Questions in Pathophysiology

IV semester module No. 14 "Environment and health"

1. Pathophysiology - definition
2. Pathogenesis - definition
3. Sanogenesis
4. Object of pathophysiologic research
5. General nosology
6. Health
7. Dual action of compensatory and protective reactions
8. Pathological process
9. Pathological reaction
10. Pathological state
11. Difference between Pathological process and Pathological state
12. Relationship between Pathological process and Pathological state
13. Disease
14. Disease stages/periods
15. Latent period
16. Incubative period
17. Prodrome
18. Complete manifestation of disease
19. Mechanisms of recovery
20. Incomplete recovery
21. Recurrence
22. Chronization of disease
23. Remission
24. Death
25. Terminal state
26. Clinical death
27. Biological death
28. Mechanism of heart fibrillation

29. Mechanism of heart asystole
30. Reanimation and methods of reanimation
31. Cardio-Pulmonary syndrome
32. Hepato-Renal syndrome
33. Posthypoxic encephalopaty
34. Etiology
35. Pathogenesis
36. Monocausalism
37. Conditionalism
38. Disease cause and conditions
39. Protective reactions
40. Compensatory reactions
41. Sanogenetic reactions
42. Adaptive reactions
43. Disease cause-result relation in pathology
44. General link and “vicious circle” in pathogenesis
45. Local and general in pathology
46. Specific and non specific in pathology
47. Etiotropic principles of treatment
48. Pathogenetical principles of treatment
49. Damaging effects of mechanical trauma on organism
50. Crush syndrome
51. “Damaging enzymes”
52. Pathogenesis of generalized hypoxia at crush syndrome
53. Pathogenesis of traumatic injuries of cranium
54. Pathogenesis of kinetosis (motion sickness)
55. Types of acceleration
56. Receptors, involved in pathogenesis of kinetosis
57. Mechanisms of manifestations at kinetosis
58. Gravitational pathology
59. Zero-gravity and its etiology
60. Functional disorders in organism at Zero-gravity
61. Damaging effects of high temperature on organism
62. Burn disease, pathogenesis

63. Pathogenesis of burn shock
64. Mechanism of false/relative policytemia at burn disease
65. Hyperthermia
66. Factors supporting development of hyperthermia
67. Blood and hemodynamic disorders at Hyperthermia
68. Factors affecting heat emission
69. Functional disorders at Hyperthermia
70. Heat stroke, pathogenesis
71. Damaging effects of low temperature on organism
72. Alterations/Reactions developed at hypothermia during stage of compensation
73. Alterations/Reactions developed at hypothermia during stage of decompensation
74. Supporting conditions of hypothermia
75. Compensatory reactions of organism at low environmental temperature
76. Electrical injury
77. Determinants of outcome gravity at electrical traumas
78. Local effects of Electrical current
79. General effects of Electrical current
80. Damaging effects of high atmospheric pressure on the organism
81. Caisson disease. Pathogenesis
82. Manifestations developed in response to high atmospheric pressure (compression)
83. Manifestations of decompression
84. Preventive and treatment methods of Caisson disease
85. Effects of hyperoxia
86. Damaging effects of low partial pressure on the organism
87. Pathogenetical factors of Mountain disease
88. Syndrome of Decompression. Pathogenesis
89. Mountain disease. Pathogenesis
90. pH alterations at Mountain disease
91. Alterations/Reactions developed at hypobaria during stage of compensation
92. Alterations/Reactions developed at hypobaria during stage of decompensation
93. Monge's disease
94. Sub-acute, erythremic type of Monge's disease
95. Emphysemic type of Monge's disease
96. Damaging effects of radiation on the organism

