**List of questions for I totalization**

**General Medicine II**

**General nosology.Typical pathological cellular processes. Typical pathological tissular processes**

1. **General nosology**
2. What studies etiology?
3. What factors are considered endogenous cause of disease?
4. What factors are considered exogenous causes of diseases?
5. What pathological processes can be caused by endogenous causes?
6. What is the role of cause in disease development?
7. What factors influence specificity of disease?
8. What factors influence the features of disease evolution?
9. In what disorders the cause plays only a trigger effect?
10. In what disorders the presence of cause is compulsory during all disease development?
11. What exogenous conditions can contribute to onset of disease?
12. What effects play favorable conditions for the body?
13. What effects play unfavorable conditions for the body?
14. What endogenous conditions can influence the action of harmful factors?
15. What exogenous conditions can influence the action of harmful factors?
16. What conditions disturb the metabolic processes and can contribute to disease development?
17. What factors enhance probability of disease development when the cause is acting?
18. What the role of conditions in disease development?
19. What studies general pathogeny?
20. What are the relations between local and general injuries in pathogeny of different diseases?
21. What represent the pathogenetic factors in pathologic process?
22. What is the chain of cause-effects in pathogeny of diseases?
23. What represents the main pathogenetic loop?
24. What is the role of main pathogenetic loop in disease development?
25. What represents etiotropic, pathogenetic and symptomatic treatment of disorders?
26. How the specific and non-specific prophylaxis of diseases is performed?
27. What are the characteristics of physiological reactions of the body?
28. What are the characteristics of pathological reactions of the body?
29. What reactions can be considered adaptative, protective, compensatory and reparative?
30. What are periods of disease development?
31. What are the characteristics of every stages of disease development?
32. What are the variants for disease resolution (ending)?
33. What represents pathological process?
34. What are primary sanogenetic mechanisms?
35. What are secondary sanogenetic mechanisms?
36. What represents vicious circle in pathogeny of diseases?
37. What are the characteristics of vicious circle in pathogeny of diseases?
38. **Cell injuries**
39. What changes at cellular level can be considered cellular injuries?
40. What cell injuries can be considered primary and secondary?
41. What primary injuries cause hypoxia, reactive oxygen species, high or low temperature, electrical current, phospholipases?
42. What cell injuries cause hyperosmolarity and hypoosmolarity of interstitial space?
43. What primary injury develops at interaction of antibodies with cell antigens and compliment activation?
44. What is the pathogenetic chain of cell death in hypoxia?
45. What is the pathogenetic chain of cell death in oxidative stress?
46. What is the pathogenetic chain of cell death at action of low temperature?
47. What is the pathogenetic chain of cell death in high temperature?
48. What is the pathogenetic chain of cell death triggered by lipolytic enzymes?
49. What is the pathogenetic chain of cell death in hyperosmolar environment?
50. What is the pathogenetic chain of cell death in hypoosmolar environment?
51. What is the pathogenetic chain of cell death triggered by continuous electrical current?
52. What is the pathogenetic chain of cell death caused by antibodies?
53. The presence in the blood of what intracellular enzymes are markers of injuries at the level of liver, pancreas, heart and epithelial cell of biliary tract?
54. How the intra-extracellular electrolyte ratio is changed at disintegration of cytoplasmic membrane?
55. What is the effect of action of electrical current on excitable cells?
56. What endogenous enzymes can trigger injuries of cytoplasmic membrane?
57. What cells can release harmful enzymes for other cells?
58. What electrolytic dyshomeostases develop during cell injuries?
59. What is the normal ratio of intra-to extracellular concentration of potassium ions?
60. What are the effects of increased level of potassium ions in the interstitium?
61. What is the normal ratio of intra-to extracellular concentration of sodium ions?
62. What is the effect of increased sodium ions concentration in the interstitial space?
63. What is the effect of reduced sodium ions concentration in the interstitial space?
64. What pathological process can reduce the electric resistance of cytoplasmic membrane?
65. What is the normal ratio of calcium ions concentration in the cell hyaloplasm and interstitial space and in the cell hyaloplasm and endoplasmic reticulum?
