

EVALUATION TOOLS

in the discipline "Pathological anatomy" for the specialties "General Medicine", "Dentistry"

1. ORAL SURVEY

Procedure and evaluation procedure

An oral survey is conducted according to a list of questions. The student is usually asked one question. The maximum number of points that a student can receive is 5. At the end of the semester, the arithmetic average of points is calculated.

Evaluation criteria

- the correctness of the answer according to the content of the task (the number and nature of errors in the answer are taken into account);
- completeness and depth of the answer (the number of learned facts, concepts, etc. is taken into account)
- consciousness of the answer (understanding of the presented material is taken into account);
- the logic of presentation of the material (taking into account the ability to build a coherent, consistent story, competently use special terminology);
- the rationality of the methods and methods used to solve the set educational task (the ability to use the most progressive and effective ways to achieve the goal is taken into account).

Contents of the evaluation tool

Questions for oral survey of the 5th semester:

Topic 1. Methodological foundations of pathological anatomy

1. The subject of pathological anatomy.
2. Tasks of pathological anatomy.
3. Research methods in pathological anatomy.
4. Objects and levels of research in pathological anatomy.
5. Significance of pathological anatomy for fundamental science and clinical practice.
6. Technique for making histological preparations.
7. Stages of manufacturing histological preparations.
8. Methods for staining histological preparations.
9. Staining with hematoxylin and eosin.
10. Staining with van Gieson.
11. Methods for detecting lipids.
12. Methods for the detection of proteins and carbohydrates.
13. Immunohistochemical diagnostic method.
14. Scheme for describing macropreparations.
15. Scheme for the study of micropreparations.

Topic 13. Introduction to nosology. The doctrine of diagnosis. Thanatology. iatrogenics

1. Definition of the concept of disease.
2. Definition of the concept of etiology.
3. Definition of the concept of pathogenesis.
4. Definition of the concept of morphogenesis.
5. Definition of the concept of a symptom.
6. Definition of the concept of syndrome.
7. Pathological anatomical diagnosis. Its structure and logic.
8. Comparison of clinical and pathoanatomical diagnoses.
9. Categories of their divergence of clinical and pathoanatomical diagnoses.

10. The work of clinical and anatomical conferences, the medical control commission and the commission for the study of lethal cases.
11. Types of death.
12. Reliable and unreliable signs of death.
13. Methods of autopsy.
14. Method of complete evisceration.
15. Iatrogeny.

Topic 14. Diseases of the cardiovascular system

1. Atherosclerosis. macroscopic stages.
2. Microscopic stages of atherosclerosis.
3. Clinical and morphological forms of atherosclerosis.
4. Complications and causes of death in atherosclerosis.
5. Hypertension. Stages.
6. Clinical and morphological forms of hypertension.
7. Complications and causes of death in hypertension.
8. Symptomatic hypertension, their types.
9. Ischemic heart disease. Classification.
10. Myocardial infarction. Classification.
11. Morphology of myocardial infarction.
12. Complications and causes of death in myocardial infarction.
13. Cerebrovascular diseases. Classification.
14. Hemorrhagic stroke. Causes. Morphology.
15. Ischemic stroke. Causes. Morphology.
16. Complications and causes of death in strokes.

Questions for oral survey of the 6th semester:

Topic 17. Infectious diseases. Tuberculosis. Syphilis

1. General characteristics of infectious diseases.
2. Classification of infectious diseases.
3. Cyclicity of the course of infectious diseases.
4. Formation of immunity against infectious diseases.
5. Primary tuberculosis. Morphology of the primary tuberculosis complex.
6. Variants of the course of primary tuberculosis.
7. Forms of progression of primary tuberculosis.
8. Hematogenous tuberculosis. Morphology.
9. Morphology of miliary tuberculosis.
10. Secondary tuberculosis. Stages (forms) and their morphology.
11. Morphology of cavernous tuberculosis.
12. The structure of tuberculous granuloma.
13. Periods of syphilis. Their morphological characteristics.
14. The structure of gumma.
15. Congenital syphilis.
16. Visceral syphilis

Topic 18. Airborne infections

1. General characteristics of airborne infections.
2. The concept of acute respiratory viral infections.
3. Flu (influenza). Clinical and morphological forms, their morphology,
4. Complications and causes of death in influenza.
5. Adenovirus infection. Morphology.
6. Parainfluenza. Morphology.

7. Respiratory syncytial infection. Morphology.
8. Meningococcal infection. Clinical and morphological forms, their morphology.
9. Complications and causes of death in meningococcal infection.
10. Diphtheria. Clinical and morphological forms, their morphology.
11. Complications and causes of death in diphtheria.
12. Scarlet fever. Clinical and morphological forms, their morphology.
13. Complications and causes of death in scarlet fever.
14. Measles. Clinical and morphological forms, their morphology.
15. Complications and causes of death in measles.

Topic 21. Lung diseases

1. Croupous (lobar) pneumonia. Stages, their morphology.
2. Complications and causes of death in lobar pneumonia.
3. Bronchopneumonia. Morphology, complications and causes of death.
4. Interstitial pneumonia. Morphology, complications and causes of death.
5. Pulmonary edema. Causes. Morphology and causes of death.
6. Respiratory distress syndrome in adults. Causes. Morphology and causes of death.
7. Thromboembolism of the pulmonary artery (pulmonary embolism). Causes. Morphology and causes of death.
8. Chronic nonspecific lung diseases. Classification and mechanisms.
9. Chronic obstructive bronchitis. Morphology, complications and causes of death.
10. Bronchiectasis. Morphology, complications and causes of death.
11. Emphysema. Morphology, complications and causes of death.
12. Bronchial asthma. Classification. Morphology, complications and causes of death.
13. Interstitial lung diseases. Classification. Morphology, complications and causes of death.
14. Lung cancer. Classification. Morphology.
15. Complications and causes of death in lung cancer.

Topic 24. Kidney diseases

1. Classification of kidney diseases.
2. Acute glomerulonephritis. Morphology.
3. Complications and causes of death in acute glomerulonephritis.
4. Subacute (rapidly progressive) glomerulonephritis. Morphology, complications and causes of death.
5. Non-inflammatory glomerulopathies (primary nephrotic syndrome).
6. Membranous nephropathy. Morphology, complications and causes of death.
7. Lipoid nephrosis. Morphology, complications and causes of death.
8. Focal segmental glomerular hyalinosis. Morphology, complications and causes of death.
9. Membranoproliferative glomerulonephritis. Morphology, complications and causes of death.
10. Chronic glomerulonephritis. Morphology, complications and causes of death.
11. Morphology of acute and chronic renal failure. Stages, complications and causes of death.
12. Interstitial kidney disease. Tubulo-interstitial nephritis. Morphology, complications and causes of death.
13. Pyelonephritis. Morphology, complications and causes of death.
14. Nephrolithiasis. Morphology, complications and causes of death.
15. Kidney cancer. Morphology, complications and causes of death.

Topic 25. Diseases of the reproductive system. Pathology of pregnancy

1. Benign prostatic hyperplasia. Classification, morphology, complications.
2. Prostate cancer. Classification, morphology, complications and causes of death.
3. Testicular tumors. Classification, morphology, complications and causes of death.
4. Endocervicosis. Classification, morphology. The value of the transformation zone.
5. Cancer of the cervix. Classification, morphology, complications and causes of death.
6. Glandular hyperplasia of the endometrium. Classification, morphology.
7. Cancer of the endometrium. Classification, morphology, complications and causes of death.

