipose tissue exchange

b. Depositing

c. Transport

d. Intermediary metabolism

e. Digestion and absorption

18. After a stomach resection a patient presented with weakness, skin pallor, face puffiness, enlargement of liver and spleen. Analysis of the peripheral blood revealed megaloblasts and megalocytes; hyperchromatism (colour index - 1,3). What type of anaemia is observed in this patient?

a. Hypoplastic

b. Haemolytic

c. B12-deficient

d. Iron-deficient

e. Toxic

19. A few minutes after repeated introduction of penicillin a patient got dyspnea, tongue numbness, hyperemia and then skin pallor. The patient also lost consciousness. What is the cause of such a grave condition?

a. Hemolytic anemia

b. Serum sickness

c. Anaphylactic shock

d. Acute glomerulonephritis

e. Bronchial asthma

20. A patient has bradycardia, moderate hypotension, decrease of basal metabolism, edemata. What disorder can induce such syndrome?

a. Adrenal hypofunction

b. Thyroid hypofunction

c. Thyroid hyperfunction

d. Parathyroid hypofunction

e. Parathyroid hyperfunction

21. A patient suffering from chronic cardiac insufficiency has got soft tissue edemata on his shins.

What is the leading pathogenetic factor of edema development?

a. Drop of hydrostatic pressure in capillaries

b. Rise of osmotic pressure in tissues

c. Drop of osmotic pressure in blood plasma

d. Rise of oncotic pressure in tissues

**e. Rise of hydrostatic pressure in capillaries**

22. Most cases of alimentary starvation are accompanied by development of evident edemata. What is the leading pathogenetic mechanism of edemata development in this case?

a. Rise of oncotic pressure in the intercellular fluid

b. Fall of osmotic pressure in the intercellular fluid

c. Rise of hydrostatic pressure in the capillaries

d. Fall of hydrostatic pressure in the tissues

**e. Fall of oncotic pressure of blood plasma**

23. A patient suffering from pleuritis underwent pleural puncture. There was obtained a transparent odourless liquid. What type of exudate was obtained?

**a. Serous**

b. Purulent

c. Putrefactive

d. Fibrinous

e. Haemorrhagic

24. A 45-year-old woman has frequent uterine haemorrhages, she presents with general weakness, dyspnea, tachycardia, cardiac pain. In blood: erythrocytes -  $3 \times 10^9/l$ , haemoglobin - 70 g/l, colour index - 0.7. The smear contains mostly hypochromic erythrocytes, microcytes. Specify the type of anaemia according to its mechanism of development:

**a. Iron-deficiency**

b. Haemolytic

c. Protein-deficiency

d. Minkowsky-Shaaffard disease

e. B12-folate-deficiency

25. A 38 year old patient had hepatitis but didn't give up alcohol. There appeared symptoms of hepatocirrhosis along with ascites and edemata of his lower limbs. What changes in blood are main factor of edemata development?

a. Hypocholesterolemia

b. Hypoglobulinemia

**c. Hypoalbuminemia**

d. Hypokalemia

e. Hypoglycemia

26. What form of hypoxia develops during shock and collapse?

a. Respiratory

b. Hemic

c. Tissue

**d. Circulatory**

e. Hypoxic

27. The leukocytes that are the first to appear in a focus of inflammation are called:

a. Monocytes

b. Lymphocytes

c. Basophils

**d. Neutrophils**

e. Eosinophils

28. After a 5-year-old child has been brought home from the kindergarten he presented with weakness, headache, body temperature rise up to 37,5°C. What period of disease development is the case?

**a. Prodromal**

b. Incubative

- c. Fastigium
- d. Recovery
- e. Latent

29. A 56 year old patient complains about limitation of movements and pain in hand joints, mainly at night. Objectively: there is a disfiguring painful swelling of affected joints. Blood and urine have high concentration of uric acid. What disease has developed?

- a. Tyrosinosis
- b. Gout**
- c. Phenylketonuria
- d. Pellagra
- e. Alkaptonuria

30. A patient ill with pheochromocytoma has high secretion of the following hormone:

- a. Thyroxin
- b. Somatotropin
- c. Glucagon
- d. Insulin
- e. Adrenaline**

31. Every year during the plant blossoming a female patient develops acute catarrhal inflammation of conjunctiva and nasal mucosa that is the clinical presentation of an allergy. These symptoms relate to the following type of allergic reactions:

- a. Immune complex
- b. Cytotoxic
- c. Anaphylactic**
- d. Cell-mediated
- e. Cellular dysfunction

32. A female patient consulted a doctor about leg pain that arises usually toward the evening; feet and shins edemata. Objectively: leg skin is cyanotic, cold to the touch. What type of peripheral circulation disorder does the patient present with?

- a. Ischaemia
- b. Arterial hyperaemia
- c. Venous hyperaemia**
- d. Stasis
- e. Thrombosis

33. A group of alpinists climbing to the top had their blood tested. The test revealed erythrocytosis and increase in hemoglobin rate. What type of hypoxia caused the stimulation of erythropoiesis in the bone marrow?

- a. Tissue
- b. Hypoxic**
- c. Hemic
- d. Combined
- e. Circulatory

34. A 42-year-old patient suffering from chronic calculous cholecystitis complains of acute pain in the right subcostal area, itching and skin icteritiousness, multiple petechial haemorrhages, saponified and light-coloured feces (steatorrhea). What type of icterus is it?

- a. Hemolytic
- b. Cythemolytic
- c. Hepatocellular
- d. Mechanic**
- e. Parenchymatous

35. A 55-year-old woman with renal failure has arterial pressure at the rate of 170/100 mm Hg. Stable pressure rise is caused by hyperactivity of the following system:

- a. Sympathoadrenal
- b. Central nervous
- c. Kallikrein-kinin
- d. Renin-angiotensin-aldosterone**
- e. Hypothalamo-pituitary

36. A boy is 4 year old. Glucose concentration in blood plasma is 12 millimole/l. This might be caused by deficiency of the following hormone:

- a. Cortisol
- b. Glucagon
- c. Insulin**
- d. Somatotropin
- e. Adrenocorticotropic

37. A 40 year old patient complains about general weakness, headache, body temperature rise, cough with sputum, dyspnea. After examination his illness was diagnosed as focal pneumonia. What type of hypoxia is observed?

- a. Circulatory
- b. Tissue
- c. Hypoxic
- d. Respiratory**
- e. Hemic

38. A 58 year old patient complained about persistent rise of arterial pressure. Clinical examination revealed chronic renal disease accompanied by disturbance of renal blood flow. Rise of arterial pressure was induced by activation of the following regulatory system:

- a. Renin-angiotensin**
- b. Sympathetic nervous
- c. Hypothalamo-pituitary-adrenal
- d. Sympathoadrenal
- e. Parasympathetic nervous

39. A patient diagnosed with acute abdomen was delivered to the hospital. A doctor suspected acute appendicitis and ordered urgent blood test. What factor would be the evidence of acute inflammation in this patient?

- a. Leukocytosis**
- b. Eosinophilia
- c. Erythropenia
- d. Erythrocytosis
- e. Leukopenia

40. What pathology of tissue growth is characterized by cellular and tissue atypia from the point of histomorphology?

- a. Benign tumour
- b. Regeneration
- c. Dystrophy
- d. Degeneration
- e. Malignant tumour**

41. After a birth trauma a newborn presents with limited movements of the right upper extremity, hyporeflexia, myopathy. These changes relate to the following type of motor dysfunctions:

- a. Myasthenia
- b. Central paraparesis
- c. Peripheral (atonic) paraparesis**
- d. Bulbar paraparesis
- e. Neuritis

42. A 37-year-old man was admitted to a hospital with an attack of bronchial asthma. What

respiration type will be observed in this patient?

- a. Apnoea
- b. Inspiratory dyspnea
- c. Expiratory dyspnea**
- d. Gasping respiration
- e. Hyperpnoea

43. A child got burn on his hand caused by hot water. Burn skin is bright red. What disturbance of local blood circulation is it?

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

44. A patient has obstructive respiratory failure. Name a disease that is usually accompanied by such type of respiratory failure:

- a. Pneumonia
- b. Pneumoconiosis
- c. Pneumothorax
- d. Bronchial asthma**
- e. Exudative pleuritis

45. A patient suffering from the bone marrow form of radiation sickness was found to have the following changes in his hemogram: leukocytes -  $2 \cdot 10^9/l$ , lymphopenia, erythrocytes -  $3,0 \cdot 10^{12}/l$ , Hb- 52 g/l, thrombocytes -  $105 \cdot 10^9/l$ , reduced blood coagulation. These changes are typical for the following stage of the radiation sickness:

- a. Solution
- b. Relapse
- c. Latent period
- d. Prodromal period
- e. Fastigium**

46. Immediate-type allergies are characterized by degranulation of the tissue basophils that secrete biologically active substances. One of such substances is:

- a. Histamine**
- b. Plasminogen
- c. Thromboxane
- d. Hagemans factor
- e. Acetylcholine

47. A 57-year-old worker at an asphalt plant complains of weakness, cough with blood-streaked sputum, chest pain. He has been diagnosed with lung cancer. What is the first stage of carcinogenesis?

- a. Promotion
- b. Progression
- c. Induction
- d. Transformation**
- e. Activation

48. A 56-year-old female patient complains about a fast growing hard neoplasm in the mammary gland that appeared a month ago. Objectively: the formation is fused with the surrounding tissues, it is uneven, slightly painful. What are the peculiarities favouring the infiltrative growth of a malignant tumour?

- a. Lack of contact inhibition**
- b. Intensified contact inhibition
- c. Rise of embryonal antigens
- d. Intensified formation of tight contacts

e. Intensified chalone formation

49. Examination of a patient revealed neutrophilic leukocytosis with shift of leukogram to the right. It is typical for:

- a. Allergy
- b. Rheumatism
- c. Chronic inflammatory process
- d. Autoimmune process

e. Acute inflammatory process

50. A patient is 54 year old. After intense emotional stress he felt strong pain behind his breastbone irradiating to his left arm and left part of his neck. He felt also death anxiety and broke into a cold sweat. Nitroglycerine relieved pain. Name a disturbance of local blood circulation in heart that has developed in this case:

- a. Ischemia
- b. Embolism
- c. Venous hyperemia
- d. Arterial hyperemia
- e. Thrombosis

51. A patient present's with Kussmaul's respiration, acetone smell from the mouth; low tonus of eyeballs, myotic pupils, dry skin, polyuria, glycosuria, hyperglycemia. Such symptom complex is typical for the following coma:

- a. Diabetic
- b. Alimentary dystrophic
- c. Adrenal
- d. Hypoglycemic
- e. Hepatic

52. A patient was diagnosed with right lung cancer and doctors administered him surgical treatment. After right-sided pulmonectomy the patient began to suffer from evident dyspnea. What form of respiratory failure is it?

- a. Central
- b. Pulmonary obstructive
- c. Thoracodiaphragmal
- d. Pulmonary restrictive
- e. Peripheral

53. A patient with acute pneumonia has an edema and hardening of pulmonary tissue. What cells are the first to infiltrate the inflammation zone and provide the effective protection from the bacterial infection?

- a. Eosinophils
- b. Basophils
- c. Monocytes
- d. Thrombocytes
- e. Neutrophils

54. A patient complains of belting pain in epigastrium. Examination revealed high diastase content in urine, as well as undigested fat in feces. What pathology are these occurrences typical for?

- a. Acute appendicitis
- b. Enterocolitis
- c. Gastritis
- d. Infectious hepatitis
- e. Acute pancreatitis

55. A patient was found to have an increase in total bilirubin concentration in plasma at the expense of indirect bilirubin; high rate of stercobilin in feces and urine; normal rate of direct bilirubin. What jaundice is it?

a. Haemolytic

b. Gilberts syndrome

c. Physiological

d. Parenchymatous

e. Mechanic

56. Examination of a patient revealed symptoms of myocardial insufficiency. What is the possible cause of cardiac insufficiency of myocardial type?

a. Mitral stenosis

b. Essential hypertension

c. Aorta coarctation

d. Pulmonary emphysema

e. Infectious myocarditis

57. A child has got a burn. Burnt skin is hyperemic, there are small vesicles full of transparent fluid.

What type of fluid is it?

a. Hemorrhagic exudate

b. Transsudate

c. Putrid exudate

d. Serous exudate

e. Purulent exudate

58. A 47-year-old patient with an arm injury was delivered to a hospital in pain shock condition.

Objectively: the patient is in grave condition, with mental confusion; integuments are moist, pale, acrocyanotic. There are also tachypnea, fall in the arterial pressure, tachycardia. What type of hypoxia is prevailing in this patient?

a. Circulatory

b. Tissue

c. Substrate

d. Respiratory

e. Haemic

59. A patient suffering from the essential hypertension presents with an increase in the arterial pressure up to 180/110 mm Hg; dyspnea, cyanosis, tachycardia; heart borders are dilated to the left, in lungs moist rales are present. What signs of urgent compensation for cardiac failure are observed?

a. Cyanosis

b. Arterial pressure rise

c. Tachycardia

d. Dyspnea

e. Myogenic dilatation

60. A patient has been suffering from diabetes mellitus for 10 years. He was delivered to a hospital in grave condition. On the 2nd day of treatment his condition grew significantly worse: he lapsed into a coma, there appeared noisy deep breathing. Deep inspirations took turns with forced expirations with assistance of expiratory muscles. What form of respiration disorder is it?

a. Stenotic respiration

b. Cheyne-Stokes respiration

c. Biots respiration

d. Kussmauls respiration

e. Tachypnea

61. After taking phenacetin a patient complained about sore throat and impossibility of deglutition. An otolaryngologist made a diagnosis of necrotic angina. In blood: Hb- 130 g/l, erythrocytes -  $4,5 \cdot 10^12/l$ , leukocytes -  $3,0 \cdot 10^9/l$ , among them lymphocytes - 75%, neutrophils - 10%, eosinophils - 5%, monocytes - 10%. What type of white blood cell disorder is it?

a. Monocytosis

b. Neutrophilia

c. Neutropenia

- d. Eosinophylia
- e. Lymphopenia

62. A Rh-positive child of a Rh-negative woman (secundapara) has yellow skin, pathologic reflexes, convulsions. The child has an increased rate of indirect bilirubin in blood. What type of jaundice is it?

- a. Hepatic with violation of bilirubin capture
- b. Hepatic with violation of bilirubin excretion
- c. Mechanic

**d. Haemolytic**

- e. Hepatic with violation of bilirubin conjugation

63. After a road accident a patient has the arterial pressure at the rate of 70/40 mm Hg and daily diuresis at the rate of about 300 ml. What is the mechanism of oliguria development in this case?

- a. Increase in tubular reabsorption
- b. Decrease in tubular secretion
- c. Increase in glomerular filtration
- d. Decrease in tubular reabsorption
- e. Decrease in glomerular filtration**

64. 3 years ago a patient was diagnosed with chronic glomerulonephritis. The patient has got multiple edemata within the last 6 months. What is the cause of their development?

- a. Glucocorticoid treatment
- b. Vasopressin hyperproduction
- c. Hyperaldosteronism
- d. Injection of non-steroidal anti-inflammatory preparations
- e. Proteinuria**

65. A warmly dressed child has spent a considerably long time out of doors. This resulted in body temperature elevation and general weakness development. What form of thermoregulation disorder is observed in this case?

- a. Endogenous hyperthermia
- b. Heat shock
- c. Centrogenous hyperthermia
- d. Exogenous hyperthermia**
- e. Fever

66. A patient with pneumosclerosis has blood pH at the rate of 7,34. Analysis of gas formula of blood showed hypercapnia. Urine analysis revealed the increase in its acidity. What form of acid-base disbalance is the case?

- a. Gaseous acidosis**
- b. Gaseous alkalosis
- c. Non-gaseous acidosis
- d. Non-gaseous alkalosis
- e. Secretory alkalosis

67. A female patient suffers from chronic glomerulonephritis. Urine analysis revealed proteinuria, hematuria, leukocyturia. Proteinuria indicates disturbance of the following process in kidneys:

- a. Glomerular filtration**
- b. Tubular reabsorption
- c. Renal blood flow
- d. Tubular secretion and reabsorption
- e. Tubular secretion

68. Examination of the lower limbs of a 40-year-old patient with coronary artery disease and vascular disease of the lower limbs (obliterating endarteritis) revealed skin pallor and dystrophy, local temperature decrease, sense shock, pain. The patient is likely to have the following disorder of the peripheral blood circulation:

- a. Angiospastic ischemia**

b. Compression ischemia

c. **Obstruction ischemia**

d. Venous hyperaemia

e. Arterial hyperaemia

69. A patient has been found to have sugar in the urine. Blood glucose is normal. Arterial pressure is normal. What is the mechanism of glycosuria development in this case?

a. Hyperfunction of adrenal cortex

b. **Disturbance of glucose reabsorption in the nephron tubules**

c. Hyperfunction of adrenal medulla

d. Insulin deficiency

e. Hyperfunction of thyroid gland

70. A 45-year-old patient complains of nausea, foul-smelling eructation, periodic vomiting, meteorism. Fractional analysis of the secretory function of stomach revealed the absence of hydrochloric acids and some enzymes. The patient has the following pathology of the gastrointestinal tract:

a. Hypoacidic state

b. Hypochlorhydria

c. **Achylia**

d. Achlorhydria

e. Anacidic state

71. A 56 y.o. patient complains of periodical pain attacks in the heart area irradiating to his left arm, sometimes to the left scapula. These pain attacks can be relieved by nitroglycerine. What heart pathology can be suspected?

a. Myocardium infarction

b. Endocarditis

c. Pericarditis

d. **Stenocardia**

e. Myocarditis

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c. **B12-deficiency**

d. Acquired hemolytic

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73. A patient was diagnosed with anacytic gastritis. What enzyme activity will be reduced?

a. Chymotrypsin

b. Trypsin

c. Amylase

d. Lipase

e. **Pepsin**

74. What disease of blood coagulation system is based upon abrupt deceleration of blood coagulation due to disturbed formation of plasma thromboplastin (VIII factor deficit)?

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b. Thrombocytopenic purpura

c. **Hemophilia**

d. Symptomatic thrombocytopenia

e. Hemorrhagic purpura

75. In order to estimate antibiotic susceptibility of a patient doctors introduced him intracutaneously 0,2 ml of penicilline solution. Ten minutes after introduction there appeared hyperemy and edema. What type does this reaction relate to (according to Coombs and Gells classification)?

- a. Cytotoxic reaction
- b. Delayed-type hypersensitivity
- c. Tuberculin reaction
- d. Anaphylactic reaction**
- e. Reaction of Arthus phenomenon type

76. Examination of a patient revealed an increase in low-density lipoprotein concentration in blood serum. The patient can be expected to have the following disease:

- a. Atherosclerosis**
- b. Glomerulonephritis
- c. Gastritis
- d. Acute pancreatitis
- e. Pneumonia

77. After taking phenacetin a patient developed acute sore throat, body temperature rise.

Examination allowed doctors to make a diagnosis of necrotic angina and agranulocytosis.

Agranulocytosis can be characterized by a decrease in the amount of the following WBCs:

- a. Eosinophils
- b. Lymphocytes
- c. Monocytes
- d. Neutrophils**
- e. Basophils

78. What classification criterion incorporates the following types of anemias: posthemorrhagic, hemolytic and anemia induced by disturbed hematogenesis?

- a. Etiology
- b. Bone marrow regenerability
- c. Colour index
- d. Pathogenesis**
- e. Hematogenesis type

79. A 40 year old woman has been suffering from profuse uterine bleedings for a long time. Blood count: Hb- 90 g/l, erythrocytes - 3,91012/l, colour index - 0,6. What is the main cause of hypochromic anemia?

- a. Nonassimilability of iron
- b. Increased consumption of iron
- c. Iron loss with blood**
- d. Deficiency of vitamin B12
- e. Insufficient iron content in food ration

80. A patient suffering from gastric ulcer for a long time has dramatic emaciation, skin pallor, appetite loss, aversion to meat products. Biopsy of mucous membrane of stomach revealed cellular atypia.

What pathology are these symptoms typical for?

- a. Benign tumour of stomach
- b. Hypertrophic gastritis
- c. Helminthic invasion
- d. Malignant tumour of stomach**
- e. Polyposis

81. A newborn born to an Rh-negative mother (3rd pregnancy) presents with progressing jaundice, symptoms of CNS excitation, anemia. What type of jaundice is it?

- a. Toxic
- b. Hemolytic**
- c. Obstructive
- d. Parenchymatous
- e. Parasitic

82. A patient had cerebral haemorrhage that made impossible active motions of left arm and leg.

Muscle tone of these limbs is increased, their spinal reflexes are intensified, reflex zones are increased. What type of CNS disorder is it?

- a. Reflex paralysis
- b. Central paralysis**
- c. Spinal shock
- d. Peripheral paralysis
- e. Atonic paralysis

83. A patient had an attack of calculous cholecystitis that was accompanied by saponated feces, steatorrhea. These changes are the evidence of disturbance of the following stage of lipometabolism:

- a. Intermediary metabolism
- b. Transport
- c. Digestion and absorption**
- d. Adipose tissue exchange
- e. Depositing

84. After a stomach resection a patient presented with weakness, skin pallor, face puffiness, enlargement of liver and spleen. Analysis of the peripheral blood revealed megaloblasts and megalocytes; hyperchromatism (colour index - 1,3). What type of anaemia is observed in this patient?

- a. Toxic
- b. B12-deficient**
- c. Hypoplastic
- d. Haemolytic
- e. Iron-deficient

85. In an emergency situation a scuba diver has quickly risen from the depths to the surface, which is against the rule. He is unconscious, presents with respiratory failure and cardiac activity disorder as a result of decompression sickness. What complication may develop in the scuba diver?

- a. Air embolism
- b. Fat embolism
- c. Gas embolism**
- d. Cellular embolism
- e. Thromboembolism

86. A patient has been hospitalized for chronic heart failure. Objectively: skin and mucous membranes are cyanotic, the patient has tachycardia, tachypnea. What type of hypoxia has developed in the patient?

- a. Hypoxic
- b. Circulatory**
- c. Hemic
- d. Anemic
- e. Tissue

87. A few minutes after repeated introduction of penicillin a patient got dyspnea, tongue numbness, hyperemia and then skin pallor. The patient also lost consciousness. What is the cause of such a grave condition?

- a. Serum sickness
- b. Acute glomerulonephritis
- c. Bronchial asthma
- d. Anaphylactic shock**
- e. Hemolytic anemia

88. A patient suffering from chronic cardiac insufficiency has got soft tissue edema on his shins. What is the leading pathogenetic factor of edema development?

- a. Rise of oncotic pressure in tissues
- b. Drop of osmotic pressure in blood plasma
- c. Rise of hydrostatic pressure in capillaries**
- d. Drop of hydrostatic pressure in capillaries

e. Rise of osmotic pressure in tissues

89. Most cases of alimentary starvation are accompanied by development of evident edemata. What is the leading pathogenetic mechanism of edemata development in this case?

- a. Fall of osmotic pressure in the intercellular fluid
- b. Fall of oncotic pressure of blood plasma**
- c. Fall of hydrostatic pressure in the tissues
- d. Rise of hydrostatic pressure in the capillaries
- e. Rise of oncotic pressure in the intercellular fluid

90. A patient suffering from pleuritis underwent pleural puncture. There was obtained a transparent odourless liquid. What type of exudate was obtained?

- a. Putrefactive
- b. Serous**
- c. Purulent
- d. Haemorrhagic
- e. Fibrinous

91. A 40-year-old patient has developed polyuria (10-12 liters per day) and polydipsia induced by damage to the hypothalamo-hypophyseal tract. What hormone deficiency causes such disorders?

- a. Vasopressin**
- b. Corticotropin
- c. Thyrotropin
- d. Somatotropin
- e. Oxytocin

92. A 45-year-old woman has frequent uterine haemorrhages, she presents with general weakness, dyspnea, tachycardia, cardiac pain. In blood: erythrocytes - 3109/l, haemoglobin - 70 g/l, colour index - 0,7. The smear contains mostly hypochromic erythrocytes, microcytes. Specify the type of anaemia according to its mechanism of development:

- a. Minkowsky-Shauffard disease
- b. Protein-deficiency
- c. B12-folate-deficiency
- d. Haemolytic
- e. Iron-deficiency**

93. After a 5-year-old child has been brought home from the kindergarten he presented with weakness, headache, body temperature rise up to 37,5oC. What period of disease development is the case?

- a. Prodromal**
- b. Incubative
- c. Fastigium
- d. Recovery
- e. Latent

94. A 56 year old patient complains about limitation of movements and pain in hand joints, mainly at night. Objectively: there is a disfiguring painful swelling of affected joints. Blood and urine have high concentration of uric acid. What disease has developed?

- a. Phenylketonuria
- b. Pellagra
- c. Gout**
- d. Alkaptonuria
- e. Tyrosinosis

95. A patient ill with pheochromocytoma has high secretion of the following hormone:

- a. Adrenaline**
- b. Insulin
- c. Somatotropin

- d. Thyroxin
- e. Glucagon

96. Every year during the plant blossoming a female patient develops acute catarrhal inflammation of conjunctiva and nasal mucosa that is the clinical presentation of an allergy. These symptoms relate to the following type of allergic reactions:

- a. Cellular dysfunction

**b. Anaphylactic**

- c. Immune complex

- d. Cytotoxic

- e. Cell-mediated

97. A female patient consulted a doctor about leg pain that arises usually toward the evening; feet and shins edemata. Objectively: leg skin is cyanotic, cold to the touch. What type of peripheral circulation disorder does the patient present with?

**a. Venous hyperaemia**

- b. Ischaemia

- c. Thrombosis

- d. Stasis

- e. Arterial hyperaemia

98. A group of alpinists climbing to the top had their blood tested. The test revealed erythrocytosis and an increase in hemoglobin rate. What type of hypoxia caused the stimulation of erythropoiesis in the bone marrow?

- a. Combined

- b. Circulatory

- c. Tissue

**d. Hypoxic**

- e. Hemic

99. A 42-year-old patient suffering from chronic calculous cholecystitis complains of acute pain in the right subcostal area, itching and skin icteritiousness, multiple petechial haemorrhages, saponified and light-coloured feces (steatorrhea). What type of icterus is it?

- a. Hepatocellular

**b. Mechanic**

- c. Parenchymatous

- d. Hemolytic

- e. Cythemolytic

100. A boy is 4 year old. Glucose concentration in blood plasma is 12 millimole/l. This might be caused by deficiency of the following hormone:

**a. Insulin**

- b. Cortisol

- c. Adrenocorticotropin

- d. Somatotropin

- e. Glucagon

101. A 40 year old patient complains about general weakness, headache, body temperature rise, cough with sputum, dyspnea. After examination his illness was diagnosed as focal pneumonia. What type of hypoxia is observed?

- a. Tissue

- b. Hypoxic

- c. Circulatory

- d. Hemic

**e. Respiratory**

102. A 58 year old patient complained about persistent rise of arterial pressure. Clinical examination revealed chronic renal disease accompanied by disturbance of renal blood flow. Rise of arterial

pressure was induced by activation of the following regulatory system:

- a. Sympathetic nervous
- b. Parasympathetic nervous
- c. Renin-angiotensin**
- d. Sympathoadrenal
- e. Hypothalamo-pituitary-adrenal

103. A patient diagnosed with acute abdomen was delivered to the hospital. A doctor suspected acute appendicitis and ordered urgent blood test. What factor would be the evidence of acute inflammation in this patient?

- a. Erythropenia
- b. Leukocytosis**
- c. Eosinophilia
- d. Leukopenia
- e. Erythrocytosis

104. What pathology of tissue growth is characterized by cellular and tissue atypia from the point of histomorphology?

- a. Dystrophy
- b. Benign tumour
- c. Regeneration
- d. Malignant tumour**
- e. Degeneration

105. After a birth trauma a newborn presents with limited movements of the right upper extremity, hyporeflexia, myopathy. These changes relate to the following type of motor dysfunctions:

- a. Central paralysis
- b. Bulbar paralysis
- c. Neuritis
- d. Peripheric (tonic) paralysis**
- e. Myasthenia

106. A child got burn on his hand caused by hot water. Burn skin is bright red. What disturbance of local blood circulation is it?

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

107. A patient has obstructive respiratory failure. Name a disease that is usually accompanied by such type of respiratory failure:

- a. Bronchial asthma**
- b. Exudative pleuritis
- c. Pneumothorax
- d. Pneumoconiosis
- e. Pneumonia

108. A patient suffering from the bone marrow form of radiation sickness was found to have the following changes in his hemogram: leukocytes - 2109/l, lymphopenia, erythrocytes - 3,01012/l, Hb - 52 g/l, thrombocytes - 105109/l, reduced blood coagulation. These changes are typical for the following stage of the radiation sickness:

- a. Latent period
- b. Solution
- c. Relapse
- d. Fastigium**
- e. Prodromal period

109. Immediate-type allergies are characterized by degranulation of the tissue basophils that secrete biologically active substances. One of such substances is:

- a. Hagemans factor
- b. Thromboxane
- c. Acetylcholine
- d. Plasminogen
- e. Histamine**

110. A 57-year-old worker at an asphalt plant complains of weakness, cough with blood-streaked sputum, chest pain. He has been diagnosed with lung cancer. What is the first stage of carcinogenesis?

- a. Transformation**
- b. Activization
- c. Induction
- d. Progression
- e. Promotion

111. A 56-year-old female patient complains about a fast growing hard neoplasm in the mammary gland that appeared a month ago. Objectively: the formation is fused with the surrounding tissues, it is uneven, slightly painful. What are the peculiarities favouring the infiltrative growth of a malignant tumour?

- a. Intensified formation of tight contacts
- b. Rise of embryonal antigens
- c. Intensified chalone formation
- d. Intensified contact inhibition
- e. Lack of contact inhibition**

112. Examination of a patient revealed neutrophilic leukocytosis with shift of leukogram to the right. It is typical for:

- a. Acute inflammatory process**
- b. Autoimmune process
- c. Rheumatism
- d. Allergy
- e. Chronic inflammatory process

113. A patient present's with Kussmaul's respiration, acetone smell from the mouth; low tonus of eyeballs, myotic pupils, dry skin, polyuria, glycosuria, hyperglycemia. Such symptom complex is typical for the following coma:

- a. Alimentary dystrophic
- b. Hepatic
- c. Diabetic**
- d. Hypoglycemic
- e. Adrenal

114. A patient had been diagnosed with right lung cancer and administered surgical treatment. After right-sided pulmonectomy the patient presented with evident dyspnea. What form of respiratory failure has developed in this patient?

- a. Peripheral
- b. Central
- c. Pulmonary restrictive**
- d. Pulmonary obstructive
- e. Thoracodiaphragmal

115. A patient with acute pneumonia has an edema and hardening of pulmonary tissue. What cells are the first to infiltrate the inflammation zone and provide the effective protection from the bacterial infection?

- a. Monocytes
- b. Eosinophils**

- c. Basophils
- d. Neutrophils**
- e. Thrombocytes

116. A patient complains of belting pain in epigastrium. Examination revealed high diastase content in urine, as well as undigested fat in feces. What pathology are these occurrences typical for?

- a. Enterocolitis
- b. Acute pancreatitis**
- c. Infectious hepatitis
- d. Gastritis
- e. Acute appendicitis

117. A patient was found to have an increase in total bilirubin concentration in plasma at the expense of indirect bilirubin; high rate of stercobilin in feces and urine; normal rate of direct bilirubin. What jaundice is it?

- a. Parenchymatous
- b. Physiological
- c. Mechanic
- d. Gilberts syndrome
- e. Haemolytic**

118. Examination of a patient revealed symptoms of myocardial insufficiency. What is the possible cause of cardiac insufficiency of myocardial type?

- a. Infectious myocarditis**
- b. Pulmonary emphysema
- c. Essential hypertension
- d. Mitral stenosis
- e. Aorta coarctation

119. A child has got a burn. Burnt skin is hyperemic, there are small vesicles full of transparent fluid. What type of fluid is it?

- a. Putrid exudate
- b. Serous exudate**
- c. Purulent exudate
- d. Hemorrhagic exudate
- e. Transsudate

120. A 47-year-old patient with an arm injury was delivered to a hospital in pain shock condition. Objectively: the patient is in grave condition, with mental confusion; integuments are moist, pale, acrocyanotic. There are also tachypnea, fall in the arterial pressure, tachycardia. What type of hypoxia is prevailing in this patient?

- a. Respiratory
- b. Substrate
- c. Haemic
- d. Tissue
- e. Circulatory**

121. A patient suffering from the essential hypertension presents with an increase in the arterial pressure up to 180/110 mm Hg; dyspnea, cyanosis, tachycardia; heart borders are dilated to the left, in lungs moist rales are present. What signs of urgent compensation for cardiac failure are observed?

- a. Tachycardia**
- b. Cyanosis
- c. Myogenic dilatation
- d. Dyspnea
- e. Arterial pressure rise

122. A patient has been suffering from diabetes mellitus for 10 years. He was delivered to a hospital in grave condition. On the 2nd day of treatment his condition grew significantly worse: he lapsed into

a coma, there appeared noisy deep breathing. Deep inspirations took turns with forced expirations with assistance of expiratory muscles. What form of respiration disorder is it?

a. Kussmauls respiration

b. Tachypnea

c. Biots respiration

d. Cheyne-Stokes respiration

e. Stenotic respiration

123. After taking phenacetin a patient complained about sore throat and impossibility of deglutition.

An otolaryngologist made a diagnosis of necrotic angina. In blood: Hb- 130 g/l, erythrocytes -

4,51012/l, leukocytes - 3,0109/l, among them lymphocytes - 75%, neutrophils - 10%, eosinophils -

5%, monocytes - 10%. What type of white blood cell disorder is it?

a. Eosinophilia

b. Lymphopenia

c. Neutrophilia

d. Monocytosis

e. Neutropenia

124. A Rh-positive child of a Rh-negative woman (secundapara) has yellow skin, pathologic reflexes, convulsions. The child has an increased rate of indirect bilirubin in blood. What type of jaundice is it?

a. Hepatic with violation of bilirubin excretion

b. Mechanic

c. Hepatic with violation of bilirubin capture

d. Hepatic with violation of bilirubin conjugation

e. Haemolytic

125. After a road accident a patient has the arterial pressure at the rate of 70/40 mm Hg and daily diuresis at the rate of about 300 ml. What is the mechanism of oliguria development in this case?

a. Decrease in glomerular filtration

b. Decrease in tubular reabsorption

c. Decrease in tubular secretion

d. Increase in tubular reabsorption

e. Increase in glomerular filtration

126. A patient with systemic lupus erythematosus has developed a diffuse renal affection accompanied by proteinuria, hypoproteinemia, massive edema. What is the mechanism of proteinuria development in this case?

a. Ischemic affection of tubules

b. Inflammation of renal tubules

c. Autoimmune affection of glomeruli

d. Blood protein increase

e. Affection of urinary tracts

127. 3 years ago a patient was diagnosed with chronic glomerulonephritis. The patient has got multiple edemata within the last 6 months. What is the cause of their development?

a. Injection of non-steroidal anti-inflammatory preparations

b. Hyperaldosteronism

c. Proteinuria

d. Glucocorticoid treatment

e. Vasopressin hyperproduction

128. A hospital admitted a patient with arterial hypertension induced by renal artery stenosis, complaints of persistent nausea and headache. The main element in the pathogenesis of hypertension is the activation of the following system:

a. Parasympathetic

b. Renin-angiotensin

c. Kallikrein-kinin

d. Hypothalamic-pituitary

e. Sympathoadrenal

129. A warmly dressed child has spent a considerably long time out of doors. This resulted in body temperature elevation and general weakness development. What form of thermoregulation disorder is observed in this case?

- a. Exogenous hyperthermia
- b. Fever
- c. Centrogenous hyperthermia
- d. Heat shock
- e. Endogenous hyperthermia

130. A patient with pneumosclerosis has blood pH at the rate of 7,34. Analysis of gas formula of blood showed hypercapnia. Urine analysis revealed an acidity increase. What form of acid-base disbalance is the case?

- a. Gaseous acidosis
- b. Gaseous alkalosis
- c. Non-gaseous acidosis
- d. Non-gaseous alkalosis
- e. Secretory alkalosis

131. A 70-year-old patient has been found to have atherosclerosis of heart and brain vessels. Examination revealed the changes in the lipid profile. Pathogenesis of atherosclerosis is greatly influenced by an increase in the following lipoproteins rate:

- a. Chylomicrons
- b. Low-density lipoprotein
- c. Intermediate-density lipoproteins
- d. Very-low-density lipoproteins
- e. High-density lipoprotein

132. After eating strawberries a child presented with itchy red spots on the skin (hives). According to the classification of Coombs and Jell this reaction relates to the following type of allergic reactions:

- a. Stimulating
- b. Reagin (anaphylactic)
- c. Immunocomplex
- d. Cytotoxic
- e. Cell-mediated

133. After an insulin injection a 45-year-old woman with a long history of diabetes mellitus has developed weakness, paleness, palpitation, anxiety, double vision, numbness of lips and the tip of tongue. Blood glucose is at the rate of 2,5 mmol/l. What complication has developed in the patient?

- a. Uremic coma
- b. Hypoglycemic coma
- c. Hyperglycemic coma
- d. Hyperosmolar coma
- e. Hyperketonemic coma

134. A patient with alcoholic cirrhosis complains of general weakness, dyspnea. He has been found to have decreased blood pressure, ascites, enlargement of superficial veins of the anterior abdominal wall, esophageal varices, splenomegaly. What hemodynamic disorder is observed in the patient?

- a. Collapse
- b. Portal hypertension
- c. Right ventricular failure
- d. Left ventricular failure
- e. Heart failure

135. A patient has developed an attack of bronchial asthma: he has laboured respiration with the frequency of 24-26/min., inspirations take turns with prolonged expirations involving participation of expiratory muscles. What form of respiratory failure has developed in the patient?

- a. Cheyne-Stokes
- b. Inspiratory dyspnea
- c. Apneustic respiration
- d. Expiratory dyspnea**
- e. Biots

136. A 58-year-old male patient was found to have a peripheral circulation disorder with a restricted arterial inflow, paleness of the respective region, drop of partial oxygen pressure in it. This disorder is called:

- a. Venostasis
- b. Reperfusion syndrome
- c. Arterial hyperemia
- d. Thrombosis
- e. Ischemia**

137. A male received a radiation dose of 30 Gy. He presents with necrotic angina, disorders of the gastrointestinal tract. Blood tests revealed anemia, leukopenia and thrombocytopenia. What period of acute radiation sickness is observed in the patient?

- a. Height of disease**
- b. Imaginary wellbeing
- c. -
- d. End of disease
- e. Primary reactions

138. A female patient suffers from chronic glomerulonephritis. Urine analysis revealed proteinuria, hematuria, leukocyturia. Proteinuria indicates disturbance of the following process in kidneys:

- a. Tubular secretion and reabsorption
- b. Renal blood flow
- c. Tubular secretion
- d. Tubular reabsorption
- e. Glomerular filtration**

139. Examination of the lower limbs of a 40-year-old patient with coronary artery disease and vascular disease of the lower limbs (obliterating endarteritis) revealed skin pallor and dystrophy, local temperature decrease, sense shock, pain. The patient is likely to have the following disorder of the peripheral blood circulation:

- a. Venous hyperaemia
- b. Arterial hyperaemia
- c. Compression ischemia
- d. Angiospastic ischemia
- e. Obstruction ischemia**

140. A 56 y.o. patient complains of periodical pain attacks in the heart area irradiating to his left arm, sometimes to the left scapula. These pain attacks can be relieved by nitroglycerine. What heart pathology can be suspected?

- a. Stenocardia**
- b. Myocarditis
- c. Pericarditis
- d. Endocarditis
- e. Myocardium infarction

141. A 54 y.o. patient with stomach ulcer complains about great weakness, dyspnea caused by the slightest physical exercise. Blood count: erythrocytes -  $1,44 \cdot 10^12/l$ , Hb- 66 g/l, colour index - 1,4. What anemia are these changes of peripheral blood count typical for?

- a. Iron-deficiency
- b. Acquired hemolytic
- c. Chronic posthemorrhagic
- d. B12-deficiency**

e. Acute posthemorrhagic

142. A patient was diagnosed with anacytic gastritis. What enzyme activity will be reduced?

- a. Amylase
- b. Chymotrypsin
- c. Trypsin
- d. Pepsin**
- e. Lipase

143. What disease of blood coagulation system is based upon abrupt deceleration of blood coagulation due to disturbed formation of plasma thromboplastin (VIII factor deficit)?

- a. Thrombocytopenic purpura
- b. Symptomatic thrombocytopenia
- c. Hemorrhagic purpura
- d. Hemophilia**
- e. Hemorrhagic vasculitis

144. As a result of spine injury a female patient has no voluntary movements of her lower limbs. This disorder is called:

- a. Monoplegia
- b. Tetraplegia
- c. Paraplegia**
- d. Hemiplegia
- e. Paraparesis

145. After taking phenacetin a patient developed acute sore throat, body temperature rise. Examination allowed doctors to make a diagnosis of necrotic angina and agranulocytosis.

Agranulocytosis can be characterized by a decrease in the amount of the following WBCs:

- a. Basophils
- b. Eosinophils
- c. Neutrophils**
- d. Lymphocytes
- e. Monocytes

146. What classification criterion incorporates the following types of anemias: posthemorrhagic, hemolytic and anemia induced by disturbed hematogenesis?

- a. Colour index
- b. Pathogenesis**
- c. Hematogenesis type
- d. Etiology
- e. Bone marrow regenerability

147. A 40 year old woman has been suffering from profuse uterine bleedings for a long time. Blood count: Hb- 90 g/l, erythrocytes -  $3,9 \times 10^12/l$ , colour index - 0,6. What is the main cause of hypochromic anemia?

- a. Increased consumption of iron
- b. Deficiency of vitamin B12
- c. Insufficient iron content in food ration
- d. Iron loss with blood**
- e. Nonassimilability of iron

148. A newborn born to an Rh-negative mother (3rd pregnancy) presents with progressing jaundice, symptoms of CNS excitation, anemia. What type of jaundice is it?

- a. Hemolytic**
- b. Obstructive
- c. Toxic
- d. Parasitic
- e. Parenchymatous

149. After a stomach resection a patient presented with weakness, skin pallor, face puffiness, enlargement of liver and spleen. Analysis of the peripheral blood revealed megaloblasts and megalocytes; hyperchromatism (colour index - 1,3). What type of anaemia is observed in this patient?

- a. Iron-deficient
- b. Toxic
- c. Haemolytic
- d. Hypoplastic
- e. B12-deficient**

150. In an emergency situation a scuba diver has quickly risen from the depths to the surface, which is against the rule. He is unconscious, presents with respiratory failure and cardiac activity disorder as a result of decompression sickness. What complication may develop in the scuba diver?

- a. Cellular embolism
- b. Thromboembolism
- c. Fat embolism
- d. Air embolism
- e. Gas embolism**

151. A patient suffering from chronic cardiac insufficiency has got soft tissue edema on his shins. What is the leading pathogenetic factor of oedema development?

- a. Drop of osmotic pressure in blood plasma
- b. Drop of hydrostatic pressure in capillaries
- c. Rise of osmotic pressure in tissues
- d. Rise of hydrostatic pressure in capillaries**
- e. Rise of oncotic pressure in tissues

152. A patient suffering from pleuritis underwent pleural puncture. There was obtained a transparent odourless liquid. What type of exudate was obtained?

- a. Fibrinous
- b. Putrefactive
- c. Haemorrhagic
- d. Purulent
- e. Serous**

153. A 40-year-old patient has developed polyuria (10-12 liters per day) and polydipsia induced by damage to the hypothalamo-hypophyseal tract. What hormone deficiency causes such disorders?

- a. Oxytocin
- b. Somatotropin
- c. Thyrotropin
- d. Vasopressin**
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- a. Haemolytic
- b. B12-folate-deficiency
- c. Iron-deficiency**
- d. Minkowsky-Shauffard disease
- e. Protein-deficiency

155. A 38 year old patient had hepatitis but did not give up alcohol. There appeared symptoms of hepatocirrhosis along with ascites and edema of his lower limbs. What changes in blood are main factor of edema development?

- a. Hypoalbuminemia**
- b. Hypcholesterolemia
- c. Hypoglycemia

- d. Hypokalemia
- e. Hypoglobulinemia

156. What form of hypoxia develops during shock and collapse?

- a. Hypoxic
- b. Respiratory
- c. Circulatory
- d. Hemic
- e. Tissue

157. The leukocytes that are the first to appear in a focus of inflammation are called:

- a. Lymphocytes
- b. Basophils
- c. Monocytes
- d. Eosinophils
- e. Neutrophils

158. After a 5-year-old child has been brought home from the kindergarten he presented with weakness, headache, body temperature rise up to 37,5 degrees. What period of disease development is the case?

- a. Recovery
- b. Fastigium
- c. Latent
- d. Incubative
- e. Prodromal

159. A 56 year old patient complains about limitation of movements and pain in hand joints, mainly at night. Objectively: there is a disfiguring painful swelling of affected joints. Blood and urine have high concentration of uric acid. What disease has developed?

- a. Gout
- b. Phenylketonuria
- c. Tyrosinosis
- d. Alkaptonuria
- e. Pellagra

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- a. Somatotropin
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- c. Insulin
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- a. Thrombosis
- b. Venous hyperaemia
- c. Ischaemia
- d. Arterial hyperaemia
- e. Stasis

162. A group of alpinists climbing to the top had their blood tested. The test revealed erythrocytosis and an increase in hemoglobin rate. What type of hypoxia caused the stimulation of erythropoiesis in the bone marrow?

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163. A 42-year-old patient suffering from chronic calculous cholecystitis complains of acute pain in the right subcostal area, itching and skin icteritiousness, multiple petechial haemorrhages, saponified and light-coloured feces (steatorrhea). What type of icterus is it?

a. Mechanic

- b. Parenchymatous
- c. Hepatocellular
- d. Cythemolytic
- e. Hemolytic

164. A 55-year-old woman with renal failure has arterial pressure at the rate of 170/100 mm Hg.

Stable pressure rise is caused by hyperactivity of the following system:

a. Central nervous

b. Kallikrein-kinin

c. Sympathoadrenal

d. Hypothalamo-pituitary

e. Renin-angiotensin-aldosterone

165. A boy is 4 year old. Glucose concentration in blood plasma is 12 millimole/l. This might be caused by deficiency of the following hormone:

a. Adrenocorticotropin

b. Insulin

c. Cortisol

d. Glucagon

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b. Erythropenia

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e. Leukocytosis

167. What pathology of tissue growth is characterized by cellular and tissue atypia from the point of histomorphology?

a. Malignant tumour

b. Degeneration

c. Regeneration

d. Benign tumour

e. Dystrophy

168. After a birth trauma a newborn presents with limited movements of the right upper extremity, hyporeflexia, myopathy. These changes relate to the following type of motor dysfunctions:

a. Peripheral (tonic) paralysis

b. Myasthenia

c. Neuritis

d. Bulbar paralysis

e. Central paralysis

169. A 37-year-old man was admitted to a hospital with an attack of bronchial asthma. What respiration type will be observed in this patient?

a. Hyperpnoea

b. Expiratory dyspnea

c. Apnoea

d. Inspiratory dyspnea

e. Gasping respiration

170. A child got burn on his hand caused by hot water. Burn skin is bright red. What disturbance of local blood circulation is it?

a. Venous hyperemia

b. Thrombosis

c. Embolism

**d. Arterial hyperemia**

e. Stasis

171. A patient has obstructive respiratory failure. Name a disease that is usually accompanied by such type of respiratory failure:

a. Pneumothorax

**b. Bronchial asthma**

c. Exudative pleuritis

d. Pneumonia

e. Pneumoconiosis

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a. Solution

b. Relapse

c. Latent period

d. Prodromal period

**e. Fastigium**

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a. Thromboxane

**b. Histamine**

c. Plasminogen

d. Acetylcholine

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174. A 57-year-old worker at an asphalt plant complains of weakness, cough with blood-streaked sputum, chest pain. He has been diagnosed with lung cancer. What is the first stage of carcinogenesis?

a. Progression

b. Induction

c. Promotion

d. Activation

**e. Transformation**

175. A 56-year-old female patient complains about a fast growing hard neoplasm in the mammary gland that appeared a month ago. Objectively: the formation is fused with the surrounding tissues, it is uneven, slightly painful. What are the peculiarities favouring the infiltrative growth of a malignant tumour?

a. Rise of embryonal antigens

**b. Lack of contact inhibition**

c. Intensified contact inhibition

d. Intensified chalone formation

e. Intensified formation of tight contacts

176. Examination of a patient revealed neutrophilic leukocytosis with shift of leukogram to the right. It is typical for:

a. Rheumatism

**b. Acute inflammatory process**

- c. Autoimmune process
- d. Chronic inflammatory process
- e. Allergy

177. A patient is 54 year old. After intense emotional stress he felt strong pain behind his breastbone irradiating to his left arm and left part of his neck. He felt also death anxiety and broke into a cold sweat. Nitroglycerine relieved pain. Name a disturbance of local blood circulation in heart that has developed in this case:

a. Venous hyperemia

**b. Ischemia**

- c. Embolism
- d. Thrombosis
- e. Arterial hyperemia

178. A patient present's with Kussmaul's respiration, acetone smell from the mouth; low tonus of eyeballs, myotic pupils, dry skin, polyuria, glycosuria, hyperglycemia. Such symptom complex is typical for the following coma:

a. Hepatic

b. Hypoglycemic

c. Adrenal

**d. Diabetic**

e. Alimentary dystrophic

179. A patient had been diagnosed with right lung cancer and administered surgical treatment. After right-sided pulmonectomy the patient presented with evident dyspnea. What form of respiratory failure has developed in this patient?

a. Pulmonary obstructive

b. Thoracodiaphragmal

c. Central

d. Peripheral

**e. Pulmonary restrictive**

180. A patient with acute pneumonia has an oedema and hardening of pulmonary tissue. What cells are the first to infiltrate the inflammation zone and provide the effective protection from the bacterial infection?

a. Basophils

**b. Neutrophils**

c. Thrombocytes

d. Monocytes

e. Eosinophils

181. A patient complains of belting pain in epigastrium. Examination revealed high diastase content in urine, as well as undigested fat in feces. What pathology are these occurrences typical for?

a. Infectious hepatitis

b. Gastritis

**c. Acute pancreatitis**

d. Acute appendicitis

e. Enterocolitis

182. A patient was found to have an increase in total bilirubin concentration in plasma at the expense of indirect bilirubin; high rate of stercobilin in feces and urine; normal rate of direct bilirubin. What jaundice is it?

a. Parenchymatous

b. Physiological

c. Mechanic

d. Gilbert's syndrome

**e. Haemolytic**

183. A 47-year-old patient with an arm injury was delivered to a hospital in pain shock condition. Objectively: the patient is in grave condition, with mental confusion; integuments are moist, pale, acrocyanotic. There are also tachypnea, fall in the arterial pressure, tachycardia. What type of hypoxia is prevailing in this patient?

- a. Tissue
- b. Haemic
- c. Circulatory**
- d. Respiratory
- e. Substrate

184. A patient suffering from the essential hypertension presents with an increase in the arterial pressure up to 180/110 mm Hg; dyspnea, cyanosis, tachycardia; heart borders are dilated to the left, in lungs moist rales are present. What signs of urgent compensation for cardiac failure are observed?

- a. Myogenic dilatation
- b. Tachycardia**
- c. Cyanosis
- d. Arterial pressure rise
- e. Dyspnea

185. A patient has been suffering from diabetes mellitus for 10 years. He was delivered to a hospital in grave condition. On the 2nd day of treatment his condition grew significantly worse: he lapsed into a coma, there appeared noisy deep breathing. Deep inspirations took turns with forced expirations with assistance of expiratory muscles. What form of respiration disorder is it?