97. Damaging effects of sun rays on the organism
98. Damaging effects of ultraviolet and laser rays on the organism
99. Damaging effects of ionizing radiation on the organism
100. Pathogenesis of main disorders developed after exposure to ionizing radiation
101. Free radicals produced after exposure to ionizing radiation
102. Disorders developed at the molecular level after exposure to ionizing radiation
103. Disorders developed at tissue level after exposure to ionizing radiation
104. Disorders developed at the organism level after exposure to ionizing radiation
105. Long-term effects of ionizing radiation
106. Pathogenesis of radiation sickness
107. Bone marrow type of radiation sickness
108. Intestinal type of radiation sickness
109. Toxemic type of radiation sickness
110. Cerebral type of radiation sickness
111. Chronic radiation sickness
112. Exogenous poisoning
113. Drug addiction, its forms
114. Toxicomania
115. Poly drug/narcotics
116. Harmful effects of nicotine on the body
117. Harmful effect of alcohol on the body

Questions in Pathophysiology

Module No. 15

V semester „ Reaction of the organism on disorders"

2022-2023 academic year

1. Typical forms of cellular injury
2. dystrophy
3. dysplasia
4. Paranecrosis
5. Necrobiosis
6. Necrosis
7. Apoptosis
8. Role of Kaspases in mechanism of apoptosis
9. Role of p-53 in mechanism of apoptosis
10. General mechanisms of cell injury
11. Mechanisms of cell membrane injury
12. Mechanisms of disorders of cellular respiration
13. Disorders of enzymes and structural protein synthesis in cells
14. Alteration of genetical apparatus of cell
15. Protective and Compensatory mechanisms of cell
16. Exo- and endogenous mechanism of cellular injury
17. Mediators of cell injury
18. Role of NO in cellular processes
19. Disorders of energetic processes in cell
20. Role of lipid peroxidation in cell injury
21. Pro-oxidants
22. Stages of free radical oxidation
23. Disorders of enzymatic antioxidant protection of cells
24. Disorders of non enzymatic antioxidant protection of cells
25. Causes and results of cell hypoxia
26. Oxidative injury of Cells

27. Nonspecific manifestations of cell injury
28. Denaturation of cell proteins
29. Disorders of Na+/K pump in cells
30. Role of pH alterations in cellular injury
31. Role of Ca^{++} in cellular injury
32. General Adaptation Syndrome
33. Concept of Adaptation
34. Stress reaction
35. Stages of General Adaptation Syndrome
36. Mechanism of General Adaptation Syndrome
37. Alarm stage of GAS
38. Resistance stage of GAS
39. Exhaustion stage of GAS
40. Diseases of adaptation
41. Stress-limiting factors
42. Anti-stress mechanisms
43. Heat-shock proteins
44. Factor of Heat-shock
45. Synthesis of stress proteins
46. Chaperones
47. Acute phase reactions
48. Effects of IL-1
49. C-reactive protein
50. Haptoglobin
51. Results of activation of proteolytic systems
52. Positive effects of kinines
53. Negative effects of kinines
54. Hemodynamic principles and their role in local hemocirculation
55. Etio-pathogenesis of Arterial hyperemia
56. Results and importance of Arterial hyperemia
57. Disorders of microcirculation at arterial hyperemia
58. Etio-pathogenesis of venous hyperemia
59. Venous hyperemia and tissue fluid exchange
60. Changes of microcirculation at venous hyperemia

61. Results of venous hyperemia
62. Etio-pathogenesis of ischemia
63. Pathogenesis of clinical signs of ischemia
64. Forms of ischemia
65. Compressive ischemia
66. Obstructive ischemia
67. Neurotonic ischemia
68. Neuroparalitic ischemia
69. Postischemic hyperemia
70. Results of ischemia
71. Microcirculation at ischemia
72. Causes of microcirculation disorders at ischemia
73. Types of disorders of microcirculation
74. Vasodilatory substances
75. Vasoconstrictive substances
76. Intravascular disorders of microcirculation
77. Transmural disorders of microcirculation
78. Extravascular disorders of microcirculation
79. Sludge phenomenon, its causes
80. Disorder of blood substantial stability
81. Mechanisms of Sludge
82. Microcirculation disorders causing sludge phenomenon
83. Etio-pathogenesis of stasis
84. Ischemic stasis
85. Congestive stasis
86. True capillary stasis
87. Thrombosis
88. Mechanism of thrombogenesis
89. Types of thrombi
90. Vascular wall and thrombogenesis
91. Aggregation and desaggregation of platelets
92. Blood flow speed and thrombogenesis
93. Plasmic hemostasis
94. Thromboplastin, thrombin, fibrinogen and thrombogenesis