8. Endometriosis. Classification, morphology, complications and causes of death.
9. Tumors of the ovaries. Classification, morphology, complications and causes of death.
10. Ectopic pregnancy. Classification, morphology, complications and causes of death.
11. Preeclampsia. Classification, morphology, complications and causes of death.
12. Spontaneous abortion and premature birth. Classification, morphology, complications and causes of death.
13. Trophoblastic disease. Classification, morphology.
14. Chorionic carcinoma. Morphology, complications and causes of death.
15. Complications and causes of death in trophoblastic disease.

Topic 26. Diseases of the mammary glands. Skin pathology

1. Dishormonal mastopathy. Morphology.
2. The value of dyshormonal mastopathy.
3. Benign breast tumors. Morphology.
4. Fibroadenoma of the mammary gland. morphological options.
5. Breast cancer. Morphology.
6. Intraductal breast cancer. Morphological variants and their characteristics.
7. Lobular breast cancer. Morphological variants and their characteristics.
8. Features of breast cancer metastasis.
9. Primary elements in skin diseases.
10. Secondary elements in skin diseases.
11. Microscopic changes in skin diseases.
12. Terms used in the description of skin diseases.
13. Organ-specific tumors of the skin.
14. Basalioma (basal cell carcinoma). Morphology.
15. Skin cancer. Morphology.

2. TESTING (MCQ)

Procedure and evaluation procedure

Testing is carried out by variants. In each variant - 10 MCQ tasks. For each correct answer, 0.5 points are awarded. In total, a student can earn up to 5 points for testing (rounded to the nearest whole number). At the end of the semester, the arithmetic mean of the scores is calculated.

Evaluation criteria

Points in the range of 86-100% of the maximum are set if the student:

Correctly answered 10 test items.

Points in the range of 71-85% of the maximum are set if the student:

Correctly answered 8 - 9 test items.

Points in the range of 56-70% of the maximum are set if the student:

Correctly answered 6 - 7 test items.

Points in the range of 0-55% of the maximum are set if the student:

Correctly answered 0 - 5 test items.

Contents of the evaluation tool

A complete bank of test items is stored at the department.

Testing (MCQ) of the 5th semester:

Topic 2. Adaptation processes

1. Definition of hypertrophy:

- a) tissue necrosis
- b) tissue repair
- c) decrease in cell volume
- d) replacement by connective tissue
- e) increase in the volume of cells and tissues

Correct answer: e

2. What is typical for myocardial hypertrophy:

- a) a decrease in the size of the heart
- b) an increase in fat under the epicardium
- c) an increase in the size of the heart
- d) a sharp plethora of blood vessels
- e) tortuous course of blood vessels

Correct answer: c

3. Changes in the liver with brown atrophy:

- a) venous congestion
- b) lipofuscin in hepatocytes
- c) increase in hepatocytes
- d) lime deposition
- e) fatty degeneration

Correct answer: b

4. Variety of atrophy (local):

- a) amyloidosis
- b) from overvoltage
- c) general
- d) pressure
- e) reorganization

Correct answer: d

5. Development phase of compensatory-adaptive processes:

- a) fullness
- b) normalization
- c) calm down
- d) exhaustion
- e) organization

Correct answer: d

6. What happens with true organ hypertrophy:

- a) overgrowth of adipose tissue
- b) proliferation of connective tissue
- c) an increase in the mass of the parenchyma
- d) capsule sclerosis
- e) amyloidosis

Correct answer: c

7. Adaptation definition:

- a) the transition from one type of tissue to another
- b) sclerosis
- c) life processes aimed at preserving the species
- d) decrease in organ mass
- e) false hypertrophy

Correct answer: c

8. Synonym of general atrophy:

- a) anemia
- b) cachexia
- c) obesity
- d) necrosis
- e) dystrophy

Correct answer: b

9. Sign of eccentric myocardial hypertrophy:

- a) heart cavities of normal size
- b) the cavities of the heart are dilated
- c) reduction of fat in the epicardium
- d) tortuous course of blood vessels
- e) organ seal

Correct answer: b

10. Morphological substrate of cardiac decompensation:

- a) brown myocardial atrophy
- b) fatty degeneration of the myocardium
- c) obesity of the heart
- d) pigmentation
- e) metastatic calcification

Correct answer: b

Topic 3. Cell damage. Morphology of disorders of protein and fat metabolism

1. List the signs of fatty liver:

- a) the size of the liver is reduced
- b) thick consistency
- c) sectional view is variegated
- d) the color on the cut is yellowish
- e) the figurative name "nutmeg liver"

Correct answer: d

2. Name the mechanism of development of parenchymal dystrophies:

- a) increased fat synthesis
- b) formation of secret granules
- c) infiltration
- d) increased protein synthesis
- e) increase in ATP synthesis

Correct answer: c

3. In which organs is parenchymal lipidosis found:

- a) lungs
- b) skin
- c) liver
- d) stomach
- e) spleen

Correct answer: c

4. Outcome of granular dystrophy:

- a) mucoid swelling
- b) focal colliquational necrosis
- c) transformation into horny dystrophy
- d) reverse development
- e) transformation into hyalinosis

Correct answer: d

5. Name the parenchymal dysproteinosis:

- a) amyloidosis
- b) hydropic dystrophy
- c) hyalinosis
- d) mucoid swelling
- e) calcification

Correct answer: b

6. What is dystrophy?

- a) local death
- b) morphological expression of tissue metabolism disorders
- c) changes in organ metabolism

d) a complex vascular-mesenchymal reaction of the body

Correct answer: b

7. Specify the mechanism of appearance of protein grains in the cytoplasm under physiological conditions:

- a) increased protein synthesis by the cell
- b) pinocytosis
- c) disintegration of ultrastructures
- d) phagocytosis
- e) perverted synthesis

Correct answer: a

8. Heart changes in fatty degeneration:

- a) downsizing
- b) the color on the cut is dark red
- c) striated striation from the endocardium of the left ventricle
- d) the figurative name of the heart is bullish
- e) the mechanism of development of fatty degeneration of the myocardium perverted synthesis

Correct answer: c

9. Characteristics of fatty infiltration of the liver:

- a) small fatty inclusions in the cytoplasm of peripheral hepatocytes
- b) small fatty inclusions in the cytoplasm of centrilobular hepatocytes
- c) green liver
- d) uneven surface of the body
- e) dense texture

Correct answer: b

10. Synonym of granular dystrophy:

- a) mucoid swelling
- b) cloudy swelling
- c) balloon dystrophy
- d) fibrinoid swelling
- e) hyalinosi

Correct answer: b

Topic 4. Morphology of pigment metabolism disorders. Pathological calcification

1. What pigments are formed during the physiological breakdown of erythrocytes?

- a) hematin
- b) hematoidin
- c) hemosiderin
- d) lipofuscin
- e) melanin

Correct answer: c

2. What pigment provides bronze skin color in Addison's disease?

- a) bilirubin
- b) lipochrome
- c) ceroid

d) melanin

e) biliverdin

Correct answer: d

3. What is typical for brown atrophy?

- a) heart enlargement
- b) accumulation of fat in the epicardium
- c) the presence of hemosiderin in cardiomyocytes
- d) expansion of the cavities of the heart
- e) accumulation of lipofuscin in cardiomyocytes

