

Pathological anatomy

Exam questions (General Medicine, Dentistry)

1. General characteristics of degenerations. Definition, causes, morphogenetic mechanisms and principles of classification.
2. Parenchymal protein degenerations. Causes, pathogenesis, subtypes, morphological characteristics.
3. Parenchymal fatty degeneration of organs (myocardium, liver, kidneys). Causes, pathogenesis, morphological characteristics, outcomes. Histochemical methods for the detection of lipids.
4. Stromal-vascular fatty degenerations. General obesity and lipomatosis. Classification, causes, mechanisms of development, morphology, significance for the organism.
5. Muroid and fibrinoid swelling. Causes, mechanisms of development, morphological characteristics, methods of histochemical detection.
6. Hyalinosis: causes, mechanisms of development, classification, morphological characteristics, outcomes and functional significance. Types of vascular hyaline.
7. Appearance and microscopic characteristics of organs (kidney, liver, spleen) with amyloidosis. Classification of amyloidosis. Methods of macro and microscopic detection of amyloid.
8. Disturbance of the exchange of hemoglobinogenic pigments. Hemosiderosis and hemochromatosis. Histochemical detection of hemosiderin. Hemomelanosis. Porphyria.
9. Disturbance of bilirubin metabolism. Jaundice, its types and their characteristics. Hereditary hyperbilirubinemia.
10. Violation of calcium metabolism. Metabolism of calcium in the body. Calcinosis (calcifications): causes, pathogenesis, types, morphological characteristics.
11. The formation of stones. Causes and mechanisms of stone formation. Types of stones by composition. Complications associated with the presence of stones in the body.
12. Necrosis. Definition, mechanisms of development, stages of necrotic process. Microscopic signs of necrosis. Reaction to necrosis of surrounding tissues. Classification of necrosis depending on the cause.
13. Clinical and morphological forms of necrosis and their brief characteristics. Outcomes and significance of necrosis.
14. Arterial plethora (hyperemia) is common and local. Definition, causes, types, morphological characteristics.
15. The common acute venous plethora. Definition, causes, pathogenesis, morphological changes in organs, outcomes.
16. General chronic venous plethora. Causes. Morphological changes in the organs (liver, lungs, kidneys, spleen, skin). Morphogenesis of congestive sclerosis.
17. Anemia (ischemia). Definition, causes, species, morphological characteristics, outcomes.
18. Bleeding and hemorrhage. Definition, reasons. Classification of bleeding. Types of hemorrhage. Morphological characteristics and outcomes.
19. Infarction. Definition, causes, classification in form and type, complications and outcomes. Morphological characteristics of infarctions of separate organs (brain, spleen, myocardium, kidneys, lungs).
20. Gangrene. Definition, varieties and their characteristics. Morphological characteristics of gangrene of the foot and gangrene of the gut.

