

MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
EDUCATIONAL INSTITUTION
GOMEL STATE MEDICAL UNIVERSITY
Department of Pathological Anatomy

APPROVED

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Pathological anatomy examination questions for 3rd-year students

1. Pathological anatomy as a medical science: definition, goals, objectives, and methods.
2. Autopsy: clinical and anatomical analysis, importance in medical practice, and legal aspects.
3. Biopsy: definition, types, and methods for studying biopsy specimens. The value of modern morphological methods (histochemistry, immunohistochemistry, electron microscopy) in the life-time diagnosis of diseases.
4. Pathology of the cell nucleus: changes in the structure, size, shape, and number of nuclei; structure and size of the nucleoli; nuclear membrane; pathology of mitosis; chromosomal aberrations and chromosomal diseases.
5. Parenchymal protein degenerations (dystrophies). Definition. Classification. General mechanisms of development of degenerative processes.
6. Parenchymal lipid degenerations (lipidosis). Etiology. Pathogenesis. Morphology. Clinical examples.
7. Parenchymal carbohydrate degenerations. Etiology. Pathogenesis. Morphology. Clinical examples.
8. Storage diseases: Gaucher's disease, Niemann-Pick disease, Pompe's disease, McArdle disease, Gierke disease.
9. Mesenchymal degenerations (dystrophies). Definition. Classification. General mechanisms of development of degenerative processes.
10. Muroid and fibrinoid swelling. Etiology. Pathogenesis. Morphology. Clinical examples. Outcomes.
11. Hyalinosis. Classification. Etiology. Pathogenesis. Morphology. Clinical examples.
12. Amyloidosis. Classification. Etiology. Pathogenesis. Morphology. Methods of detection and staining. Outcomes.
13. Obesity, cachexia. Definition. Classification. Etiology. Pathogenesis. Morphology. Staining.
14. Pathology of proteinogenic (tyrosinogenic) pigments (melanin): hyperpigmentation and hypopigmentation.
15. Pathology of hemoprotein-derived (hemoglobinogenic) pigments. Hemosiderosis. Etiology. Pathogenesis. Morphology. Staining. Clinical examples. Outcomes.

16. Hemochromatosis. Porphyria. Etiology. Pathogenesis. Morphology. Staining. Clinical examples. Outcomes.
17. Pathology of bilirubin metabolism. Jaundice. Etiology. Pathogenesis. Morphology. Clinical examples.
18. Pathologic calcification. Classification. Localization. Causes. Morphology. Outcomes.
19. Disturbances of nucleoproteins metabolism. Gout. Metabolic disorders of copper. Morphology. Clinical examples. Outcomes.
20. Necrosis. Apoptosis. Definition. Etiology. Nuclear and cytoplasmic changes. Classification. Outcomes. Difference between apoptosis and necrosis.
21. Gangrene. Definition. Etiology. Classification. Clinical examples.
22. Pressure ulcers. Sequester. Definitions. Etiology. Clinical examples.
23. Death. Medical definition. Difference between clinical and biological death. Clinical and physiological criteria.
24. Arterial hyperemia. Definition. Classification. Etiology. Clinical examples. Outcomes.
25. Venous congestion. Definition. Classification. Etiology. Clinical examples. Outcomes.
26. Ischemia. Definition. Classification. Etiology. Clinical examples. Outcomes.
27. Bleeding and hemorrhage. Definition. Classification. Etiology. Clinical examples. Outcomes.
28. Edema and dehydration. Definition. Classification. Etiology. Clinical examples. Outcomes.
29. Infarction. Definition. Classification. Etiology. Clinical examples. Outcomes.
30. Thrombosis. Definition. Pathophysiology. Thrombus morphology. Etiology. Clinical examples. Outcomes.
31. Embolism. Definition. Classification. Etiology. Clinical examples. Outcomes.
32. Disseminated intravascular coagulation (DIC). Definition. Pathophysiology. Etiology. Clinical examples. Outcomes. Blood stasis. Sludge phenomenon.
33. Exudative inflammation. Definition. Classification. Pathophysiology.
34. Serous inflammation. Definition. Classification. Pathophysiology. Etiology. Morphology. Clinical examples. Outcomes.
35. Fibrinous inflammation. Definition. Classification. Pathophysiology. Etiology. Morphology. Clinical examples. Outcomes.
36. Purulent (suppurative) inflammation. Definition. Classification. Pathophysiology. Etiology. Morphology. Clinical examples. Outcomes.
37. Catarrhal inflammation. Definition. Pathophysiology. Etiology. Morphology. Clinical examples. Outcomes.
38. Putrid, hemorrhagic and mixed inflammation. Definition. Pathophysiology. Serous inflammation. Etiology. Morphology. Clinical examples. Outcomes.
39. Productive (proliferative) inflammation. Definition. Classification. Pathophysiology. Etiology. Morphology. Clinical examples. Outcomes.
40. Interstitial inflammation. Definition. Classification. Pathophysiology. Etiology. Morphology. Clinical examples. Outcomes.

41. Granulomatous inflammation. Definition. Classification. Pathophysiology. Etiology. Morphology. Clinical examples. Outcomes.
42. Specific granulomas in tuberculosis, syphilis, leprosy, scleroma, sarcoidosis. Morphology. Outcomes.
43. Type 1 hypersensitivity reaction. Pathophysiology. Etiology. Morphology. Clinical examples. Outcomes.
44. Type 2 hypersensitivity reaction. Pathophysiology. Etiology. Morphology. Clinical examples. Outcomes.
45. Type 3 hypersensitivity reaction. Pathophysiology. Etiology. Morphology. Clinical examples. Outcomes.
46. Type 4 hypersensitivity reaction. Pathophysiology. Etiology. Morphology. Clinical examples. Outcomes.
47. Autoimmune diseases. Definition. Classification. Etiology. Morphology. Clinical examples. Outcomes.
48. Immunodeficiency disorders. Definition. Classification. Etiology. Clinical examples.
49. Acquired immunodeficiency syndrome (AIDS). Definition. Pathophysiology. Etiology. Morphology. Outcomes. Opportunistic infections associated with HIV.
50. Regeneration. Definition. Pathophysiology. Classification. Clinical examples.
51. Hypertrophy. Definition. Pathophysiology. Classification. Clinical examples.
52. Hyperplasia. Definition. Pathophysiology. Classification. Clinical examples.
53. Metaplasia. Definition. Pathophysiology. Classification. Clinical examples.
54. Atrophy. Definition. Pathophysiology. Classification. Clinical examples.
55. Dysplasia. Definition. Pathophysiology. Classification. Clinical examples.
56. Sclerosis and calcification. Definition. Pathophysiology. Classification. Clinical examples.
57. Tumors. Definition. Classification. Properties of tumors. Cellular and tissue atypism. Tumor growth. Examples of tumors with different types of growth.
58. Theories of carcinogenesis. Metastasis. Pathways and stages of metastasis. Clinical aspects of neoplasia. Diagnosis of cancer.
59. Fibrous and adipose tissue tumors. Definition. Classification. Types and localization. Pathological features.
60. Muscle and nervous tissue tumors. Definition. Classification. Types and localization. Pathological features.
61. Tumors of blood and lymphatic vessels. Tumors of synovial tissue. Definition. Classification. Types and localization. Pathological features.
62. Bone and cartilage tissue tumors. Definition. Classification. Types and localization. Pathological features.
63. Tumors from squamous epithelium: papilloma, squamous cell carcinoma, basal cell carcinoma. Definition. Classification. Most frequent localization. Pathological features.
64. Adenoma and adenocarcinoma. Definition. Classification. Types and localization. Pathological features.
65. Urothelial tumors. Definition. Classification. Most frequent localization. Pathological features.

66. Neuroendocrine tumor and carcinoma. Carcinoid. Definition. Classification. Most frequent localization. Pathological features.

67. Melanocytic tumors: nevus and melanoma. Definition. Classification. Types and localization. Pathological features. Metastatic pathways.

68. Mesothelioma. Teratoma. Definitions. Classification. Types and localization. Pathological features.

69. Lung cancer. Carcinogenesis. Precancerous conditions. Classification. Macroscopic forms. Histological types. Metastatic pathways. Complications and causes of death.

70. Esophageal cancer. Carcinogenesis. Precancerous conditions. Classification. Macroscopic forms. Histological types. Metastatic pathways. Complications and causes of death.

71. Stomach cancer. Carcinogenesis. Precancerous conditions. Classification. Macroscopic forms. Histological types. Metastatic pathways. Complications and causes of death.

72. Colon cancer. Carcinogenesis. Precancerous conditions. Classification. Macroscopic forms. Histological types. Metastatic pathways. Complications and causes of death.