Correct answer: e

4. Name the lipidogenic pigment:

- a) adrenochrome
- b) pigment of enterochromaffin cells
- c) bilirubin
- d) porphyrin
- e) lipofuscin

Correct answer: e

5. Types of hemosiderosis:

- a) general
- b) parenchymal
- c) mesenchymal
- d) mixed
- e) intravascular

Correct answer: a

6. Definition of mixed dystrophies:

- a) metabolic disorders in the parenchyma of the organ
- b) metabolic disorders in the stroma of the organ
- c) violation of the metabolism of proteins and carbohydrates
- d) violation of the metabolism of complex proteins and minerals in the parenchyma and stroma of the organ
- e) violation of lipid and protein metabolism

Correct answer: d

7. In what cells is melanin synthesized?

- a) melanocytes
- b) melanophores
- c) melanophages
- d) myelocytes
- e) myeloblasts

Correct answer: a

8. What process leads to the development of general hemosiderosis?

- a) extravascular hemolysis
- b) hematoma formation
- c) vessel necrosis
- d) intravascular hemolysis
- e) hemorrhage

Correct answer: d

9. What is characteristic of brown lung induration?

- a) hemosiderosis

- b) lipofuscinosis
- c) melanosis
- d) hemomelanosis
- e) formation of hematin

Correct answer: a

10. Name the diseases and pathological processes in which widespread melanosis develops:

- a) albinism
- b) Addison's disease
- c) melanoma
- d) nevus
- e) vitiligo

Correct answer: b

Topic 5. Morphology of lethal cell damage. Necrosis and apoptosis

1. Definition of the concept of "necrosis":

- a) organ anemia
- b) dystrophy
- c) fullness of the body
- d) body death
- e) tissue necrosis in a living organism

Correct answer: e

2. Name the type of indirect necrosis:

- a) toxic
- b) infectious
- c) traumatic
- d) wet
- e) trophoneurotic

Correct answer: e

3. Microscopic signs of cell necrosis:

- a) fatty degeneration
- b) karyopyknosis
- c) karyokinesis
- d) degranulation
- e) proteinaceous dystrophy

Correct answer: b

4. Favorable outcome of dry necrosis:

- a) organization
- b) septic autolysis
- c) regeneration
- d) cyst
- e) formation of a sequester

Correct answer: a

5. Types of gangrene:

- a) dense
- b) dry
- c) partial
- d) toxic
- e) vascular

Correct answer: b

6. Definition of the concept of "necrobiosis":

- a) vasospasm

- b) anemia of organs
- c) irreversible dystrophic processes
- d) autolysis
- e) pathobiosis

Correct answer: c

7. Microscopic signs of cell necrosis:

- a) plasmorrhagia
- b) plasmation
- c) karyorrhexis
- d) karyokinesis
- e) accumulation of protein grains in the cytoplasm

Correct answer: c

8. Typical outcome of wet necrosis:

- a) encapsulation
- b) petrification
- c) mummification
- d) ossification
- e) cyst

Correct answer: e

9. In what organs is it possible to develop gangrene:

- a) brain
- b) spleen
- c) intestines
- d) heart
- e) kidney

Correct answer: c

10. Name the stages of the necrotic process:

- a) plasmolysis
- b) plasmorhexis
- c) necrobiosis
- d) karyolysis
- e) karyorrhexis

Correct answer: c

Topic 6. Circulatory disorders 1.

1. Cause of general chronic venous plethora:

- a) acute heart failure
- b) acute renal failure
- c) chronic heart failure
- d) chronic renal failure
- e) acute liver failure

Correct answer: c

2. What is the name of the liver in chronic venous plethora:

- a) frosting
- b) sago
- c) sebaceous
- d) nutmeg
- e) goose

Correct answer: d

3. Definition of stasis:

- a) decreased blood flow
- b) stopping blood flow in microcirculation vessels

- c) blood clotting
- d) slowing down the outflow of blood
- e) hemolysis of erythrocytes

Correct answer: b

4. Definition of the concept of "diapedetic bleeding":

- a) bleeding from capillaries, arterioles and venules
- b) bleeding from the veins when their walls are corroded by a tumor
- c) bleeding due to increased permeability of the vascular wall
- d) bleeding from large arteries
- e) bleeding from a ruptured aortic aneurysm

Correct answer: c

5. Change in the organs in acute anemia:

- a) sclerosis, inflammation
- b) necrosis, dystrophy
- c) hyalinosis, amyloidosis
- d) brown atrophy
- e) congestive induration

Correct answer: b

6. Definition of hemorrhage:

- a) blood clotting in the cavity of the heart
- b) blood clotting in a vessel
- c) bleeding from a vessel
- d) bleeding from the heart
- e) accumulation of blood in the tissue

Correct answer: e

7. Mechanism of bleeding:

- a) vascular malformations
- b) hyalinosis of the vascular wall
- c) increased vascular permeability
- d) sclerosis of the vascular wall
- e) lipoidosis of the vascular wall

Correct answer: c

8. Appearance of the organ in anemia:

- a) pale
- b) full-blooded
- c) colorful
- d) brown
- e) cyanotic

Correct answer: a

9. Definition of venous plethora:

- a) decreased blood flow
- b) stopping blood flow
- c) increased blood flow
- d) decreased blood flow
- e) increased blood flow

Correct answer: a

10. What process underlies the brown induration of the lungs:

- a) anthracosis
- b) necrosis

- c) hemorrhagic infarction
- d) lipofuscinosis
- e) hemosiderosis

Correct answer: e

Topic 8. Inflammation. Acute inflammation

1. What is alteration:

- a) the reaction of the microvasculature
- b) damage to tissues and cells
- c) cell reproduction
- d) increased vascular permeability
- e) formation of exudate

Correct answer: b

2. Name the type of exudative inflammation:

- a) mucoid swelling
- b) interstitial inflammation
- c) inflammation of the mucous membranes
- d) catarrhal
- e) cloudy swelling

Correct answer: d

3. Name the type of fibrinous inflammation:

- a) catarrhal
- b) croupous
- c) abscess
- d) phlegmon
- e) empyema

Correct answer: b

4. The main characteristic of purulent inflammation:

- a) the formation of a fibrinous film
- b) the presence of a large amount of mucus in the exudate
- c) pronounced cell proliferation
- d) a large number of segmented leukocytes in the exudate
- e) a large number of red blood cells in the exudate

Correct answer: d

5. What is an abscess:

- a) diffuse purulent inflammation
- b) limited purulent inflammation
- c) fibrinous inflammation of the mucous membranes
- d) fibrinous inflammation of the serous membranes
- e) purulent inflammation of the cavities

Correct answer: b

6. What is exudation:

- a) damage to cells and tissues
- b) cell reproduction
- c) the reaction of the microvasculature with an increase in vascular permeability
- d) metabolic disorder
- e) tissue necrosis

Correct answer: c

7. Type of inflammation depending on the causative factor:

- a) specific
- b) alternative
- c) exudative
- d) proliferative
- e) parenchymal