95. Thrombasterin and retraction of thrombi
96. Mainsteps of arterial thrombogenesis
97. Venous thrombogenesis
98. Basic difference between arterial and venous thrombogenesis
99. Outcome of thrombi
100. Disseminated intravascular coagulation
101. Forms of embolism according to its origin
102. Types of embolism
103. Types and mechanisms of embolism according to its localization
104. Embolism in systemic circulation
105. Embolism in pulmonary circulation
106. Syndrome of cor-pulmonale
107. Embolism of vena cava
108. Clinical forms of disorders of local blood circulation
109. Regulation of water exchange in norm and pathology
110. Importance of hydrodynamic, osmotic and colloid-osmotic pressure alterations
111. Forms of Disorders of water metabolism (hyperhydration and hypohydration)
112. General mechanism of edema formation
113. Mechanism of cardiac edema
114. Mechanism of nephritic edema
115. Mechanism of nephrotic edema
116. Mechanism of cachectic edema
117. Exicosis its mechanisms and results
118. Disorder of Na, Ka, Ca and Mg metabolism
119. Disorders of electrolytes and water metabolism (content and ratio) at cellular and extracellular levels
120. Mechanism of Disorders of homeostasis of electrolytes
121. Inflammation, etiology of inflammation
122. Alteration and development of inflammatory processes
123. Inflammatory Cells
124. Mechanisms of Inflammatory hyperemia
125. Haemodynamic alterations in the inflamed area
126. Mechanism of capillary vasodilation in inflammation
127. linear and volumetric speed of Blood flow at acute inflammation
128. Blood aggregation at inflammation

129. Haemodynamic characteristics of arterial and venous hyperemia in case of inflammation
130. “secondary alteration” and lysosomal enzymes
131. Exudation and its mechanism
132. Mechanism of leukocytes emigration
133. Mechanism of edema formation
134. Reaction of Leukocytes in inflammation
135. Leukocyte margination and adhesion at inflammation
136. Basis of leukocyte activation
137. Phagocytosis in inflammation
138. Degranulation of leucocytes
139. Classification of inflammatory mediators
140. Plasma and cell derived inflammatory mediators
141. Vasoactive amines
142. Plasma proteases
143. Metabolites of arachidonic acid
144. Constituent parts of lysosomes
145. Oxygen free radicals
146. Thrombocytes activation factor
147. Cytokines
148. Derivatives of collagen, fibronectin and growth factor
149. Synthesis of main inflammatory mediators and mechanism of their action
150. Types of exudates
151. Serous exudate
152. Fibrinous exudate
153. Purulent exudate
154. Hemorrhagic exudate
155. Alteration form of inflammation
156. Proliferative type of inflammation
157. Pain in inflammation
158. Outcome of acute inflammation
159. Importance of inflammation for the organism
160. Normergic, hypoergic and hyperergic inflammation
161. Chronic inflammation
162. Role of macrophages and leukotrienes in chronic inflammation

163. Lipid peroxidation and collagen degradation
164. Role of lymphocytes and collagen in chronic inflammation
165. Cells and fibrous elements participating in inflammation
166. Fever. General characteristic
167. Pathogenesis of fever
168. Difference between hyperthermia and fever
169. Primary and secondary Pyrogens
170. Stages of fever
171. Types of fever
172. The biologic role of fever
173. Pathophysiologic principles of treatment of fever
174. Fever for treatment purposes in medicine. Pyrotherapy

Questions in Pathophysiology

V semester. Module #16 "Infection and immunopathology"