66. What intracellular enzymes are activated by increased level of calcium ions in the cell hyaloplasm?
67. What intracellular enzymes are activated at destruction of membrane of endoplasmic reticulum?
68. What are final effects of activation of phospholipases, ATP-ases, endonucleases and cell proteases?
69. What can be the causes of intracellular acidosis?
70. What are the consequences of decompensated cell acidosis?
71. What pathological processes can decouple the process of oxidation and phosphorylation in the mitochondria?
72. What the final effects of decoupling of mitochondrial oxidation and phosphorylation?
73. What are the consequences of energy deficiency in the cell?
74. What are the consequences of lysosomal membrane destabilization?
75. What are factors which stabilize and factors which destabilize lysosomal membrane?
76. What pathological processes lead to formation of reactive oxygen species?
77. What substances refer to free radicals?
78. What substances represent the endogenous antioxidant system?
79. What are the effects of reactive oxygen species?
80. What are the final effects of action of free radicals on cells?
81. What is the definition of cell injury?
82. What is the definition of cellular pathologic process?
83. What does represent “point of no return“ in the course of cell injury?
84. What does represent “point of no return“ in the course of cell injury?
85. What does represent “point of no return“ in the course of cell injury?
86. What intracellular electrolytic dyshomeostasis is found in cells which started necrosis?
87. What intracellular electrolytic dyshomeostasis is found in cells which started necrosis?
88. What intracellular electrolytic dyshomeostasis is found in cells which started necrosis?
89. What is the pathogenetic role of intracellular sodium dyshomeostasis in development of cell necrosis?
90. What is the pathogenetic role of intracellular potassium dyshomeostasis in development of cell necrosis?
91. What is the pathogenetic role of intracellular calcium dyshomeostasis in development of cell necrosis?
92. What is the pathogenetic role of intracellular calcium dyshomeostasis in development of cell necrosis?
93. What is the pathogenetic role of intracellular calcium dyshomeostasis in development of cell necrosis?
94. What is the pathogenetic role of mitochondrial damage in development of cellular pathological processes?
95. What is the pathogenetic role of mitochondrial damage in development of cellular pathological processes?
96. What is the pathogenetic role of mitochondrial damage in development of cellular pathological processes?
97. What intracellular dyshomeostasis is found in ischemic cells?
98. What intracellular dyshomeostasis is found in ischemic cells?
99. What is the pathogeny of hypoxic cell injury?
100. What is the pathogeny of hypoxic cell injury?
101. What is the pathogeny of hypoxic cell injury?
102. What is the pathogeny of hypoxic cell injury?
103. What are pathogenetic factors of hypoxic cell injuries?
104. What are pathogenetic factors of hypoxic cell injuries?
105. What are pathogenetic factors of hypoxic cell injuries?
106. What are pathogenetic factors of hypoxic cell injuries?
107. What are pathogenetic factors of hypoxic cell injuries?
108. What is the pathogenetic role of reactive oxygen species (ROS) in development of cellular pathologic processes?
109. What is the pathogenetic role of reactive oxygen species (ROS) in development of cellular pathologic processes?
110. What is the pathogenetic role of reactive oxygen species (ROS) in development of cellular pathologic processes?
111. **Cell dystrophy**
112. What are the causes of cell metabolic disorders?
113. What is the pathogenetic chain for development of fatty liver in persistent hypoglycemia?
114. What is the pathogenetic chain for development of fatty liver in persistent hyperglycemia?
115. What cellular pathological process can trigger cell dystrophy?
116. What are specific manifestations for cell dystrophy?
117. What are the causes for liver lipid metabolic disorders?
118. What is the pathogenetic chain for development of lipid dystrophy in long-lasting inanition?
119. What are possible consequences of cell dystrophy?
120. What are the general factors of congenital dystrophies?
121. What are the general factors of congenital dystrophies?
122. What are the general factors of acquired dystrophies?
123. What are the general factors of acquired dystrophies?
124. What is the main pathogenetic link in pathophysiological mechanism of fatty liver?
125. What are the main pathogenetical mechanisms of fatty liver?
126. What are the main pathogenetical mechanisms of fatty liver?
127. What is one of the pathogenetical mechanisms in development of fatty liver in case of starvation?
128. What are the main pathogenetical mechanisms of fatty liver in malnutrition?
129. What is the main pathogenetic link of cell dystrophy in condition of ATP depletion?
130. What is the main pathogenetic link of cell dystrophy under the action of catecholamine’s excess?
131. What is the pathogenetic mechanism of cell dystrophy in condition of acidosis?
132. What is the pathogenetic mechanism characteristic for glycogen storage disease?
133. What is the pathogenetic mechanism characteristic for cell dystrophy under action of ROS (reactive oxygen species)?
134. What is the pathogenetic mechanism of cell dystrophy in condition of intracellular acidosis?
135. What are the pathogenetical factors of cell dystrophy in condition of catecholamine excess?
136. **Apoptosis**
137. Whatcells in the human bodiesare subjected to apoptosis?
138. What are manifestations of apoptosis in the initial period?
139. What factors represent positive apoptotic signals and negative apoptotic signals for initiation of apoptosis?
140. For what cells lack of growth factors, thyroid stimulation hormone, ACTH, estrogens, androgens represent a specific negative signals for initiation of apoptosis?
141. What condition is compulsory for complete evolution of apoptosis?
142. What are manifestations of apoptosis in the middle stage?
143. What are ending phenomena in apoptosis?
144. What are the characteristics of apoptosis?
145. What are the characteristics of apoptosis?
146. What are the characteristics of apoptosis?
147. Apoptosis is a programmed cell death, which can be initiated in physiological and pathological situations. What are the conditions for physiological apoptosis?
148. Apoptosis is a programmed cell death, which can be initiated in physiological and pathological situations. What are the conditions for physiological apoptosis?
149. Apoptosis is a programmed cell death, which can be initiated in physiological and pathological situations. What are the conditions for pathological apoptosis?
150. Apoptosis is a programmed cell death, which can be initiated in physiological and pathological situations. What are the conditions for pathological apoptosis?
151. What are the pathogenetic factors responsible for initiation of apoptosis?
152. What are the main pathogenetic mechanisms of intrinsic pathway of apoptosis?
153. What are the important pathogenetic factors for the initiation of intrinsic pathway of apoptosis?
154. What are the important pathogenetic factors for the initiation of extrinsic pathway of apoptosis?
155. What is the pathogenetic factor that inhibits extrinsic pathway of apoptosis?
156. What are the features of apoptosis?
157. What are the features of apoptosis?
158. What are the features of apoptosis?
159. What is the mechanism of apoptosis initiated by DNA damage?
160. What are the features of apoptosis?
161. What are the features of apoptosis?
162. What is the feature of apoptosis?
163. What are the features of apoptosis?
164. What are the pathophysiologic mechanisms of defective apoptosis?
165. What are the pathophysiologic mechanisms of defective apoptosis?
166. What are the pathophysiologic mechanisms of reduced apoptosis?
167. What are the pathophysiologic factors of reduced apoptosis?
168. What disorders are related with reduced apoptosis?
169. What disorders are related with reduced apoptosis?
170. What disorders are related with increased apoptosis?
171. What disorders are related with increased apoptosis?
172. **Necrosis**
173. What represents necrosis?
174. What is the main pathogenetic loop of necrosis in injury of cytoplasmic membrane?
175. What is the main pathogenetic loop of necrosis in injury of mitochondria?
176. What is the main pathogenetic loop of necrosis in oxidative stress?
177. What are local consequences of necrosis?
178. What are general consequences of necrosis?
179. What biochemical tests can be used for diagnosis of tissue in which necrosis occurred?
180. What are the characteristics of necrosis?
181. What are the characteristics of necrosis?
182. What are the characteristics of necrosis?
183. What is the pathogenetic role of reactive oxygen species (ROS) in development of cell necrosis?
184. What is the pathogenetic role of reactive oxygen species (ROS) in development of cell necrosis?
185. What is the pathogenetic role of reactive oxygen species (ROS) in development of cell necrosis?
186. What is the pathogenetic role of reactive oxygen species (ROS) in development of cell apoptosis?
187. What is the medical definition of the general changes in the body which accompanies necrosis of tissues?
188. What proteins are elevated in the blood in acute phase-response?
189. What proteins are elevated in the blood in acute phase-response?
190. What is the pathogenesis of enhanced blood level of acute-phase proteins in necrosis?
191. **Tissular pathological processes**
192. What regenerative processes are possible in the cell at molecular level?
193. What regenerative processes are possible at cell organelle level?
194. What represents physiological regeneration?
195. What regeneration is considered to be homeostatic, adaptative, reparative, protective and compensatory?
196. What regeneration is quantitatively and qualitatively inadequate?
197. What represent anaplasia, metaplasia, dysplasia and sclerosis?
198. What represent hypertrophy and hyperplasia?
199. What physiological hypertrophy is considered adaptative, compensatory, functional?
200. What pathological hypertrophy is considered inflammatory, endocrine, neurotrophic and tumoral?
201. What atrophy is considered physiologic?
202. What atrophy can be considered functional, involutive, senile, posthypertrophic and endocrine?
203. What atrophy is considered pathologic?
204. What represent sclerosis?
205. What factors trigger sclerosis in the tissue?
206. What is the pathogenetic chain of sclerosis triggered by cell injury?
207. In what organs irreversible cell injuries lead to sclerosis?
208. What is the source of conjunctive tissue in pathogeny of sclerosis?
209. What is the mechanism of reducing excessive collagen fibers in the tissue?
210. What pathological processes lead to progressive sclerosis?
211. What are consequences of sclerosis?
212. What are principles of pathogenetic correction of sclerosis?
213. What are the pathogenetic factors which induce linked actions of mechanical sensors during hypertrophy?
214. What types of stimuli involve hypertrophy due to signaling downstream of G protein-coupled receptors pathway?
215. What contractile proteins undergo to switch from adult to fetal forms within hypertrophy?
216. Define the correct notion of the metaplasia?
217. What is the most common type of epithelial metaplasia?
218. What does Barrett esophagus represent?
219. What does connective tissue metaplasia represent?
220. How is explained the mechanisms of atrophy?
221. What kind of stimuli activate ubiquitin ligases leading to atrophy?
222. What kind of stimuli accelerate proteolysis leading to atrophy?
223. What are pathogenic mechanisms which explain autophagy in atrophy?
224. What are pathogenic mechanisms which explain autophagy in atrophy?