**Questions of V totalization for oral/writing answer**

**Pathophysiology of the blood**

1. Absolute primary erythrocytosis. Etiology. Pathogeny. Hematological changes.
2. Absolute secondary erythrocytosis. Etiology. Pathogeny. Hematological changes.
3. Relative erythrocytosis. Etiology. Pathogeny. Hematological changes.
4. Aplastic anemia. Etiology. Pathogeny. Hematological changes.
5. Clinical manifestations in a patient with hypoplasia/aplasia of hematopoietic bone marrow. Pathogeny.
6. Vitamin B12 deficiency. Etiology. Pathogeny. Hematological changes.
7. Pathogeny of clinical syndromes in vitamin B12 deficiency anemia.
8. Folate deficiency. Etiology.Pathogeny. Hematological changes.
9. Pathogeny of clinical syndromes in folate deficiency anemia Pathogeny. Criteria for differentiation from B12 deficiency anemia.
10. Iron deficiency. Etiology. Pathogeny. Hematological changes.
11. Pathogeny of clinical syndromes in iron deficiency anemia.
12. Acquired hemolytic anemia. Etiology. Pathogeny. Mechanisms of hemolysis. Hematological changes.
13. Congenital hemolytic anemia. Etiology. Pathogeny. Mechanisms of hemolysis. Hematological changes.
14. Pathogeny of clinical symptoms in a patient with hemolytic anemia.
15. Acute and chronic post-bleeding anemia. Etiology. Pathogeny. Hematological changes.
16. Neutrofilia. Types. Pathogenetic mehanisms. Hematological changes.
17. Absolute and relative lymphocytosis. Etiology. Pathogeny. Hematological changes.
18. Agranulocytosis. Etiology. Pathogeny. Hematological changes.
19. Acute leukemia. Etiology. Pathogeny. Hematological changes.
20. Chronic leukemia. Etiology. Pathogeny. Hematological changes.
21. Pathogeny of clinical manifestations in acute/chronic leukemia.

**Pathophysiology of cardiovascular system**

1. Mechanisms of systolic heart failure. Changes of intra-cardiac hemodynamics.
2. Mechanisms of diastolic heart failure. Changes of intra-cardiac hemodynamics.
3. Mechanisms of hemodynamic heart failure. Changes of intra-cardiac hemodynamics.
4. Compensatory mechanisms of the heart due to work overload with resistance.
5. Compensatory mechanisms of the heart due to work overload with volume.
6. Pathophysiology of myocardial remodeling.
7. Pathogenesis of cardiac failure in case of decreased venous outflow.
8. Etiology, pathogenesis and patterns of coronary artery disease.
9. The role of chronic (systemic) inflammation in the pathogenesis of cardiac insufficiency and essential hypertension.
10. Mechanisms of manifestations in left and right heart failure.
11. Pathogenesis of esential hypertension.
12. The pathophysiology of vascular remodeling in hypertension.
13. Pathogenesis of sinus node automatism disorder (changes on ECG).
14. Pathogenesis of myocardial excitability disorders (changes on ECG)
15. Pathogenesis of myocardial conductivity disorder (changes of ECG).
16. Pathogenesis of nephrogenic hypertension.
17. Pathogenesis of endocrine hypertension.
18. The role of endothelial dysfunction in the pathogenesis of essential hypertension.

**Pathophysiology of respiratory system**

1. Disorders of pulmonary ventilation. Causes. Pathogenesis. Manifestations. Pneumogram changes. Consequences.
2. Alveolar-capillary diffusion disorders. Causes. Pathogenesis. