**Questions for the exam**

1. The principal mechanisms of cell injury, and their biochemical and functional effects.
2. Mechanisms of cell death.
3. Reactive species mechanisms of cellular hypoxia-reoxygenation injury.
4. Hereditary disorders: causes, types, methods of research of hereditary diseases.
5. Thermal injury: types of injury and pathogenesis.
6. Types of pathological arterial hyperemia according to the mechanism development.
7. Types of venous hyperemia according to the mechanism development.
8. Ischemia. Causes, types, mechanisms, consequence.
9. Stasis. Causes, types, mechanisms, consequence.
10. Etiology of inflammation. Primary and secondary alteration in inflammation.
11. Basic mediators of inflammation, their origin, principles of classification.
12. Inflammation. Changes in vascular flow and caliber in acute inflammation.
13. Exudation in inflammation.
14. Phagocytosis in inflammation.
15. Causes and pathogenesis of chronic inflammation.
16. Immunodeficiency syndromes and their pathogenesis.
17. Type I hypersensitivity reaction.
18. Type II hypersensitivity reaction.
19. Type III hypersensitivity reaction.
20. Type IV hypersensitivity reaction.
21. Molecular mechanisms of carcinogenesis.
22. Mechanisms of infiltrating growth and tumor metastasis.
23. Mechanisms of immune evasion by tumors.
24. Hypoglycemia: types, mechanisms, clinical manifestations.
25. Diabetes mellitus type 1. Pathophysiological mechanisms.
26. Diabetes mellitus type 2. Pathophysiological mechanisms.
27. The obesity: mechanisms of development.
28. Atherosclerosis and dyslipidemia. The role of endothelial dysfunction in the pathogenesis of atherosclerosis.
29. Atherosclerosis. Risk factors (main causes and conditions) of atherosclerosis. Pathogenesis of atherosclerosis.
30. Etiology and pathogenesis of hyperuricemia and gout.
31. Acidosis and alkalosis: definition, types of imbalances.
32. Types of reactions of neurons to injury.
33. Risk factors of cerebral ischemia.
34. Molecular and cellular mechanisms of Alzheimer's disease.
35. Molecular and cellular mechanisms of Parkinson's disease.
36. Cushing's syndrome/disease – causes, symptoms, pathogenesis.
37. Etiology and pathogenesis of acute and chronic hypocorticism.
38. Hypopituitarism– causes, symptoms, pathogenesis.
39. Hyperpituitarism– causes, symptoms, pathogenesis.
40. Hyperthyroidism– causes, symptoms, pathogenesis.
41. Hypothyroidism– causes, symptoms, pathogenesis.
42. Adrenogenital syndrome: causes, pathogenesis, symptoms.
43. Erythrocytosis: types and causes. Polycythemia vera: pathogenesis.
44. Acute posthemorrhagic anemia: causes and сlinical manifestations.
45. Iron deficiency anemia: causes and сlinical manifestations.
46. B-12 deficiency anemia: causes and сlinical manifestations.
47. Folate deficiency anemia: causes and сlinical manifestations.
48. Aplastic anemia: causes and сlinical manifestations.
49. Hemolytic anemia: causes and сlinical manifestations.
50. Agranulocytosis, their types, causes and mechanisms of development.
51. Acute leukemia (classification, pathogenesis, hematological manifestations).
52. Chronic myeloproliferative leukemia (classification, pathogenesis, hematological manifestations).
53. Chronic lymphocytic leukemia (classification, pathogenesis, hematological manifestations).
54. Hodgkin's disease: (classification, pathogenesis, hematological manifestations).
55. Thrombocytosis (types, causes, mechanisms of development, consequences).
56. Thrombocytopenia (types, causes, mechanisms of development, consequences).
57. The pathogenesis of thrombocytopathies (types, manifestations of thrombocytopathies).
58. Disseminated intravascular coagulation (pathogenesis of each stage of the syndrome).
59. Hemorrhagic vasculitis (pathogenesis, clinical manifestations).
60. Ischemic heart disease and heart failure (types, pathogenesis, clinical manifestations).
61. Essential hypertension: etiology, pathogenesis.
62. Arrhythmias: etiology, pathogenesis.
63. Pathogenesis of acute respiratory distress syndrome.
64. Obstructive pulmonary diseases: etiology, pathogenesis.
65. Idiopathic pulmonary fibrosis: etiology, pathogenesis.
66. Definition of shock, name the types of shock. Describe the stages of shock.
67. Definition of a coma, name the types of coma. Describe the general pathogenesis of coma.
68. Definition of collapse, types. Pathophysiological mechanisms.
69. Disorders of salivation: hypo- and hypersalivation (pathogenesis, clinical manifestation).
70. Helicobacter pylori associated gastritis and duodenitis: pathogenesis, clinical manifestation.
71. Stomach ulcer: pathogenesis, clinical manifestation.
72. Etiology of liver diseases. Liver failure: concept characteristics, classification.
73. Hepatic coma. Etiology, pathogenesis.
74. Etiology and pathogenesis of pyelonephritis.
75. Etiology, pathogenesis, stages of development of acute kidney injury.
76. Nephrolithiasis: molecular mechanism of renal stone formation.
77. Uremic coma: causes, symptoms, diagnosis, treatment.