2022-2023 academic year

1. Damaging effect of biological factors on the body
2. Infectious processes
3. Nonspecific protective-adaptive reactions at infectious processes
4. Specific protective-adaptive reactions at infectious processes
5. Pathogenesis of infectious processes
6. Periods of infectious processes
7. Mechanisms of protection at infections
8. Complications of infections, sepsis
9. The role of Inheritance in pathology
10. Inherited, congenital and acquired diseases, general characteristics
11. Molecular-genetic diseases
12. Chromosomal diseases
13. Monogenic diseases
14. Polygenic diseases
15. Hemophilia
16. Dominantly transmitted diseases
17. Recessively transmitted diseases
18. Autosomal-linked chromosomal diseases
19. X-linked Chromosomal diseases
20. Genetic predispositions
21. Diathesis. Types of diathesis
22. Anergy, hypoergy, hyperergy
23. Role of reactivity in pathology
24. Types of reactivity (Group, individual, Age related reactivity)
25. Resistance of organism and types
26. Effects of environment on reactivity
27. Immune reactivity
28. Mechanisms of disorders of specific and nonspecific immune reactivity

29. Complement system and role of its disorders in pathology
30. Pathogenesis of Immune deficiency. AIDS
31. Hypersensitivity of the organism
32. Etiology of allergy. Exo- and endogenous allergens
33. Classification, stages and mechanisms of development of Hypersensitivity reactions
34. Allergic mediators
35. Type I allergic reactions
36. Mediators of I type allergic reactions
37. Pathogenesis of type II allergic reactions
38. Antibodies and complement in type II hypersensitivity reactions
39. Role of autoimmune processes in type II hypersensitivity reactions
40. Pathogenesis of type III hypersensitivity reactions
41. Antibodies of type III hypersensitivity reactions
42. Pathogenesis of type IV hypersensitivity reactions
43. Pathogenesis of anaphylactic shock
44. Urticaria and Quincke's edema
45. Polinosis
46. Serum sickness
47. Pathogenesis of autoimmune diseases
48. Pathogenesis of Bacterial and Contact allergy (dermatitis)
49. General principles of treatment of hypersensitivity reactions
50. Tissue growth pathophysiology
51. Hyperbioltic processes and types
52. Hypertrophy, Types of hypertrophy
53. Hyperplasia
54. Tissue Regeneration
55. Wound healing as a typical form of pathological Regeneration
56. Hypobiotic processes – Atrophy,dystrophy, degeneration, mechanisms of development
57. Pathophysiology of tumor growth
58. General characterization of benign and malignant tumors
59. Malignant growth characters and differentiation
60. Invasion of malignant tumor cells
61. Malignant tumor metastasis
62. Capacity of malignant tumor cells of adhesion, membrane degradation and penetration

63. Biological peculiarities of malignant growth
64. Tissue atypism in malignant tumor
65. Metabolic atypism in malignant tumor
66. Experimental modeling of tumors
67. Chemical carcinogenic factors
68. Ionizing radiation as carcinogen
69. Oncogenic virusis
70. Protocancerogenes, protooncogene, ultimate cancerogen
71. Pathogenesis of tumor growth
72. Cell neoplastic transformation
73. Antiblastomic resistance of the organism: Anticarcinogenic, immune and non immune anticellular mechanisms
74. Organism-tumor Interrelation

Questions in Pathophysiology

VI semester. Module No. 19

"Pathology of neuro-endocrine, vegetative and somatic systems"

2022-2023 academic year

1. Pathologic decrease of nervous regulation, its causes and mechanisms
2. Pathogenesis of denervation syndromme
3. Causes of pathological enhancement of nervous influence
4. Mechanisms of pathological enhancement of nervous influence
5. Types and mechanisms of sensitivity disorders
6. Pain, its types
7. Protopathic, epicritic and phantom pain
8. Mechanism of Pain development
9. The role of disturbance of the antinociceptive system in the formation of pain
10. Mechanisms of disturbance of the motor function of the nervous system
11. Pathological reduction of nervous influence, its causes and mechanisms
12. Neuroses
13. Hypokinesia
14. Hyperkinesia
15. Types of neurosis
16. Experimental neuroses
17. Pituitary and non pituitary ways of endocrine regulation
18. Negative feedback between endocrine glands
19. Hypopituitarism
20. Panhypopituitarism and its consequences
21. Hypophisic cachexia
22. Partial hypofunction of adenohypophisis
23. Lilliputism / Dwarfism
24. Infantilism (gonadotrophic insufficiency) in girls and boys
25. Adipogenic Dystrophy
26. Hyperfunction of adenohypophysis (anterior pituitary)

