**Questions for 1st totalization, SIMU test (2024-2025)**

1. **What pathological process is provoked by endogenous cause?**
2. **What effects exert favorable conditions for the body?**
3. **What effects exert unfavorable conditions for the body?**
4. **What exogenous conditions could influence the action of harmful agents?**
5. **What is the role of the cause in disease appearance?**
6. **What is the role of conditions in the disease appearance**
7. **What is pathogenetic factor in pathological processes?**
8. **What is the pathogenetic chain in pathological processes?**
9. **What is the main link of pathogenesis?**
10. **What is the characteristic for body’s physiologic reaction**
11. **What is the characteristic for body’s physiologic reaction?**
12. **What is the characteristic for body’s pathologic reaction?**
13. **What are features of body’s pathologic reaction?**
14. **What reaction could be considered as compensatory?**
15. **What reaction could be considered as compensatory?**
16. **What reaction could be considered as protective?**
17. **What is adaptive reaction?**
18. **What is compensatory reaction?**
19. **What is protective reaction?**
20. **What is reparative reaction?**
21. **What is the pathological process?**
22. **What is the definition of cell injury?**
23. **What is the definition of cellular pathologic process?**
24. **What does represent “point of no return“ in the course of cell injury?**
25. **What does represent “point of no return“ in the course of cell injury?**
26. **What intracellular electrolytic dyshomeostasis is found in cells which started necrosis?**
27. **What is the pathogenetic role of intracellular sodium dyshomeostasis in development of cell necrosis?**
28. **What is the pathogenetic role of intracellular potassium dyshomeostasis in development of cell necrosis?**
29. **What is the pathogenetic role of intracellular calcium dyshomeostasis in development of cell necrosis?**
30. **What is the pathogenetic role of mitochondrial damage in development of cellular pathological processes?**
31. **What is the pathogenetic role of mitochondrial damage in development of cellular pathological processes?**
32. **What is the pathogenetic role of mitochondrial damage in development of cellular pathological processes?**
33. **What are the characteristics of apoptosis?**
34. **What are the characteristics of apoptosis?**
35. **What are the characteristics of necrosis?**
36. **What are the characteristics of necrosis?**
37. **What are the characteristics of necrosis?**
38. **What is the pathogeny of hypoxic cell injury?**
39. **What is the pathogeny of hypoxic cell injury?**
40. **What is the pathogenetic role of reactive oxygen species (ROS) in development of cell necrosis?**
41. **What is the pathogenetic role of reactive oxygen species (ROS) in development of cell necrosis?**
42. **What is the medical definition of the general changes in the body which accompanies necrosis of tissues?**
43. **What proteins are elevated in the blood in acute phase-response?**
44. **What are the important pathogenetic factors for the initiation of intrinsic pathway of apoptosis?**
45. **What are the important pathogenetic factors for the initiation of extrinsic pathway of apoptosis?**
46. **What are the features of apoptosis?**
47. **What are the features of apoptosis?**
48. **What is the mechanism of apoptosis initiated by DNA damage?**
49. **What are the pathophysiologic mechanisms of defective apoptosis?**
50. **What are the pathophysiologic factors of reduced apoptosis?**
51. **What disorders are related with reduced apoptosis?**
52. **What disorders are related with increased apoptosis?**
53. **What disorders are related with increased apoptosis?**
54. **What are the general factors of acquired dystrophies?**
55. **What is the main pathogenetic link in pathophysiological mechanism of fatty liver?**
56. **What are the main pathogenetical mechanisms of fatty liver?**
57. **What are the main pathogenetical mechanisms of fatty liver?**
58. **What is one of the pathogenetical mechanisms in development of fatty liver in case of starvation?**
59. **What are the main pathogenetical mechanisms of fatty liver in malnutrition?**
60. **What is the main pathogenetic link of cell dystrophy in condition of ATP depletion?**
61. **What is the pathogenetic mechanism characteristic for glycogen storage disease?**
62. **What is the pathogenetic mechanism characteristic for cell dystrophy under action of ROS (reactive oxygen species)?**
63. **Which regeneration is considered as homeostatic?**
64. **Which physiological regeneration is considered as reparative?**
65. **Which physiological regeneration is considered as adaptive?**
66. **What does the metaplasia mean?**
67. **67.What does the sclerosis mean?**
68. **What does the hyperplasia mean?**
69. **What does the hypertrophy mean?**
70. **What does atrophy mean?**
71. **What types of the atrophy are considered as physiological?**
72. **What factor induces sclerosis?**
73. **What factor induces sclerosis?**
74. **What factor induces sclerosis?**
75. **What are the consequences of sclerosis?**
76. **What is the most common type of epithelial metaplasia?**
77. **How is explained the mechanisms of atrophy?**
78. **What kind of stimuli activate ubiquitin ligases leading to atrophy?**
79. **What is the relationship between influx and reflux of blood in arterial hyperemia?**
80. **What is the pathogenetic mechanism of neurotonic arterial hyperemia?**
81. **What is the pathogenetic mechanism of neuroparalitic arterial hyperemia?**
82. **What is the pathogenetic mechanism of neuromyoparalytic arterial hyperemia?**
83. **What is the pathogenetic mechanism of functional arterial hyperemia?**
84. **What is characteristic arterial hyperemia?**
85. **What is characteristic arterial hyperemia?**
86. **What are the external manifestations of venous hyperemia?**
87. **What is the cause of increased organ volume in venous hyperemia?**