73. Uterine cancer. Carcinogenesis. Precancerous conditions. Classification. Macroscopic forms. Histological types. Metastatic pathways. Complications and causes of death.

74. Cervical cancer. Carcinogenesis. Precancerous conditions. Classification. Macroscopic forms. Histological types. Metastatic pathways. Complications and causes of death.

75. Breast cancer. Carcinogenesis. Precancerous conditions. Classification. Macroscopic forms. Histological types. Metastatic pathways. Complications and causes of death.

76. Thyroid cancer. Carcinogenesis. Precancerous conditions. Classification. Macroscopic forms. Histological types. Metastatic pathways. Complications and causes of death.

77. Kidney cancer. Carcinogenesis. Precancerous conditions. Classification. Macroscopic forms. Histological types. Metastatic pathways. Complications and causes of death.

78. Liver cancer. Carcinogenesis. Precancerous conditions. Classification. Macroscopic forms. Histological types. Metastatic pathways. Complications and causes of death.

79. Pancreas cancer. Carcinogenesis. Precancerous conditions. Classification. Macroscopic forms. Histological types. Metastatic pathways. Complications and causes of death.

80. Prostate cancer. Carcinogenesis. Precancerous conditions. Classification. Macroscopic forms. Histological types. Metastatic pathways. Complications and causes of death.

81. Acute and chronic leukemias. Definition. Classification. Clinical and morphological manifestations. Complications and causes of death.

82. Multiple myeloma. Definition. Classification. Clinical and morphological manifestations. Complications and causes of death.
83. Lymphomas. Definition. Classification. Clinical and morphological manifestations of Hodgkin and non-Hodgkin's lymphomas. Complications and causes of death.
84. Anemia: definition, classification, etiology. Morphology of anemia due to blood loss, impaired hematopoiesis (pernicious anemia), and hemolytic anemia. Morphology.
85. Atherosclerosis. Definition. Etiology. Pathogenesis. Classification. Morphology. Microscopic stages of atherosclerosis. Clinical forms of atherosclerosis. Complications and outcomes.
86. Arterial hypertension. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.
87. Ischemic heart disease. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes. Morphology of chronic heart failure.
88. Myocardial infarction. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.
89. Cerebrovascular diseases. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.
90. Rheumatic heart disease. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes. Rheumatic myocarditis. Rheumatic granuloma.
91. Periarteritis nodosa. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.
92. Rheumatoid arthritis. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.
93. Sjogren's syndrome. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.
94. Systemic lupus erythematosus (SLE). Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.
95. Ankylosing spondylitis. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.
96. Systemic scleroderma (SSD). Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.
97. Dermatomyositis. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.
98. Acute bronchitis. Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.
99. Bronchopneumonia. Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.
100. Lobar pneumonia. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.
101. Interstitial pneumonia. Acute respiratory distress syndrome (ARDS). Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.
102. Aspiration pneumonia. Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.

103. Hypostatic pneumonia. Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.

104. Chronic obstructive pulmonary disease (COPD). Chronic bronchitis. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.

105. Bronchiectasis. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.

106. Emphysema. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.

107. Bronchial asthma. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes. Morphological features in status asthmaticus.

108. Chronic interstitial lung diseases. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.

109. Diseases of esophagus. Esophagitis. Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.

110. Gastritis. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.

111. Peptic ulcer disease: gastric ulcer, duodenal ulcer. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.

112. Appendicitis. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.

113. Inflammatory bowel disease (IBD): ulcerative colitis, Crohn's disease. Differential diagnosis. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.

114. Hepatosis. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.

115. Autoimmune hepatitis. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.

116. Primary biliary cholangitis (PBC). Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.

117. Viral hepatitis. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes.

118. Liver cirrhosis. Definition. Etiology. Pathogenesis. Classification. Morphology. Complications and outcomes. Causes of death. Portal hypertension.

119. Classification of kidney diseases. Etiology. Pathogenesis. Proliferation of cells in the glomeruli. Nephrotic and nephritic syndromes. Acute tubular injury.

120. Postinfectious glomerulonephritis. Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.

121. IgA-nephropathy (Berger's disease). Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.

122. Rapidly progressive glomerulonephritis (RPGN): anti-GBM disease (Goodpasture syndrome), immune-complex-mediated glomerulonephritis, ANCA-associated vasculitis. Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.