27. Etiology and pathogenesis of adenohypophysis hyperfunction
28. Pituitary gigantism, acromegaly
29. Metabolism fisorders in acromegaly and gigantism
30. Etiology and pathogenesis of Icenko-Cushing's disease
31. Consequences of Adrenocorticotropic hormone (ACTH) hyperproduction
32. Dysfunction of neurohypophysis(posterior pituitary) and its clinical signs
33. Pathogenesis of diabetes insipidus
34. Thyreotoxicosis
35. Diffuse toxic goiter (Graves' disease)
36. Toxic goiter (Plummer's disease)
37. Phenomenon "Iod- Basedov"
38. Causes of thyreotoxicosis, manifestations, their mechanism
39. Metabolism during thyreotoxicosis
40. Thyroid gland hypofunction, its causes and mechanisms
41. Myxedema
42. Cretinism
43. Thyroidectomy, cachexia thyropriva
44. Mucosal edema
45. Endemic goiter
46. Disorders of thyrocalcitonin secretion
47. Parathyroid glands dysfunction
48. Hyperparathyreosis
49. Osteodystrophy, nephrocalcinosis, hypoparathyreosis
50. Tetania parathyropriva
51. Mechanism of hypoparathyreosis clinical signs
52. Disorders of adrenal gland functions, corticoid insufficiency
53. Biosynthesis of corticoid hormoms in adrenal cortex
54. Acute corticoid insufficiency
55. Adison's disease
56. Water and electrolytes metabolism, insufficiency of aldosterone and glucocorticoids
57. Vascular tone in adrenal gland dysfunction
58. Carbohydrates metabolism in adrenal gland dysfunction
59. Processes in adrenal gland insufficiency and their main mechanisms
60. Hyperpigmentation in adrenal gland insufficiency

61. **Mechanisms of adrenal gland cortex hyperfunction**
62. **Types of hypercorticoidisms**
63. **Manifestations of hypercorticoidism, Icenko-Cushing's disease and syndrome**
64. **Mechanisms of hyperaldosteronism clinical signs**
65. **Adrenogenital syndromes and their types**
66. **Hermaphroditism, feminism, hyrsutism, virilization**
67. **Hyperfunction of adrenal gland medulla**
68. **Adrenal gland tumors**
69. **Dysfunction of male genital glands**
70. **Hypogonadism**
71. **Hypergonadism**
72. **Castration, its consequences**
73. **Dysfunction of female genital glands**
74. **Structure and functions of bone**
75. **Osteocytes and osteoclasts, their functions**
76. **Bone homeostasis and remodeling**
77. **Congenital disorders of ossification**
78. **Achondroplasia, its mechanism of development**
79. **Incomplete osteogenesis-type 1 collagen disease, its pathogenesis**
80. **Osteopetrosis**
81. **Bone metabolic disorders: osteopenia and osteoporosis**
82. **Rickets, mechanism of development**
83. **Hyperparathyroidism**
84. **Paget's disease-deforming osteitis**
85. **Bone fractures**

Questions in Pathophysiology

VI semester. Module No. 20

"Vegetative (cardiovascular, respiratory, excretory) system pathology"