88. **What is the cause of decreased local temperature in venous hyperemia?**
89. **What are the local pathogenetic mechanisms of ischemia?**
90. **What hemodynamic changes are characteristic for the ischemia?**
91. **What emboli are endogenous?**
92. **What embolus is exogenous?**
93. **Which vessels damage lead to air embolism?**
94. **What factors disturb rheological properties of the blood?**
95. **What does represent edema?**
96. **What is the main pathogenetic mechanism of edema development in nephritic syndrome?**
97. **What are the pathogenetic mechanisms of edema in liver failure?**
98. **What is one pathogenetic mechanism of edema in heart failure?**
99. **What is one pathogenetic mechanism of hepatic edema?**
100. **What is the first vascular reaction to injury?**
101. **What does represent paradoxical embolism?**
102. **What is the pathogenetic role of endothelial cell injury in development of white**
103. **thrombus (primary thrombus)?**
104. **What is the pathogenetic role of endothelial cell injury in development of white thrombus**
105. **(primary thrombus)?**
106. **What pathogenetic factors contribute to activation and adhesion of thrombocytes in**
107. **thrombosis?**
108. **What pathogenetic factors contribute to activation and adhesion of thrombocytes in**
109. **thrombosis?**
110. **What pathogenetic factor contributes to activation and adhesion of thrombocytes in**
111. **thrombosis?**
112. **Which are pathogenetic factors that contribute to development of thrombosis?**
113. **What pathogenetic factor contributes to development of thrombosis?**
114. **What are the biological characteristics of acute inflammation?**
115. **What is one of biological characteristics of acute inflammation?**
116. **What are the biological characteristics of chronic inflammation?**
117. **What is one of biological characteristics of chronic inflammation?**
118. **What is the pathogenic chain for cytokines production in acute inflammation triggered by cell necrosis in hypoxia?**
119. **What is the pathogenic chain for cytokines production in acute inflammation triggered by biological factors (bacteria, fungi)?**
120. **What does involve the inflammasome concept?**
121. **What biological products can be DAMP (damage associated molecular pattern)?**
122. **What biological products can be PAMP (pathogen associated molecular pattern)?**
123. **What are the biological effects of anti-inflammatory interleukins?**
124. **What are the biological effects of pro-inflammatory interleukins (IL-1, IL-6)?**
125. **What is one of biological effect of pro-inflammatory interleukins (IL-1, IL-6)?**
126. **What immune cells secrete pro-inflammatory interleukins (IL-1, IL-6)?**
127. **What immune cells secrete anti-inflammatory interleukins?**
128. **What is the pathogeny for enhanced synthesis of acute-phase proteins in acute inflammation triggered by a biological flogogenic factor (bacteria, fungi)?**
129. **What is the pathogeny for enhanced synthesis of acute-phase proteins in acute inflammation triggered by cell necrosis in hypoxia?**
130. **What is the role of C reactive protein in pathogeny of acute inflammation?**
131. **What is the role of fibrinogen in pathogeny of acute inflammation?**
132. **What is the role of serum amyloid A in pathogeny of acute inflammation?**
133. **What are plasma-derived inflammatory mediators?**
134. **What is the role of Hageman factor in pathogeny of acute inflammation?**
135. **What inflammatory mediators are released in the result of activation of Hageman factor?**
136. **What are biological effects of anaphylatoxins in inflammatory focus?**
137. **What is the role of C3b fraction of the complement system in acute inflammation?**
138. **What is the role of C5a-C9a fraction of the complement system in acute inflammation?**
139. **Which blood cells mainly will migrate to the tissue in acute viral infection?**
140. **What is the sequence of leukocytes emigration to the focus of inflammation?**
141. **What are the humoral chemotactic substances that are important in emigration of leukocytes?**
142. **What are the cellular chemotactic substances that are important in emigration of**
143. **leukocytes?**
144. **Which factors promote adhesion and rolling of leukocytes at the endothelial level?**
145. **Which factors promote the firm adhesion of leukocytes to the vessel wall?**
146. **What is the mechanism of leukocytes rolling along vessel wall?**
147. **What is the mechanism of firm adhesion of leukocytes to the vessel wall?**
148. **What is the mechanism of firm adhesion of leukocytes to the vessel wall?**
149. **Which inflammatory mediators induce expression of selectins and integrins that are important for the leukocytes emigration?**
150. **What is the mechanism of leukocytes transmigration across the vessel wall?**
151. **What is the mechanism of leukocytes transmigration across the vessel wall?**
152. **Which types of leukocytes have ability to make phagocytosis?**
153. **What is the sequence of the processes during phagocytosis?**
154. **What are the most important opsonins that enhance the recognition processes and phagocytosis of pathogenic agents?**
155. **What does represent the opsonisation process?**
156. **What is the specific immune mechanism of attachment process during phagocytosis?**
157. **What are the oxygen – dependent bactericide mechanisms that destroy the pathogenic agent in phagolysosome?**
158. **What is one of the oxygen – dependent bactericide mechanisms that destroy the pathogenic agent in phagolysosome?**
159. **What are the oxygen – independent bactericide products that destroy pathogenic agents in phagolysosome?**
160. **What is the role of macrophages in the regenerative processes during acute inflammation?**
161. **What is the role of macrophages in the regenerative processes during acute inflammation?**
162. **What is the role of macrophages in the regenerative processes during chronic inflammation?**
163. **What is the mechanism of pathologic regeneration during chronic inflammation?**