21. Thrombosis. Definition. Local and common factors of thrombus formation. The mechanism of thrombus formation. Stages of thrombus morphogenesis. Diseases and conditions associated with an increased risk of thrombosis.
22. Thrombus. Its types, morphological characteristics. The difference between blood clots and postmortem clots. Outcomes of thrombosis and importance for the body.
23. Embolism. Definition, causes, species, morphological characteristics, outcomes.
24. Fat, air and gas embolisms. Causes of development, pathogenesis, morphological manifestations. Pathologic-anatomical diagnostics. Causes of death.
25. Shock. Causes and mechanisms of development. Types of shock. Stages of shock. Morphological changes in the organs in shock.
26. Edema. Causes, mechanisms of development, types, outcomes. Morphological characteristics of pulmonary edema and edema-swelling of the brain. The concept of adult respiratory distress syndrome.
27. Inflammation. The definition, essence and biological significance of inflammation. Etiology of inflammation. Phases of inflammatory reaction. Clinical and morphological signs of inflammation. Principles of classification.
28. Inflammation: the phase of alteration. Cellular and humoral mediators of the inflammatory reaction and their main effects.
29. Inflammation: the phase of exudation, its stages. The concept of exudate and transudate.
30. Fibrinous inflammation. Localization and causes. Types of fibrinous inflammation, their morphological characteristics, outcomes and significance for the body.
31. Purulent inflammation. Causes. Varieties of purulent inflammation, their morphological characteristics, outcomes, significance for the organism.
32. Serous, hemorrhagic, putrefactive and catarrhal inflammation. Causes. Morphological characteristics.
33. Granulomatous inflammation. Pathogenesis, classification and significance of granulomas. The structure of specific granules.
34. Adaptation and compensation. Definition, essence, bases of classification. The phases of the progression of the compensatory process.
35. 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.
36. Hypertrophy and hyperplasia. Definition, classification, morphological characteristics, importance for the organism.
37. Atrophy general and local. Classification, morphology, significance for the organism.
38. Metaplasia and dysplasia. Definitions. Types of metaplasia. Signs and degrees of dysplasia. Significance for the body.
39. Sclerosis and cirrhosis. Concept, causes, mechanism of development, morphological characteristics.
40. Tumor. Definition. Carcinogens, their kinds. Modern theories of carcinogenesis. The concept of cellular oncogenes and anti-oncogenes. Mechanisms of activation of oncogenes.
41. The structure of tumors. Types of atypism in the tumor and their characteristics.
42. Types of tumor growth. Invasion. The concept of relapse. Secondary changes in tumors.
43. Metastasis of tumors: definition, ways of metastasis, stages of metastatic cascade.
44. Comparative characteristics of benign and malignant tumors. Local and common manifestations of tumors. The concept of paraneoplastic syndrome.
45. Epithelial tumors without specific localization: benign and malignant. General characteristics, types, morphology.

46. Mesenchymal tumors: benign and malignant. General characteristics, types, morphology.
47. Tumors of melanin-forming tissue. Sources of occurrence and localization. Morphological characteristics
48. Anemia. Etiology and pathogenesis. Classification. Diseases and conditions accompanied by anemia.
49. Posthemorrhagic anemia. Causes, morphological characteristics.
50. Anemia due to impaired blood formation (dyserythropoietic). Classification, causes, mechanisms of development, morphological characteristics.
51. Iron-deficient anemia. Causes. Morphological manifestations.
52. B₁₂- deficient anemia. Causes. Morphological manifestations.
53. Anemia due to increased blood destruction (hemolytic). Causes, pathogenesis, classification, morphological characteristics.
54. Acute leukemia. Classification, causes, pathogenesis, intravital morphological diagnosis, morphological manifestations, complications, causes of death.
55. Chronic leukemia. Causes, pathogenesis, morphological characteristics, complications, causes of death.
56. Paraproteinemic leukemia. Myeloma: classification, pathological anatomy, complications, causes of death.
57. Regional tumors of the hematopoietic tissue (lymphoma). Classification, etiology, pathogenesis, morphological characteristics.
58. Lymphogranulomatosis. Clinico-morphological classification (stages) of the disease, morphological characteristics, prognosis.
59. Atherosclerosis. Risk factors, pathogenesis, macro- and microscopic stages.
60. Clinical and morphological forms of atherosclerosis, their morphological characteristics, complications, causes of death.
61. Hypertensive disease and symptomatic (secondary) hypertension. Risk factors and pathogenesis. Stages of hypertension, their morphological characteristics. Differences in benign and malignant progression.
62. Clinical and morphological forms of hypertension, their characteristics, causes of death.
63. Ischemic heart disease (CHD). Definition, risk factors, pathogenesis, causes of ischemic myocardial damage. Classification of IHD.
64. Myocardial infarction. Causes, classification, dynamics of morphological changes, complications, causes of death.
65. Chronic ischemic heart disease. Morphological characteristics, complications, causes of death.
66. Cerebrovascular diseases. Classification, background diseases, risk factors, morphological manifestations, outcomes.
67. General concept of rheumatic diseases. Morphology of immune disorders and systemic disorganization of connective tissue. The main nosological forms of rheumatic diseases.
68. Rheumatism. Etiology and pathogenesis. Clinical and morphological forms of rheumatism. Morphological characteristics of the cardiovascular form. Structure of rheumatic granuloma. Complications, causes of death.
69. Croupous pneumonia. Etiology, pathogenesis, stages and their morphological characteristics, complications and causes of death. Differences of croupous pneumonia from bronchopneumonia.
70. Bronchopneumonia. Etiology, pathogenesis, morphology depending on the pathogen, complications. Differences in bronchopneumonia from croupous pneumonia.
71. Interstitial pneumonia. Etiology, pathogenesis, morphological characteristics, complications.

72. Chronic nonspecific lung diseases (CNLD). Classification and nosological forms. Mechanisms of development of CNLD. Outcomes of CNLD.
73. Thromboembolism of the pulmonary artery. Etiology, pathogenesis, morphological characteristics, causes and mechanisms of death.
74. Bronchial asthma. Classification, provoking factors, pathogenesis, morphological characteristics, outcomes, causes of death.
75. Bronchiectasis and bronchiectatic disease. Concept, classification, etiology, pathogenesis, morphological characteristics, complications, outcomes, causes of death.
76. Lung cancer. Etiology and pathogenesis. Precancerous conditions. Macro- and microscopic forms. Patterns of metastasis.
77. Chronic gastritis. Causes and mechanism of development. Types of chronic gastritis in etiology and morphology, their characteristics. The importance of chronic gastritis in the occurrence of stomach cancer.
78. Peptic ulcers of the stomach and duodenum. Etiological role of *H. pylori*, pathogenesis. Pathological anatomy in the stage of exacerbation and remission. Distinction of an ulcer from erosion. Complications.
79. Cancer of the stomach. Etiology and pathogenesis. Precancerous conditions. Macroscopic forms and histological types. Features of metastasis.
80. Nonspecific ulcerative colitis. Causes, pathogenesis, pathological anatomy, complications.
81. Crohn's disease. Causes, pathogenesis, pathological anatomy, complications.
82. Colon cancer. Precancerous diseases. Macroscopic forms and histological types of colorectal cancer. Patterns of metastasis.
83. Appendicitis. Etiology, pathogenesis, classification, morphological characteristics, complications.
84. Massive progressive necrosis (toxic degeneration) of the liver. Etiology, pathogenesis, pathological anatomy, complications, outcomes.
85. Fatty hepatitis (steatosis) of the liver. Etiology, pathogenesis, pathological anatomy, complications, outcomes. The role of alcohol in the development of fatty hepatitis.
86. Acute viral hepatitis. Etiology, epidemiology, pathogenesis. Morphological characteristics. Clinical and morphological forms. Outcomes.
87. Chronic viral hepatitis. Etiology, pathogenesis. Morphological characteristics. Signs of activity. Outcomes, prognosis.
88. Liver cirrhosis. Etiology, pathogenesis. Classification. Morphological signs of liver cirrhosis. Extrahepatic changes. Complications and causes of death.
89. Acute glomerulonephritis. Classification, etiology, pathogenesis, morphological characteristics, complications, outcomes.
90. Subacute glomerulonephritis. Classification, etiology, pathogenesis, morphological characteristics, complications, outcomes.
91. Chronic glomerulonephritis. Classification, etiology, pathogenesis, morphological characteristics, outcomes.
92. Non-inflammatory glomerulopathies. Etiology, pathogenesis, morphological characteristics, outcomes of diseases that constitute the essence of the primary nephrotic syndrome.
93. Chronic renal failure. Definition, etiology, pathogenesis, stages, morphological characteristics.
94. Acute renal failure. Causes and pathogenesis. Stages. Morphological characteristics. Complications. Outcomes and causes of death.
95. Amyloidosis of the kidneys (amyloid nephrosis). Causes, pathogenesis, stages and their morphological characteristics, complications, outcomes.