1. Adaptive and compensatory reactions of cardiovascular system
2. Causes of acute vascular insufficiency
3. Causes of chronic vascular insufficiency
4. Essence of cardiac insufficiency
5. Heart failure caused by increased workload
6. Heart failure caused by Overload
7. Heart failure caused by afterload
8. Acquired and Congenital heart diseases
9. Heart failure caused by miocardial injury
10. Heart failure caused by pericardial injury
11. Left sided, Right sided and total miocariaial insuficiency
12. Hypertension of pulmonary and systemic circulation
13. Determinants of the total peripheral resistance
14. Disorders of creatine phosphate metabolism in the myocardium
15. Coronary insufficiency
16. Determining factors of coronary blood flow
17. Non-coronarogenic necrosis of the myocardium
18. Coronarogenic necrosis of myocardium
19. Ischemic heart disease
20. Types of angina pectoris
21. Myocardial infarction
22. Vasoactive endothelial factors
23. Mechanisms, forms and outcome of coronary blood circulation disorders
24. Chronic atherosclerotic obstruction of coronars
25. Mechanism and manifestations of life-threatening complications of myocardial infarction
26. Catecholamine necrosis of the myocardium
27. Electrolytic-steroid necrosis of the myocardium
28. Compensatory changes of heart muscle contractility - Homeometric and heterometric mechanism of contraction

29. Peculiarities of hypertrophied myocardium
30. Pathogenesis of ``cor pulmonale''
31. Mechanism of pulmonary edema at heart failure
32. Renin-angiotensin system at heart failure
33. Pathogenesis of cardiac edema
34. Heart disrrhythmias
35. Disrrhythmias developed as a result of disorders of automaticity
36. Nomotopic and heterotopic arrhythmias
37. Cardiac arrhythmias according to the site of origin of the abnormal impulse generation
38. Arrhythmias developed due to disorders of excitability and impulse conduction
39. Extrasystolic arrhythmia
40. Extrasystole
41. Paroxysmal tachycardia
42. Cardiac arrhythmias developed as a result of disorders of impuls conduction
43. Heart block
44. Determinants of mean blood pressure
45. Mechanism of centrogenic hypertension
46. The role of blood vessel baroreceptors in blood pressure regulation
47. Reaction of baroreceptors during hypo- and hypertension
48. Humoral regulation of vascular tone
49. Effects of renin-angiotensin system on vascular tone
50. The role of the sympathetic-adrenal system in the development of hypertension
51. Etiology and pathogenesis of hypertensive disease
52. The main pathogenic links of hypertensive disease
53. Pathogenesis of pulmonary hypertension
54. Mechanism of arterial hypotension
55. Secondary arterial hypotension
56. Types of arterial hypotension according to the initial link of pathogenesis
57. The main links of the pathogenesis of arterial hypotension
58. The concept of shock, its types
59. Stages of traumatic shock
60. Mechanism of development of primary hypovolemic shock
61. Mechanism of development of cardiogenic shock
62. Pathogenesis of "shock lung".

63. Pathogenesis of "shock kidney".
64. Normovolemia, its types
65. Hypovolemia (oligemia), its types and mechanisms
66. Hypervolemia, its types and mechanisms
67. Principles of classification of anemias
68. Acute posthemorrhagic anemia
69. Chronic posthemorrhagic anemia
70. Hemorrhage
71. Immediate compensatory mechanisms at hemorrhage
72. Delaied compensatory reactions after bleeding
73. Blood picture at acute posthemorrhagic anemia
74. Blood picture at chronic posthemorrhagic anemia
75. Etiology of anemias developed as a result of hemolysis
76. Hereditary, congenital and acquired hemolytic anemias
77. Blood picture at hemolytic anemias
78. Toxic-hemolytic anemias
79. Immune hemolytic anemias
80. Pathogenesis of microspherocytic anemia (Minkowski-Shofar disease).
81. Pathogenesis of sickle cell anemia
82. Mechanisms of clinical manifestations of sickle cell anemia
83. Thalassemias
84. Alpha-thalassemia
85. Beta-thalassemia
86. Erythrocytes at thalassemia
87. Enzymopathies
88. Pathogenesis of glucose-6-phosphate dehydrogenase deficiency anemia
89. Anemias developed due to disorders of hemopoiesis
90. Causes of iron deficiency anemia
91. Erythrocytes and hemoglobin in case of iron deficiency anemia
92. Mechanisms of manifestations of iron deficiency anemia
93. Early (juvenile) chlorosis
94. Later chlorosis
95. Mechanism of achlorhydric anemia
96. Hemopoiesis during iron-refractory anemias