Correct answer: a

8. What is diffuse purulent inflammation called?

- a) an abscess
- b) empyema
- c) phlegmon
- d) sepsis
- e) polyserositis

Correct answer: c

9. Sign of catarrh:

- a) fibrin in exudate
- b) a large amount of mucus in the exudate
- c) ulceration of the mucous membrane
- d) occurs on the serous membranes
- e) occurs in the stroma of organs

Correct answer: b

10. Proliferation characteristics:

- a) proliferation of cells in the field of inflammation
- b) damage to cells and tissues
- c) the reaction of the microvasculature
- d) metabolic disorder
- e) tissue necrosis

Correct answer: a

Topic 9. Chronic inflammation. Regeneration. Wound healing

1. Where is productive inflammation with the formation of polyps:

- a) in the stroma of organs
- b) on the mucous membranes
- c) in a capsule
- d) on serous covers
- e) in vessels

Correct answer: b

2. What tissue reaction prevails in productive inflammation:

- a) alteration
- b) hyperplasia
- c) proliferation
- d) exudation
- e) atrophy

Correct answer: c

3. Name the cells prevailing in tuberculous granuloma:

- a) leukocytes
- b) epithelioid
- c) xanthoma
- d) Mikulich cells
- e) fibroblasts

Correct answer: b

4. Morphological manifestations of a productive reaction in tuberculosis:

- a) focus of caseous necrosis
- b) lobular foci of exudative inflammation
- c) granuloma
- d) exudative alveolitis
- e) necrotic bronchopneumonia

Correct answer: c

5. What changes in the aorta appear in the tertiary period of syphilis:

- a) gumma
- b) syphilides
- c) gummous infiltration
- d) hard chancre
- e) abdominal aneurysm

Correct answer: c

6. Type of productive inflammation:

- a) interstitial
- b) phlegmon
- c) croupous
- d) empyema
- e) simple

Correct answer: a

7. Manifestations of the tertiary period of syphilis:

- a) lymphadenitis
- b) hard chancre
- c) gummous infiltration of blood vessels
- d) syphilides
- e) white pneumonia

Correct answer: c

8. In what disease does specific inflammation develop:

- a) measles
- b) typhoid fever
- c) scarlet fever
- d) tuberculosis
- e) rheumatism

Correct answer: d

9. What distinguishes gumma from tuberculous granuloma:

- a) hemorrhage
- b) the presence of Mikulich cells
- c) the presence of small blood vessels
- d) vascular thrombosis
- e) the presence of Virchow cells

Correct answer: c

10. In what diseases are granulomas found:

- a) malaria
- b) typhus
- c) atherosclerosis
- d) flu

e) amyloidosis

Correct answer: b

Topic 10. Immunopathological processes.
Amyloidosis

1. Definition of autoimmune diseases:

- a) local immunopathological reactions
- b) extreme manifestation of insufficiency of the immune system
- c) acute immune inflammation
- d) reaction of immune toxic complexes
- e) reaction of autoantibodies and sensitized lymphocytes against their own antigens

Correct answer: e

2. A cell directly involved in immune reactions:

- a) epithelial cell
- b) endothelial cell
- c) neutrophilic leukocyte
- d) macrophage
- e) fibroblast

Correct answer: d

3. A characteristic type of necrosis in immediate-type hypersensitivity reactions:

- a) collocation
- b) fibrinoid
- c) waxy
- d) vascular
- e) indirect

Correct answer: b

4. Organ-specific autoimmune disease:

- a) rheumatism
- b) Struma Hashimoto
- c) atopic bronchial asthma
- d) cirrhosis of the liver
- e) tuberculosis

Correct answer: b

5. Type of immediate hypersensitivity reaction:

- a) granulomatosis
- b) cell cytolysis
- c) cooperation of T and B-lymphocytes
- d) cytotoxic and cytolytic reactions
- e) autoimmunization

Correct answer: d

6. What general pathological process is typical for delayed-type hypersensitivity reactions:

- a) inflammation
- b) hyperplasia
- c) chronic immune inflammation
- d) atrophy
- e) autoimmunization

Correct answer: c

7. Cells involved in cytotoxic and cytolytic reactions:

- a) T-lymphocytes, macrophages
- b) K, NK cells, T lymphocytes
- c) B-lymphocytes, T-lymphocytes
- d) neutrophilic leukocytes, macrophages
- e) plasma cells

Correct answer: b

8. Definition of immunological tolerance:

- a) extreme manifestation of insufficiency of the immune system
- b) local immune response
- c) unresponsiveness of lymphoid tissue to antigens
- d) cellular immune response
- e) an allergic reaction

Correct answer: c

9. Organ-specific autoimmune disease:

- a) encephalomyelitis
- b) systemic lupus erythematosus
- c) atopic bronchial asthma
- d) cirrhosis of the liver
- e) glomerulonephritis

Correct answer: a

10. The reason for the development of secondary (acquired) immunodeficiency syndrome:

- a) autoimmunity
- b) lymphotropic viruses
- c) hypersensitivity reaction
- d) hyperplasia of lymphoid tissue
- e) loss of tolerance to self antigens

Correct answer: b

Topic 11. Tumors. General provisions. Tumors from the epithelium

1. Name the malignant tumor from the integumentary epithelium:

- a) sarcoma
- b) adenoma
- c) adenocarcinoma
- d) squamous cell carcinoma
- e) papilloma

Correct answer: d

2. Property of adenocarcinoma:

- a) develops from connective tissue
- b) develops from glandular epithelium
- c) organ-specific
- d) no atypia
- e) does not metastasize

Correct answer: b

3. Origin of chorionepithelioma:

- a) endometrium
- b) placenta
- c) myometrium
- d) umbilical cord
- e) theca tissue

Correct answer: b

4. Benign tumor from the integumentary epithelium:

- a) adenoma
- b) adenocarcinoma
- c) fibroadenoma
- d) papilloma
- e) squamous cell carcinoma

Correct answer: d

5. In which organ does eosinophilic adenoma develop:

- a) adrenal gland
- b) pituitary gland
- c) thyroid gland
- d) ovary
- e) brain

Correct answer: b

6. Preferential way of cancer metastasis:

- a) hematogenous
- b) lymphogenous
- c) implantation
- d) perineural
- e) mixed

Correct answer: b

7. What clinical syndrome develops in pheochromocytoma:

- a) pericardial rub
- b) pulmonary embolism

- c) necrosis in the organs
- d) hypertension syndrome
- e) acromegaly

Correct answer: d

8. What differentiated malignant tumor can develop from adenoma:

- a) solid cancer
- b) skirr
- c) adenocarcinoma
- d) small cell
- e) slimy

Correct answer: c

9. From what type of epithelium papilloma develops:

- a) glandular
- b) flickering
- c) stratified squamous
- d) cuboid
- e) of all kinds

Correct answer: c

10. Feature of fibrous cancer (skirr):

- a) develops from stromal cells
- b) has a capsule
- c) the parenchyma prevails over the stroma
- d) the stroma prevails over the parenchyma
- e) does not give metastases

Correct answer: d

Testing (MCQ) of the 6th semester:

Topic 15. Rheumatic diseases

1. What disease belongs to the group of rheumatic diseases:

- a) atherosclerosis
- b) systemic lupus erythematosus
- c) arthrosis
- d) anemia
- e) hypertension

Correct answer: b

2. Change in connective tissue in rheumatism:

- a) amyloidosis, sclerosis
- b) fibrinoid swelling, hyalinosis
- c) atherosclerosis, hyalinosis
- d) atrophy, lipoidosis
- e) mucoid swelling, mucus

Correct answer: b

3. Name the morphological manifestation of decompensated heart disorder:

- a) nutmeg liver
- b) kidney amyloidosis
- c) hyalinosis of the spleen capsule
- d) brown atrophy of the liver

d) cerebral hemorrhage

Correct answer: a

4. The nature of rheumatic myocarditis in childhood:

- a) focal productive
- b) diffuse productive
- c) diffuse exudative
- d) necrotic
- e) dystrophic

Correct answer: c

5. Type of rheumatic endocarditis:

- a) polyposis-ulcerative
- b) acute ulcerative
- c) eosinophilic fibroplastic
- d) acute warty

Correct answer: d

6. A characteristic sign of rheumatic diseases:

- a) calcareous metastases
- b) progressive disorganization of connective tissue
- c) venous stasis in organs
- d) hypertension syndrome
- e) heart disease

Correct answer: b

7. Name the most common clinical and anatomical form of rheumatism:

- a) polyarthritic
- b) cerebral
- c) nodose
- d) cardiovascular
- e) mixed

Correct answer: d

8. What type of rheumatic myocarditis usually develops in adults:

- a) exudative
- b) diffuse productive
- c) focal productive
- d) necrotic
- e) purulent

Correct answer: c

9. Change in connective tissue in rheumatism, indicating an exacerbation of the process:

- a) hyalinosis, atrophy
- b) sclerosis, amyloidosis
- c) hemorrhage, edema
- d) mucoid swelling, fibrinoid swelling
- e) calcification

Correct answer: d

10. What type of pericarditis is typical for rheumatism:

- a) hemorrhagic
- b) fibrinous
- c) purulent
- d) diphtheria
- e) catarrhal

Correct answer: b

Topic 16. Diseases of the hematopoietic system

1. What is leukemia:

- a) regional tumor disease of the hematopoietic tissue
- b) a malignant tumor on the epithelium
- c) systemic tumor disease of the hematopoietic tissue
- d) a malignant tumor from the mesenchyme
- e) precancerous disease

Correct answer: c

2. Name acute leukemia:

- a) Hodgkin's disease
- b) lymphoblastic
- c) multiple myeloma
- d) lymphocytic
- e) myelocytic

Correct answer: b

3. Name the histo (cyto)-genetic form of chronic leukemia:

- a) sharp
- b) chronic

- c) leukemic
- d) myelocytic
- e) lymphoblastic

Correct answer: d

4. One of the principles of the modern classification of leukemia:

- a) the duration of the flow
- b) the degree of differentiation of tumor cells and the nature of the course
- c) localization of leukemic infiltrates
- d) features of the clinical course
- e) pathoanatomical features of organ changes

Correct answer: b

5. Pathological anatomical autopsy revealed enlarged lymph nodes, porphyritic spleen. What disease should you think about:

- a) myelocytic leukemia
- b) multiple myeloma
- c) lymphoblastic leukemia
- d) Hodgkin's disease
- e) lymphocytic leukemia

Correct answer: d

6. Name paraproteinemic leukemia:

- a) lymphoblastic
- b) multiple myeloma
- c) myelocytic
- d) Hodgkin's disease
- e) myeloid

Correct answer: b

10. Name the systemic tumor disease of the hematopoietic tissue:

- a) Hodgkin's disease
- b) lymphosarcoma
- c) reticulosarcoma
- d) myeloid leukemia
- e) mycosis fungoides

Correct answer: d

Topic 19. Intestinal infections

1. Type of inflammation in the colon with dysentery:

- a) productive
- b) purulent
- c) fibrinous
- d) hemorrhagic
- e) granulomatous

Correct answer: c

2. The causative agent of typhoid fever:

- a) cocci
- b) shigella
- c) Ebert's wand
- d) rickettsia
- e) virus

Correct answer: c

3. Changes in the mesenteric lymph nodes in typhoid fever at the first stage of the disease:

- a) necrosis
- b) no change
- c) anemia
- d) atrophy
- e) formation of typhoid granulomas

Correct answer: e

4. What is typical for the algidic period of cholera:

- a) venous congestion
- b) anemia
- c) anasarca
- d) dehydration
- e) arterial hyperemia

Correct answer: d

5. Specific complication of cholera:

- a) algid
- b) anemia
- c) uremia
- d) cachexia
- e) plethora

Correct answer: c

6. Changes in the group follicles of the small intestine in the 1st stage of typhoid fever:

- a) hyperplastic changes
- b) purulent fusion
- c) anemia
- d) atrophy
- e) lipoidosis

Correct answer: a

7. Complication of typhoid fever:

- a) intestinal bleeding
- b) intestinal diverticulum
- c) liver failure
- d) brown atrophy
- e) asphyxia

Correct answer: a

8. Morphological type of colitis in dysentery in the 1st stage:

- a) follicular
- b) fibrinous
- c) purulent
- d) catarrhal
- e) ulcerative

Correct answer: d

9. The causative agent of dysentery:

- a) Koch's wand
- b) Koch's vibrio
- c) shigella
- d) virus
- e) mycobacterium

Correct answer: c

10. Changes in the spleen in cholera typhoid:

- a) pulp hyperplasia
- b) greasy sectional view
- c) the consistency is very dense
- d) many heart attacks
- e) hyalinosis capsules

Correct answer: a

Topic 22. Diseases of the gastrointestinal tract

1. Definition of gastritis:

- a) dystrophic disease of the gastric mucosa
- b) inflammatory disease of the mucous membrane
- c) dysregenerative disease of the gastric mucosa
- d) an infectious disease with damage to the gastric mucosa
- e) precancerous disease of the stomach

Correct answer: b

2. The essence of morphological changes in acute gastritis:

- a) exudative inflammation of the gastric mucosa
- b) structural reorganization of the gastric mucosa
- c) violation of the regeneration of the epithelium of the gastric mucosa
- d) malignancy of the epithelium of the gastric mucosa
- e) enterolization of the gastric mucosa

Correct answer: a

3. Pathogenetic factor of a general nature, which is important for the development of peptic ulcer:

- a) metabolic disorders in the mucous membrane of the stomach and duodenum
- b) violation of blood supply in the stomach and duodenum
- c) violation of the acid-peptic factor
- d) violation of immunological homeostasis
- e) violation of the nervous regulation of the activity of the stomach and duodenum

Correct answer: e

4. Tissue determined at the bottom of the ulcer-cancer of the stomach:

- a) tumor
- b) muscular
- c) lymphoid
- d) fibrous tissue
- e) epithelial

Correct answer: d

5. Morphological form of acute appendicitis:

- a) phlegmonous
- b) catarrhal
- c) fibrinous
- d) erosive
- e) ulcerative

Correct answer: a

6. Forms of acute gastritis:

- a) superficial
- b) fibrinous
- c) apostematous
- d) phlegmonous-ulcerative
- e) atrophic