96. Pyelonephritis and urinary tract infections. Definition, classification, etiology, predisposing factors, pathways of infection, pathogenesis, morphological characteristics, outcomes, complications.
97. Benign hyperplasia and prostate cancer. Causes, pathogenesis, morphological characteristics, complications.
98. Tumors of the testicles. Classification. Morphology. Metastasis.
99. Endocervicosis (pseudo-erosion) and cervical cancer. Risk factors, classification, background diseases, morphological characteristics, metastasis. The value of the transformation zone.
100. Endometriosis. Classification by localization. Pathogenetic theories. Morphology of endometriosis of the uterus (adenomyosis) and ovaries. Prognosis.
101. Glandular hyperplasia and endometrial cancer. Classification, risk factors, morphological characteristics. Metastasis.
102. Tumors of the breast. Precancerous conditions. Classification. Morphological characteristics. Patterns of metastasis.
103. Tumors of the ovaries. Classification. Morphological characteristics. Features of metastasis of malignant neoplasms.
104. Gestosis. Risk factors. Causes and pathogenesis. Clinical manifestations. Classification. Morphological changes in the organs. Influence on the fetus. Causes of death of a woman.
105. Ectopic pregnancy. Classification by localization. Causes. Morphological diagnostics. Complications. Causes of death of a woman.
106. Spontaneous abortion and premature birth. Definitions. Causes and risk factors. Morphological characteristics of the material obtained after spontaneous abortion, and the purpose of its study.
107. Trophoblastic disease (bladder skein, chorion carcinoma). Causes, morphological characteristics. Metastasis of chorion carcinoma.
108. Goiter (struma). Definition. Classification. Causes and mechanism of development. Morphology. Complications and causes of death.
109. Diffuse toxic goiter. Etiology and pathogenesis. Clinical manifestations. Macro- and microscopic picture of the thyroid gland and changes in other organs. Causes of death.
110. Thyroiditis. Etiology. Pathogenesis. Classification. Morphology. Outcomes.
111. Tumors of the thyroid gland. Classification. Morphological characteristics.
112. Tumors of the adrenal glands. Classification, morphological characteristics. Appropriate clinical syndromes.
113. Diabetes mellitus. Etiology, pathogenesis, classification, morphological characteristics, complications, causes of death.
114. Organ-specific skin tumors. Classification, morphological characteristics.
115. HIV infection. Epidemiology, etiology, pathogenesis, stages of the disease and their morphological characteristics, complications, causes of death. AIDS-marker diseases.
116. Acute respiratory viral infections. Flu. Etiology and pathogenesis. Clinical and morphological forms and their characteristics. Complications. Causes of death.
117. Typhoid fever. Etiology and pathogenesis. Morphological characteristics of local and general changes. Complications.
118. Dysentery (shigellosis). Etiology and pathogenesis. Morphological characteristics of local and general changes. Complications.
119. Cholera. Etiology and pathogenesis. Clinical and morphological stages and their characteristics. Complications. The concept of especially dangerous infections.
120. Meningococcal infection. Etiology and pathogenesis. Morphological characteristics of various forms. Complications. Causes of death.

121. Diphtheria. Etiology and pathogenesis. Morphological characteristics of local and general changes. Clinical and morphological classification. Complications. Causes of death.
122. Measles. Etiology and pathogenesis. Morphological characteristics of local and general changes. Complications.
123. Scarlet fever. Etiology and pathogenesis. Morphological characteristics of local and general changes. Complications.
124. Pest. Etiology and pathogenesis. Forms and their characteristics. Complications. Causes of death. The concept of especially dangerous infections.
125. Anthrax. Etiology and pathogenesis. Forms and their characteristics. Complications. Causes of death.
126. Primary tuberculosis. Etiology and pathogenesis of tuberculosis. Morphological manifestations. Variants.
127. Hematogenous tuberculosis. Etiology and pathogenesis of tuberculosis. Varieties of hematogenous tuberculosis and their morphological characteristics.
128. Secondary tuberculosis. Etiology and pathogenesis of tuberculosis. Forms of secondary tuberculosis and their morphological characteristics.
129. Syphilis. Etiology, epidemiology and pathogenesis. Periods of the disease and their morphology. Visceral syphilis. Congenital syphilis.
130. 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. The concept of the syndrome of a systemic inflammatory response (SIRS).