

**“Approved”**  
**by Vice-Rector for Academic Affairs**  
**«Avicenna Tajik State Medical University»**  
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## **EXAM QUESTIONS FOR PATHOPHYSIOLOGY FOR STUDENTS OF 3-RD YEAR BACHELORS**

1. The subject and tasks of pathophysiology.
2. Methods of pathophysiology. Modeling, its types, capabilities, limitations.
3. Definition of the concepts of “health” and “disease”.
4. Criteria for distinguishing a disease from health.
5. The concept of a pathological condition, a pathological process, a pathological reaction, a typical pathological process.
6. Terminal states.
7. Clinical and biological deaths.
8. Outcomes of the disease.
9. Etiology, concept. The role of causes and conditions in the occurrence and development of diseases.
10. External pathogenic factors.
11. Internal pathogenic factors.
12. Pathogenesis, concept. The main link and vicious circles in the pathogenesis of diseases
13. The damaging effect of low temperatures. Causes.
14. Stages of hypothermia.
15. The damaging effect of high temperatures. Causes.
16. Stages of hyperthermia.
17. The pathogenic effect of the rays of the solar spectrum.
18. Local changes in the body under the influence of electric current.
19. General changes in the body under the influence of electric current.
20. Factors for determination of the pathogenic activity of electric current.
21. Mountain or altitude sickness. Causes. Pathogenesis.
22. Stages of mountain disease.
23. The mechanism of the pathogenic effect of high atmospheric pressure.
24. Caisson disease. Pathogenesis.
25. The concept of reactivity and resistance of the body.
26. Types and forms of reactivity .
27. Types and forms of the resistance.
28. Biological reactivity. Definition Examples.

29. Individual reactivity. Definition Kinds.
30. The importance of age in the occurrence and development of diseases.
31. The importance of gender in the occurrence and development of diseases.
32. The value of the constitution in human pathology.
33. Group reactivity. Definition Kinds.
34. Allergy, concept. General characteristics of allergies.
35. Exoallergens. Species, origin, nature.
36. Endoallergens. Classification.
37. Sensitization concept, types.
38. Specific and non-specific hyposensitization.
39. Classification of allergic reactions by time.
40. Allergy Classification by Jell and Coombs.
41. Allergic reactions of the delayed type.
42. Stages of the allergic reactions.
43. Allergic reactions of an immediate type.
44. Anaphylaxis. The phenomenon of Artyus - Sakharov.
45. The main manifestations of the acute phase response.
46. APR mediators, origin and their role in the development of change.
47. Fever. Concept. Causes.
48. Exogenous pyrogenic substances, their mechanism of action.
49. Endogenous pyrogenic substances, their mechanism of action.
50. First stage of the fever. Appearance.
51. Second stage of the fever. Development
52. Third stage of the fever. Development .
53. Differences of fever from hyperthermia.
54. Changes in heat transfer and heat production at different stages of fever.
55. Changes in physiological functions and metabolism during fever.
56. The protective significance of fever.
57. The pathogenic significance of fever.
58. Inflammation. Definition .Exogenous factors of the inflammation.
59. Endogenous factors of the inflammation.
60. Local signs of inflammation, their pathogenesis.
61. General signs of inflammation, their pathogenesis.
62. Alteration. The mechanism of primary and secondary damage in inflammation.
63. Metabolic changes and physico-chemical changes in the focus of acute inflammation.
64. Vascular reactions with inflammation. Stages.
65. Mechanical development short spasm of arterioles in the inflammation.
66. Mechanical development of arterial heperemia in inflammation.
67. Etiology of transforms of arterial hyperemia to venous type in inflammation.

68. Mechanical development of prestasis and stasis in inflammation.
69. Exudation. Definition The mechanism of development.
70. Types and properties of exudates.
71. The difference between exudate and transudate. The role of exudation in inflammation.
72. Proliferation. The mechanisms of proliferation processes.
73. Biological concept of the inflammation.
74. Mediators of inflammation.
75. Humoral mediators of inflammation.
76. Phagocytosis in the focus of inflammation, its types, stages and mechanisms.
77. Emigration of leukocytes during inflammation, stages.
78. Positive water balance. Definition The main types.
79. Negative water balance. Definition The main types.
80. Hyperosmolar hypohydration. Causes. Pathogenetic features of manifestation, consequences.
81. Isoosmolar hypohydration. Causes. Pathogenetic features of manifestation, consequences, principles of correction
82. Hypoosmolar hypohydration. Causes. Pathogenetic features of manifestation, consequences
83. Hyperosmolar hyperhydration. Causes. Pathogenetic features of manifestation, consequences.
84. Isoosmolar hyperhydration. Causes. Pathogenetic features of manifestation, consequences.
85. Hypoosmolar hyperhydration. Causes. Pathogenetic features of manifestation, consequences.
86. Swelling (Edema) and dropsy. Definition Kinds.
87. The main pathogenetic factors in the development of edema.
88. Classification of edema by pathogenesis .
89. Classification of edema by etiology.
90. Hypoxia. Concept. Types of hypoxia.
91. Exogenous hypoxia. Etiology. Pathogenesis.
92. Respiratory-type hypoxia. Etiology. Pathogenesis.
93. Hemic hypoxia. Etiology. Pathogenesis.
94. Tissue-type hypoxia. Etiology. Pathogenesis.
95. Circulatory type of hypoxia. Etiology. Pathogenesis.
96. Emergency adaptive reactions in hypoxia.
97. Long-term adaptive reactions in hypoxia.
98. Anemia. Definition. Development.
99. The principles of classification of anemia.
100. Iron deficiency anemia. Reasons.

101. The mechanism of development iron deficiency anemia . The picture of peripheral blood.
102. Hemolytic anemia. Kinds. Causes.
103. Mechanisms of hemolytic anemia development . The picture of peripheral blood.
104. B-12 and folic acid deficiency anemia. Causes.
105. The mechanism of B-12 and folic acid deficiency anemia development. The picture of peripheral blood.
106. Causes and stages of development of acute posthemorrhagic anemia.
107. Circulatory failure. Concept. Types.
108. Heart failure. Concept. Kinds.
109. An overload form of heart failure. Kinds. Causes.
110. Compensatory mechanisms in heart failure.
111. Arrhythmias of the heart. Concept. Kinds.
112. Etiology of arrhythmia.
113. Sinus tachycardia.
114. Sinus bradycardia.
115. Extrasystole. Definition Kinds.
116. Arterial hypertension. Definition .Kinds.
117. Endocrinal arterial hypertension. Kinds.
118. Renoparenchymal arterial hypertension.
119. Vasorenal arterial hypertension.
120. Arterial hypotension. Reasons.
121. Disorders of appetite. Kinds. Causes.
122. Disorder of digestion in the oral cavity. Causes.
123. Hyposalivation. Causes. Outcomes .
124. Hypersalivation. Causes. Outcomes .
125. Disorder of the barrier function of the intestine; dysbacteriosis.
126. Disorder of the duodenum.
127. Disorder of the intestinal wall( membrane)
128. Disorder of the base metabolism. Types, causes.
129. Starvation. Definition of a concept. Kinds.
130. Periods of complete starvation.
131. Hypo-, and vitamin deficiencies, their manifestations.
132. Diabetes mellitus. Kinds. Etiology.
133. Liver failure. Definition Kinds.
134. Mechanical jaundice. Reasons, main manifestations.
135. Cholemic and acholic syndromes.Development.
136. Parenchymal jaundice. Kinds. Causes, main manifestations.
137. Hemolytic jaundice. Causes, main manifestations.

138. Acute renal failure. Concept. Etiology.
139. Acute renal failure. Stages.
140. Chronic renal failure. Concept. Etiology.
141. Chronic renal failure. Stages.
142. Renal manifestations of nephropathy.
143. Changes in daily diuresis. Causes.
144. Hyperfunction of the anterior pituitary gland. Causes, development.
145. Hypofunction of the anterior pituitary gland. Causes, development.
146. Hyperthyroidism, causes. Signs .
147. Hypofunction of the thyroid gland causes. Signs .
148. Stress and disease adaptation.
149. Pain, concept. The biological significance of pain.
150. Types of pain. General characteristics.