97. Causes of iron-refractory anemias and common link of pathogenesis
98. Blood picture in case of iron-refractory anemia
99. Mechanism of hyperchromia in B12 deficiency anemia
100. Pathogenesis of Addison-Birmer pernicious anemia
101. Pathogenesis of botryocephalic and diphyllobothrium anemias
102. Pathogenesis of agastric pernicious anemia
103. Anemia during sprue
104. Causes and factors producing hypo- and aplastic anemias
105. Blood picture in hypo- and aplastic anemias
106. Erythrocytosis and its types
107. Mechanisms of relative (false) polycythemia
108. Pathogenesis of Policitemia vera (erythromyelosis).
109. Regenerative and degenerative forms of erythrocytes
110. Signs of acceleration of erythropoiesis
111. Mechanism of reduced ESR
112. Mechanism of increased ESR
113. Etiology of disorders of leukopoiesis
114. Colony stimulating factor
115. Keylons as a leukopoiesis inhibitor
116. Changes in the leukocyte formula
117. Physiological and pathological leukocytosis
118. Leukopoietins
119. Quantitative and qualitative changes of leukocytes
120. Leukemoid reactions
121. Leukopenia
122. Agranulocytosis
123. Aleikia
124. Pancytopenia
125. Types of hemoblastosis
126. Hepatosarcomas
127. Leukosis and its types
128. Etiology of leukemias
129. Burkitt's malignant lymphoma
130. T-cell leukemia

131. Pathogenesis of leukemias
132. Forms of acute leukemia according to the number of leukocytes in the blood
133. Acute myeloblastic leukemias
134. Chronic myelogenous leukemia
135. Thrombocytosis, thrombopenia, their types, mechanisms and results
136. Thrombocytopenia
137. Thrombocytopathies, its causes and types
138. Mechanism of erythrocyte aggregation
139. Changes in osmotic resistance of erythrocytes
140. Hypoproteinemia
141. Hyperproteinemia
142. Paraproteinemia
143. The role of dysfibrinogenemia in blood coagulation disorders
144. Mechanisms of hypercoagulation
145. Processes determining gas exchange in the lungs
146. Shortness of breath
147. Basic factors and mechanisms of external respiratory failure
148. Determining factors of alveolar ventilation
149. Lung ventilation disorders affecting breath regulation
150. Disorders of regulation of respiratory center
151. Etiology of alveolar ventilation disorders
152. Hyper- and hypoventilation
153. Effect of carbon dioxide tension on lung ventilation
154. Main peripheral receptors involved in breathing regulation
155. The role of the vagus nerve in breathing regulation
156. Consequences of damage to the nerves of the respiratory muscles and their centers
157. Etiology of lung hypoventilation
158. Causes of respiratory disorders due to impaired chest movement
159. Causes of respiratory muscle dysfunction
160. Pneumo-, hydro- and hemothorax
161. Causes and mechanism of obstructive type of external breathing failure
162. Causes, mechanism and consequences of obstruction of air flow in the lower respiratory tract
163. Disorders of ventilation of the lungs related to the reduction of the respiratory surface area
164. Surfactant and the consequences of its deficiency

165. Hyaline membranosis of newborns
166. Pulmonary atelectasis
167. Diffusion disorders in the lungs
168. Alveolar-capillary block
169. Causes and mechanisms of decreased perfusion of pulmonary vessels
170. Forms of respiratory failure
171. Pathogenesis of shortness of breath
172. Causes of shortness of breath and mechanisms of development
173. Inspiratory shortness of breath
174. Expiratory shortness of breath
175. Mixed type of shortness of breath
176. Cough, its causes and mechanism
177. Periodic breathing
178. Cheyne-Stokes, Biot, Kussmaul ``big'', gasping breath
179. Respiratory distress syndrome
180. Indigestion
181. Disruption of nervous and humoral regulation of digestion
182. Disorders of taste
183. Ageusia and hypogeusia
184. Hypergeusia, parageusia, dysgeusia
185. Mechanisms of appetite disorders
186. Anorexia and hyporexia
187. Hyperrexia and pararexia
188. Indigestion in the mouth
189. Causes and consequences of saliva secretion disorders
190. Hyposalivation, causes and consequences
191. Hypersalivation, causes and consequences
192. Causes and consequences of disorders of the voluntary phase of swallowing
193. Causes and consequences of disorders of the final phase of swallowing
194. Disorders of the reflex phase of the esophagus
195. Esophageal atony
196. Esovagospasm, causes and consequences
197. Esophagostenosis, causes and consequences
198. Achalazia