Correct answer: b

7. The essence of morphological changes in the stomach in chronic gastritis:

- a) violation of regeneration and structural restructuring of the mucosa
- b) necrosis of the mucous membrane
- c) proliferation of the mucosal epithelium
- d) hyalinosis of vessels
- e) replacement of the muscle layer with connective tissue

Correct answer: a

8. The main clinical and morphological expression of peptic ulcer:

- a) inflammation of the gastric mucosa
- b) inflammation of the mucous membrane of the duodenum
- c) recurrent gastric and duodenal ulcer
- d) erosion of the mucous membrane of the stomach and duodenum
- e) degeneration of the epithelium of the mucous membrane of the stomach and duodenum

Correct answer: c

9. Pathogenetic factor of a local nature, which is important in the development of gastric ulcer:

- a) violation of the acid-peptic factor
- b) violation of the nervous regulation of the activity of the stomach
- c) violation of the endocrine regulation of the activity of the stomach
- d) autoimmune reactions
- e) circulatory disorders in the wall of the stomach

Correct answer: a

10. Morphological form of destructive appendicitis:

- a) simple
- b) gangrenous
- c) superficial
- d) erosive
- e) fibrinous

Correct answer: b

Topic 23. Diseases of the liver and biliary tract

1. Clinical and morphological form of viral hepatitis:

- a) chronic, necrotic
- b) toxic-allergic, toxic
- c) septic
- d) interstitial, gastric
- e) functional

Correct answer: a

2. Characteristic histological changes in acute viral hepatitis:

- a) hydropic dystrophy of hepatocytes, lympho-macrophage infiltration
- b) fatty degeneration of hepatocytes, infiltration by neutrophilic leukocytes
- c) hepatocyte hemosiderosis
- d) copper deposition in hepatocytes
- e) the formation of Mallory bodies

Correct answer: a

3. What type of jaundice is typical for viral hepatitis:

- a) subhepatic
- b) suprahepatic
- c) hepatic
- d) mixed
- e) mechanical

Correct answer: c

4. The main etiological factors leading to the development of cirrhosis:

- a) bacteria, parasites
- b) hepatitis virus, alcohol
- c) exposure to ionizing radiation
- d) endocrine disorders
- e) nutritional factor

Correct answer: b

5. Signs of portal hypertension syndrome:

- a) ascites, varicose veins of the esophagus
- b) anemia, hepatomegaly
- c) cachexia, splenomegaly
- d) jaundice, hepatic coma
- e) hemorrhagic syndrome

Correct answer: a

6. What factor is important for the development of secondary biliary cirrhosis of the liver:

- a) massive necrosis of the liver parenchyma
- b) venous congestion
- c) cholestasis
- d) portal vein thrombosis
- e) collapse of the stroma of the liver

Correct answer: c

7. Name the macroscopic forms of liver cirrhosis:

- a) viral, alcoholic
- b) macronodular, micronodular
- c) monolobular, granular
- d) multilobular
- e) stagnant

Correct answer: b

8. Name the diseases in which fatty hepatosis often develops:

- a) chronic alcoholism
- b) glycogenosis

- c) viral hepatitis
- d) hypertension
- e) liver cancer

Correct answer: a

9. Ways of infection with viral hepatitis:

- a) airborne, transmissible
- b) alimentary, parenteral
- c) contact, aerogenic
- d) with animal bites
- e) with insect bites

Correct answer: b

10. Macroscopic characteristics of the liver in acute toxic dystrophy (stage yellow dystrophy):

- a) the liver is reduced, flabby
- b) the liver is enlarged, dense
- c) the liver is reduced, brown
- d) bumpy surface
- e) nutmeg liver

Correct answer: a

3. WRITTEN WORK

Procedure and evaluation procedure

Conducted in class on questions. Each student is asked to answer two questions in writing. Each question is scored on a 10-point scale. In total, you can score a maximum of 20 points.

Evaluation criteria

- the correctness of the answer according to the content of the task (the number and nature of errors in the answer are taken into account);
- completeness and depth of the answer (the number of learned facts, concepts, etc. is taken into account)
- consciousness of the answer (understanding of the presented material is taken into account);
- the logic of presentation of the material (taking into account the ability to build a coherent, consistent story, competently use special terminology);
- rationality of the used methods and methods for solving the set educational task (taking into account the ability to use the most progressive and effective ways to achieve the goal);

Contents of the evaluation tool

Questions for written work of the 5th semester:

1. Inflammation. Definition, essence and biological significance of inflammation. Etiology of inflammation. Phases of the inflammatory response. Clinical and morphological signs of inflammation. Principles of classification.
2. Inflammation: alteration phase. Cellular and humoral mediators of the inflammatory response and their main effects.
3. Inflammation: exudation phase, its stages. The concept of exudate and transudate.
4. Fibrinous inflammation. Localization and reasons. Types of fibrinous inflammation, their morphological characteristics, outcomes and significance for the body.
5. Purulent inflammation. Causes. Varieties of purulent inflammation, their morphological characteristics, outcomes, significance for the body.
6. Serous, hemorrhagic, putrefactive and catarrhal inflammation. Causes. Morphological characteristic.
7. Granulomatous inflammation. Pathogenesis, classification and significance of granulomas. The structure of specific granulomas.
8. Regeneration. Definition, levels of restoration of structural elements (forms of regeneration), mechanisms of regulation, types of regeneration and their characteristics. Regeneration of individual cells and tissues.
9. Appearance and microscopic characteristics of organs (kidneys, liver, spleen) in amyloidosis. Classification of amyloidosis. Methods of macro- and microscopic detection of amyloid.
10. Immunopathological reactions. Classification. Morphology. Examples.
11. Autoimmune diseases. Etiology. Pathogenesis. Examples. Morphology.
12. Immunodeficiencies. Classification. Examples. Morphology of immune deficiency.
13. Tumor. Definition. Carcinogens, their types. Modern theories of carcinogenesis. The concept of cellular oncogenes and anti-oncogenes. Oncogene activation mechanisms.
14. Structure of tumors. Types of atypism in the tumor and their characteristics.
15. Types of tumor growth. Invasion. The concept of relapse. Secondary changes in tumors.
16. Metastasis of tumors: definition, ways of metastasis, stages of the metastatic cascade.
17. Comparative characteristics of benign and malignant tumors. Local and general manifestations of tumors. The concept of paraneoplastic syndrome.
18. Epithelial tumors without specific localization, benign and malignant. General characteristics, types, morphology.
19. Mesenchymal tumors, benign and malignant. General characteristics, types, morphology.
20. Tumors of melanin-forming tissue. Sources of occurrence and localization. Morphological characteristic.