123. Minimal change disease (lipoid nephrosis). Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.
124. Membranous glomerulonephritis. Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.
125. Membranoproliferative glomerulonephritis (MPGN). Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.
126. Focal segmental glomerulosclerosis (FSGS). Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.
127. Interstitial nephritis. Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.
128. Pyelonephritis. Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.
129. Hydronephrosis. Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.
130. Growth hormone pathology: acromegaly, nanism. Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations.
131. Adrenogenital syndrome. Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations.
132. Waterhouse-Friderichsen syndrome (WFS). Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations.
133. Addison's disease. Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations.
134. Cushing's syndrome. Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations.
135. Thyroid pathology. Goiter. Thyroiditis. Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations.
136. Diabetes mellitus. Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations. Causes of death of patients with diabetes mellitus.
137. Sepsis. Diagnostic criteria. SOFA score. Morphology. Clinical and anatomical forms of sepsis.
138. Viral respiratory infections: influenza, SARS-CoV-2. Definition. Etiology. Morphology of community-acquired viral pneumonias (CAVP). Complications and outcomes.
139. Viral respiratory infections: parainfluenza, adenovirus, RSV. Definition. Etiology. Morphology of community-acquired viral pneumonias (CAVP). Complications and outcomes.
140. Meningococcal infection. Definition. Etiology. Classification. Morphology. Complications and outcomes. Causes of death.
141. Diphtheria. Definition. Etiology. Morphology. Differential diagnosis of true and false croup. Complications and outcomes.
142. Scarlet fever. Definition. Etiology. Morphology. Complications of the first and second periods of the course of the disease.
143. Measles. Definition. Etiology. Morphology. Differences between chickenpox and measles. Complications and outcomes.

144. Typhoid fever. Definition. Etiology. Morphology of different stages of the disease. Complications and outcomes.

145. Cholera. Definition. Etiology. Morphology. Complications and outcomes. Causes of death.

146. Intestinal coli infection. Definition. Etiology. Morphology. Complications and outcomes.

147. Salmonellosis. Definition. Etiology. Classification. Morphology. Complications and outcomes.

148. Dysentery. Definition. Etiology. Classification. Morphology. Complications and outcomes. Causes of death. Morphological features of dysentery in children.

149. HIV-infection. Definition. Etiology. Pathogenesis. Morphology of different stages of the disease. The concept of opportunistic infections. AIDS. Causes of death.

150. Anthrax. Definition. Etiopathogenesis. Morphology. Clinical manifestations. Causes of death.

151. Plague. Definition. Etiopathogenesis. Morphology. Clinical manifestations. Causes of death.

152. Primary tuberculosis. Definition. Pathogenesis. Morphology. Primary tuberculosis complex. Complications and outcomes. Causes of death.

153. Hematogenous tuberculosis. Definition. Pathogenesis. Classification. Morphology. Miliary tuberculosis. Complications and outcomes. Causes of death.

154. Secondary tuberculosis. Definition. Pathogenesis. Classification. Morphology. Complications and outcomes. Causes of death.

155. Pathology of external female genital organs. Examples. Morphology. Complications and outcomes.

156. Cervicitis. Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations.

157. Cervical ectropion (cervical erosion). Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations. Complications and outcomes. Colposcopy.

158. Squamous cervical precursor lesions: CIN, SIL. Definition. Etiology. Pathogenesis. Morphology. Complications and outcomes.

159. Endometritis. Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations. Complications and outcomes.

160. Endometrial hyperplasia. Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations. Complications and outcomes.

161. Ectopic pregnancy. Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations. Complications and outcomes.

162. Hydatidiform mole (molar pregnancy). Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations. Complications and outcomes.

163. Hypertensive disorders of pregnancy (gestational nephropathy, preeclampsia, eclampsia). Definition. Etiology. Pathogenesis. Morphology (placental and renal changes). Clinical manifestations. Complications and outcomes.

164. Congenital malformations of the placenta, amnion, and umbilical cord. Etiology. Pathogenesis. Morphology. Clinical manifestations. Complications and outcomes.

165. Placental pathology. Definition. Etiology. Pathogenesis. Placental insufficiency: primary vs. secondary, acute vs. chronic. Placental inflammation: morphology based on infection route, effects on the fetus. Clinical manifestations.

166. Acute radiation syndrome (ARS). Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations. Complications and outcomes. Causes of death.

167. Chronic radiation syndrome (CRS). Definition. Etiology. Pathogenesis. Morphology. Clinical manifestations. Complications and outcomes. Causes of death.

168. Iatrogenic pathology. Definition. Examples. Morphology. Complications and outcomes. Causes of death.

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