199. Gastroesophageal reflux syndrome
200. Causes and consequences of gastric reservoir function disorders
201. Types of gastric juice secretion disorders
202. Hypersecretion of gastric juice
203. Hyposecretion of gastric juice
204. Achillia
205. Consequences of Achillia
206. Disorders of the acidity of gastric juice
207. Disorders of the motor function of the stomach, its causes
208. Hypertonia and atony of the stomach
209. Gastric hyperkinesia
210. Stomach hypokinesia
211. Mechanism of heartburn
212. Heartburn, mechanism
213. Hiccup mechanism
214. Mechanism of vomiting
215. Disorders of the absorptive function of the stomach
216. Disorders of gastric excretory function
217. Etiology and pathogenesis of gastric ulcer
218. Indigestion in the intestines
219. Bile secretion disorder
220. Acholia, causes and consequences
221. Causes and consequences of pancreatic juice secretion disorders
222. Mechanisms of development of pancreatitis
223. Indigestion in the small intestine
224. Disorders of intestinal membrane and absorption
225. Acquired malabsorption syndrome
226. Disorders of intestinal motor function
227. Constipation, its types
228. Intestinal obstruction, its types
229. Disorders of defecation
230. Autointoxication from intestines
231. Liver failure and its types
232. The main causes of liver damage

233. Portal hypertension, its causes
234. Metabolism during liver damage
235. Disorders of the protective and barrier function of the liver
236. Toxemic syndrome during liver failure
237. Hepatic coma, its pathogenesis, factors and types
238. Disorders of the bile-secreting function of the liver
239. Causes, consequences and manifestations of acholia
240. Blood coagulation during acholia
241. Jaundice and its types
242. Pathogenesis of mechanical jaundice
243. Pathogenesis of parenchymal jaundice
244. Pathogenesis of hemolytic jaundice
245. Bile pigment turnover during jaundice
246. Enzymopathic, cholestatic, hepatocellular jaundice
247. Mechanism and consequences of formation of gallstones
248. Blood circulation disorder during liver failure
249. Causes, types and consequences of portal hypertension
250. Causes of renal dysfunction
251. Disorders of regulation of urine secretion
252. Disorders of the function of nephrons
253. Causes and mechanisms of proteinuria
254. Mechanisms of functional proteinuria
255. 255. Mechanisms of organic proteinuria
256. Globular proteinuria
257. Disorders of the excretory function of the kidneys
258. Disorders of renal tubule function
259. Disorders of reabsorption of sodium and water in renal tubules
260. Hyposthenic, isosthenic
261. Tubular proteinuria
262. Disorders of reabsorption of amino acids in tubules
263. Fancon syndrome
264. Tubular acidosis
265. Hematuria
266. Leukocyturia

267. Cylindruria
268. Acute diffuse glomerulonephritis
269. Immunocomplex glomerulonephritis
270. Chronic diffuse glomerulonephritis, its forms
271. Nephrotic syndrome
272. The main causes of acute diffuse glomerulonephritis
273. Pyelonephritis, its causes and manifestations
274. Kidney stone disease
275. General events during kidney damage
276. Azotemia
277. Renal arterial hypertension
278. Renal anemia
279. Coagulation disorders during kidney disease
280. Hypocoagulative, hemorrhagic syndrome at kidney diseases
281. Kidney failure
282. Acute kidney failure
283. Chronic kidney failure
284. Uremia, uremic coma