Questions for written work of the 6th semester:

1. Croupous (lobar) pneumonia. Etiology, pathogenesis, stages and their morphological characteristics, complications and causes of death. Differences of croupous pneumonia from bronchopneumonia.
2. Bronchopneumonia. Etiology, pathogenesis, morphology depending on the pathogen, complications. Differences between bronchopneumonia and croupous pneumonia.
3. Interstitial pneumonia. Etiology, pathogenesis, morphological characteristics, complications.
4. Chronic nonspecific lung diseases. Classification and nosological forms. Mechanisms of development. CNLD outcomes.
5. Thromboembolism of the pulmonary artery (pulmonary embolism)). Etiology, pathogenesis, morphological characteristics, causes and mechanisms of death.
6. Bronchial asthma. Classification, provoking factors, pathogenesis, morphological characteristics, outcomes, causes of death.
7. Bronchiectasis and bronchiectasis. Concept, classification, etiology, pathogenesis, morphological characteristics, complications, outcomes, causes of death.
8. Lung cancer. Etiology and pathogenesis. precancerous conditions. Macro- and microscopic forms. Patterns of metastasis.
9. Chronic gastritis. Causes and mechanism of development. Types of chronic gastritis by etiology and morphology, their characteristics. Significance of chronic gastritis in the occurrence of gastric cancer.
10. Peptic ulcer of the stomach and duodenum. Etiological role of *H. pylori*, pathogenesis. Pathological anatomy in the stage of exacerbation and remission. The difference between ulcers and erosion. Complications.
11. Cancer of the stomach. Etiology and pathogenesis. precancerous conditions. Macroscopic forms and histological types. Features of metastasis.
12. Nonspecific ulcerative colitis. Causes, pathogenesis, pathological anatomy, complications.
13. Crohn's disease. Causes, pathogenesis, pathological anatomy, complications.
14. Colon cancer. precancerous diseases. Macroscopic forms and histological types of rectal cancer. Patterns of metastasis.
15. Appendicitis. Etiology, pathogenesis, classification, morphological characteristics, complications.
16. Massive progressive necrosis (toxic dystrophy) of the liver. Etiology, pathogenesis, pathological anatomy, complications, outcomes.
17. Fatty hepatosis (steatosis) of the liver. Etiology, pathogenesis, pathological anatomy, complications, outcomes. The role of alcohol in the development of fatty liver.
18. Acute viral hepatitis. Etiology, epidemiology, pathogenesis. Morphological characteristic. Clinical and morphological forms. Outcomes.
19. Chronic viral hepatitis. Etiology, pathogenesis. Morphological characteristic. Signs of activity. Outcomes, prognosis.
20. Cirrhosis of the liver. Etiology, pathogenesis. Classification. Morphological signs of liver cirrhosis. extrahepatic changes. Complications and causes of death.
21. Acute glomerulonephritis. Classification, etiology, pathogenesis, morphological characteristics, complications, outcomes.
22. Subacute (rapidly progressive) glomerulonephritis. Classification, etiology, pathogenesis, morphological characteristics, complications, outcomes.
23. Chronic glomerulonephritis. Classification, etiology, pathogenesis, morphological characteristics, outcomes.
24. Non-inflammatory glomerulopathies. Etiology, pathogenesis, morphological characteristics, outcomes of diseases that make up the essence of primary nephrotic syndrome.
25. Chronic renal failure. Definition, etiology, pathogenesis, stages, morphological characteristics.
26. Acute renal failure. Causes and pathogenesis. Stages. Morphological characteristic. Complications. Outcomes and causes of death.
27. Amyloidosis of the kidneys (amyloid nephrosis). Causes, pathogenesis, stages and their morphological characteristics, complications, outcomes.
28. Pyelonephritis and urinary tract infections. Definition, classification, etiology, predisposing factors, ways of spreading infection, pathogenesis, morphological characteristics, outcomes, complications.

29. Benign hyperplasia and prostate cancer. Causes, pathogenesis, morphological characteristics, complications.
30. Testicular tumors. Classification. Morphology. Metastasis.
31. Endocervicosis (pseudo-erosion, cervical ectopy) and cervical cancer. Risk factors, classification, underlying diseases, morphological characteristics, metastasis. The value of the transformation zone.
32. Endometriosis. Classification by localization. pathogenic theories. Morphology of endometriosis of the uterus (adenomyosis) and ovaries. Prognosis.
33. Glandular hyperplasia and endometrial cancer. Classification, risk factors, morphological characteristics. Metastasis.
34. Tumors of the mammary gland. precancerous conditions. Classification. Morphological characteristic. Patterns of metastasis.
35. Tumors of the ovaries. Classification. Morphological characteristic. Features of metastasis of malignant neoplasms.
36. Preeclampsia. Risk factors. Causes and pathogenesis. Clinical manifestations. Classification. Morphological changes in organs. Impact on the fetus. Causes of death of a woman.
37. Ectopic (ectopic) pregnancy. Classification by localization. Causes. Morphological diagnostics. Complications. Causes of death of a woman.
38. Spontaneous abortion and premature birth. Definitions. Causes and risk factors. Morphological characteristics of the material obtained after spontaneous abortions and the purpose of its study.
39. Trophoblastic disease (cystic mole, chorioncarcinoma). Causes, morphological characteristics. Metastasis of chorionic carcinoma.
40. Goiter (struma). Definition. Classification. Causes and mechanism of development. Morphology. Complications and causes of death.
41. Diffuse toxic goiter. Etiology and pathogenesis. Clinical manifestations. Macro- and microscopic picture of the thyroid gland and changes in other organs. Causes of death.
42. Thyroiditis. Etiology. Pathogenesis. Classification. Morphology. Outcomes.
43. Tumors of the thyroid gland. Classification. Morphological characteristic.
44. Tumors of the adrenal glands. Classification, morphological characteristics. Relevant clinical syndromes.
45. Diabetes mellitus. Etiology, pathogenesis, classification, morphological characteristics, complications, causes of death.
46. Organ-specific tumors of the skin. Classification, morphological characteristics.

4. CONTROL WORK

Procedure and evaluation procedure

Conducted on questions in the form of an interview. Each student is asked to answer two questions orally. Each question is scored on a 10-point scale. In total, you can score a maximum of 20 points.

Evaluation criteria

- the correctness of the answer according to the content of the task (the number and nature of errors in the answer are taken into account);
- completeness and depth of the answer (the number of learned facts, concepts, etc. is taken into account)
- consciousness of the answer (understanding of the presented material is taken into account);
- the logic of presentation of the material (taking into account the ability to build a coherent, consistent story, competently use special terminology);
- rationality of the used methods and methods for solving the set educational task (taking into account the ability to use the most progressive and effective ways to achieve the goal);

Contents of the evaluation tool

Questions for the test of the 5th semester:

1. Adaptation and compensation. Definition, essence, bases of classification.

2. Phases of the course of the compensatory process.
3. Hypertrophy and hyperplasia. Definition, classification, morphological characteristics, significance for the organism.
4. General and local atrophy. Classification, morphology, significance for the organism.
5. Metaplasia. Definition. Types of metaplasia. Significance for the body.
6. Dysplasia. Definition. Signs and degrees of dysplasia. Significance for the body.
7. General characteristics of dystrophies (degenerations). Definition, causes, morphogenetic mechanisms and principles of classification.
8. Parenchymal protein dystrophies. Causes, pathogenesis, types, morphological characteristics.
9. Parenchymal fatty degeneration of organs (myocardium, liver, kidneys). Causes, pathogenesis, morphological characteristics, outcomes. Histochemical methods for detection of lipids.
10. Stromal-vascular fatty degenerations. General obesity (obesity) and lipomatosis. Classification, causes, mechanisms of development, morphology, significance for the organism.
11. Muroid and fibrinoid swelling. Causes, mechanisms of development, morphological characteristics, methods of histochemical detection.
12. Hyalinosis: causes, mechanisms of development, classification, morphological characteristics, outcomes and functional significance. Types of vascular hyaline.
13. Violation of the exchange of hemoglobinogenic pigments. Hemosiderosis and hemochromatosis. Histochemical detection of hemosiderin. Hemomelanosis. Porfiria.
14. Violation of bilirubin metabolism. Jaundice, its types and their characteristics. Hereditary hyperbilirubinemia.
15. Violation of calcium metabolism. The metabolism of calcium in the body. Calcifications: causes, pathogenesis, types, morphological characteristics.
16. Formation of stones. Causes and mechanisms of stone formation. Types of stones by composition. Complications associated with the presence of stones in the body.
17. Necrosis. Definition, mechanisms of development, stages of the necrotic process. Microscopic signs of necrosis. Reaction to necrosis of surrounding tissues. Classification of necrosis depending on the cause.
18. Clinical and morphological forms of necrosis and their brief characteristics. Outcomes and significance of necrosis.
19. Arterial plethora (hyperemia), general and local. Definition, causes, types, morphological characteristics.
20. General acute venous plethora. Definition, causes, pathogenesis, morphological changes in organs, outcomes.
21. General chronic venous plethora. Causes. Morphological changes in organs (liver, lungs, kidneys, spleen, skin). Morphogenesis of congestive sclerosis.
22. Anemia (ischemia). Definition, causes, types, morphological characteristics, outcomes.
23. Bleeding and hemorrhage. Definition, reasons. Classification of bleeding. Types of hemorrhages. Morphological characteristics and outcomes.
24. Heart attack. Definition, causes, classification by form and type, complications and outcomes. Morphological characteristics of infarctions of individual organs (brain, spleen, myocardium, kidneys, lungs).
25. Gangrene. Definition, varieties and their characteristics. Morphological characteristics of foot gangrene and intestinal gangrene.
26. Thrombosis. Definition. Local and general factors of thrombosis. Thrombus formation mechanism. Stages of thrombus morphogenesis. Diseases and conditions associated with an increased risk of thrombosis.
27. Thrombus. Its types, morphological characteristics. Difference of blood clots from post-mortem clots. Outcomes of thrombosis and significance for the organism.
28. Embolism. Definition, causes, types, morphological characteristics, outcomes.
29. Fat, air and gas embolism. Causes of development, pathogenesis, morphological manifestations. Pathological anatomical diagnostics. Causes of death.

30. Shock. Causes and mechanisms of development. Shock types. Stages of shock. Morphological changes in organs during shock.
31. Edema. Causes, mechanisms of development, types, outcomes. Morphological characteristics of pulmonary edema and cerebral edema-swelling. The concept of adult respiratory distress syndrome.

Questions for the test of the 6th semester:

1. Anemia. Etiology and pathogenesis. Classification. Diseases and conditions associated with anemia.
2. Posthemorrhagic anemia. Causes, morphological characteristics.
3. Anemia due to impaired blood formation (dyserythropoietic). Classification, causes, mechanisms of development, morphological characteristics.
4. Iron deficiency anemia. Causes. Morphological manifestations.
5. B12 deficiency anemia. Causes. Morphological manifestations.
6. Anemia due to increased blood destruction (hemolytic). Causes, pathogenesis, classification, morphological characteristics.
7. Acute leukemia. Classification, causes, pathogenesis, intravital morphological diagnosis, morphological manifestations, complications, causes of death.
8. Chronic leukemias. Causes, pathogenesis, morphological characteristics, complications, causes of death.
9. Paraproteinemic leukemias. Myeloma: classification, pathological anatomy, complications, causes of death.
10. Regional tumor diseases of the hematopoietic tissue (lymphoma). Classification, etiology, pathogenesis, morphological characteristics.
11. Lymphogranulomatosis (Hodgkin's disease). Clinical and morphological classification (stages) of the disease, morphological characteristics, prognosis.
12. Atherosclerosis. Risk factors, pathogenesis, macro- and microscopic stages.
13. Clinical and morphological forms of atherosclerosis, their morphological characteristics, complications, causes of death.
14. Essential hypertension and symptomatic (secondary) hypertension. Risk factors and pathogenesis. Stages of hypertension, their morphological characteristics. Differences in its benign and malignant course.
15. Clinical and morphological forms of hypertension, their characteristics, causes of death.
16. Ischemic heart disease (IHD). Definition, risk factors, pathogenesis, causes of ischemic myocardial damage. IHD classification.
17. Myocardial infarction. Causes, classification, dynamics of morphological changes, complications, causes of death.
18. Chronic ischemic heart disease. Morphological characteristics, complications, causes of death.
19. Cerebrovascular diseases. Classification, background diseases, risk factors, morphological manifestations, outcomes.
20. General concept of rheumatic diseases. Morphology of immune disorders and systemic disorganization of connective tissue. The main nosological forms of rheumatic diseases.
21. Rheumatism. Etiology and pathogenesis. Clinical and morphological forms of rheumatism. Morphological characteristics of the cardiovascular form. Structure of a rheumatic granuloma. Complications, causes of death.
22. HIV infection. Epidemiology, etiology, pathogenesis, stages of the disease and their morphological characteristics, complications, causes of death. AIDS marker diseases.
23. Acute respiratory viral infections. Flu (influenza). Etiology and pathogenesis. Clinical and morphological forms and their characteristics. Complications. Causes of death.
24. Typhoid fever. Etiology and pathogenesis. Morphological characteristics of local and general changes. Complications.
25. Dysentery (shigellosis). Etiology and pathogenesis. Morphological characteristics of local and general changes. Complications.

26. Cholera. Etiology and pathogenesis. Clinical and morphological stages and their characteristics. Complications. The concept of especially dangerous infections.
27. Meningococcal infection. Etiology and pathogenesis. Morphological characteristics of various forms. Complications. Causes of death.
28. Diphtheria. Etiology and pathogenesis. Morphological characteristics of local and general changes. Clinical and morphological classification. Complications. Causes of death.
29. Measles. Etiology and pathogenesis. Morphological characteristics of local and general changes. Complications.
30. Scarlet fever. Etiology and pathogenesis. Morphological characteristics of local and general changes. Complications.
31. Plague. Etiology and pathogenesis. Forms and their characteristics. Complications. Causes of death. The concept of especially dangerous infections.
32. Anthrax. Etiology and pathogenesis. Forms and their characteristics. Complications. Causes of death.
33. Primary tuberculosis. Etiology and pathogenesis of tuberculosis. Morphological manifestations. Course variants.
34. Hematogenous tuberculosis. Etiology and pathogenesis of tuberculosis. Varieties of hematogenous tuberculosis and their morphological characteristics.
35. Secondary tuberculosis. Etiology and pathogenesis of tuberculosis. Forms of secondary tuberculosis and their morphological characteristics.
36. Syphilis. Etiology, epidemiology and pathogenesis. Periods of the disease and their morphology. Visceral syphilis. congenital syphilis.
37. Sepsis. Differences of sepsis from other infectious diseases. Classification. Morphological characteristics of various forms. Features of septic (bacterial) endocarditis in drug addicts. Local and general changes.