- a. Kussmauls respiration**
- b. Tachypnea
- c. Biot
- d. Cheyne-Stokes respiration
- e. Stenotic respiration

186. After taking phenacetin a patient complained about sore throat and impossibility of deglutition. An otolaryngologist made a diagnosis of necrotic angina. In blood: Hb- 130 g/l, erythrocytes - 4,5\*10<sup>12</sup>/l, leukocytes - 3,0\*10<sup>9</sup>/l, among them lymphocytes - 75%, neutrophils - 10%, eosinophils - 5%, monocytes - 10%. What type of white blood cell disorder is it?

- a. Neutrophilia
- b. Eosinophilia
- c. Lymphopenia
- d. Neutropenia**
- e. Monocytosis

187. A Rh-positive child of a Rh-negative woman (secundapara) has yellow skin, pathologic reflexes, convulsions. The child has an increased rate of indirect bilirubin in blood. What type of jaundice is it?

- a. Mechanic
- b. Haemolytic**
- c. Hepatic with violation of bilirubin conjugation
- d. Hepatic with violation of bilirubin capture
- e. Hepatic with violation of bilirubin excretion

188. A patient with systemic lupus erythematosus has developed a diffuse renal affection accompanied by proteinuria, hypoproteinemia, massive oedema. What is the mechanism of proteinuria development in this case?

- a. Autoimmune affection of glomeruli**
- b. Ischemic affection of tubules
- c. Affection of urinary tracts
- d. Blood protein increase
- e. Inflammation of renal tubules

189. 3 years ago a patient was diagnosed with chronic glomerulonephritis. The patient has got multiple edemata within the last 6 months. What is the cause of their development?

**a. Proteinuria**

- b. Injection of non-steroidal anti-inflammatory preparations
- c. Vasopressin hyperproduction
- d. Glucocorticoid treatment
- e. Hyperaldosteronism

190. A warmly dressed child has spent a considerably long time out of doors. This resulted in body temperature elevation and general weakness development. What form of thermoregulation disorder is observed in this case?

- a. Centrogenous hyperthermia
- b. Exogenous hyperthermia**
- c. Fever
- d. Endogenous hyperthermia
- e. Heat shock

191. A patient with pneumosclerosis has blood pH at the rate of 7,34. Analysis of gas formula of blood showed hypercapnia. Urine analysis revealed an acidity increase. What form of acid-base disbalance is the case?

- a. Non-gaseous acidosis
- b. Gaseous acidosis**
- c. Gaseous alkalosis
- d. Secretory alkalosis
- e. Non-gaseous alkalosis

192. A 70-year-old patient has been found to have atherosclerosis of heart and brain vessels. Examination revealed the changes in the lipid profile. Pathogenesis of atherosclerosis is greatly influenced by an increase in the following lipoproteins rate:

- a. Low-density lipoprotein**
- b. Intermediate-density lipoproteins
- c. Chylomicrons
- d. High-density lipoprotein
- e. Very-low-density lipoproteins

193. After an insulin injection a 45-year-old woman with a long history of diabetes mellitus has developed weakness, paleness, palpitation, anxiety, double vision, numbness of lips and the tip of tongue. Blood glucose is at the rate of 2,5 mmol/l. What complication has developed in the patient?

- a. Hypoglycemic coma**
- b. Hyperglycemic coma
- c. Uremic coma
- d. Hyperketonemic coma
- e. Hyperosmolar coma

194. A patient with alcoholic cirrhosis complains of general weakness, dyspnea. He has been found to have decreased blood pressure, ascites, enlargement of superficial veins of the anterior abdominal wall, esophageal varices, splenomegaly. What hemodynamic disorder is observed in the patient?

- a. Portal hypertension**
- b. Right ventricular failure
- c. Collapse
- d. Heart failure
- e. Left ventricular failure

195. A patient has developed an attack of bronchial asthma: he has laboured respiration with the frequency of 24-26/min., inspirations take turns with prolonged expirations involving participation of expiratory muscles. What form of respiratory failure has developed in the patient?

- a. Apneustic respiration
- b. Expiratory dyspnea**
- c. Biot's
- d. Cheyne-Stokes

e. Inspiratory dyspnea

196. A 58-year-old male patient was found to have a peripheral circulation disorder with a restricted arterial inflow, paleness of the respective region, drop of partial oxygen pressure in it. This disorder is called:

- a. Arterial hyperemia
- b. Venostasis
- c. Reperfusion syndrome
- d. Ischemia**
- e. Thrombosis

197. A newborn infant has hemolytic jaundice caused by rhesus incompatibility. What bile pigment will be concentrated highest in the blood of this infant?

- a. Urobilinogen
- b. Conjugated bilirubin
- c. Unconjugated bilirubin**
- d. Stercobilinogen
- e. Bile acids

198. The patient has been admitted to the hospital with complaints of general fatigue, headache, lumbago, edema of face and extremities. Urine analysis revealed proteinuria, hematuria and cylindruri

- a. What is the main pathogenetic mechanism of edema formation during glomerulonephritis?**
- b. Increase of vascular permeability
- c. Hormonal disbalance
- d. Increase of hydrodynamic blood pressure
- e. Decrease of oncotic blood pressure

199. Fluorography examination of the 59-year-old patient has revealed well-defined shadow, which is characteristic to tumor, in the lower part of the left lung. What trait is characteristic of benign tumor?

- a. Cancer cachexia
- b. Metastasis
- c. Expansive growth**
- d. Invasion in surrounding tissues
- e. Infiltrating growth

200. The 55-year-old patient has been hospitalised due to chronic cardiac failure. Objectively: skin and mucosa are cyanotic, tachycardia, tachypnea. What kind of hypoxia does the patient have?

- a. Tissue
- b. Hypoxic
- c. Anemic
- d. Hemic
- e. Circulatory**

201. In the process of chemical solution preparation laboratory assistants forearm was exposed to concentrated hydrochloric acid. There are burning pain, hyperemia and swelling of the damaged area. What pathologic process are these symptoms evidential of?

- a. Inflammation**
- b. Embolism
- c. Lymphostasis
- d. Thrombosis
- e. Tumor

202. 1 minute after the patient had been administered penicillin the patients arterial pressure sharply dropped, pulse became thready, cold sweating and clonic convulsions began. Name this condition.

- a. Anaphylactic shock**
- b. Cardiogenic shock
- c. Burn shock

- d. Septic shock
- e. Traumatic shock

203. The 13-year-old female patient having suffered from measles complains of dry mouth, thirst, body weight loss, polyuria, her glucose concentration in blood is 16 mmol/l. What disease can be suspected?

- a. Steroidogenic diabetes
- b. Glycogenosis
- c. Type II pancreatic diabetes
- d. Diabetes insipidus

**e. Type I pancreatic diabetes**

204. During calculous cholecystitis attack the patient has developed the following symptoms: saponated feces and steatorrhea. What stage of fats metabolism is disrupted according to those symptoms?

- a. Fats metabolism in adipose tissue
- b. Depositing disruption
- c. Fat absorption
- d. Intermediary metabolism of fats

**e. Fat digestion, absorption and secretion**

205. The patient with acute cardiac failure has developed dyspnea, tachycardia and cyanosis during physical exertion. Name the type of hypoxia.

- a. Circulatory**
- b. Hemic
- c. Tissue
- d. Hypoxic
- e. Respiratory

206. In 1915 Japanese scientists Katsusaburo Yamagiwa and Koichi Ichikawa became the first, who induced experimental tumors, by painting ears of rabbits with coal tar. What method of experimental tumor inducing did they use?

- a. Transplantation
- b. Cell-free filtrate induction
- c. Radioisotope induction
- d. Chemical induction**
- e. Explantation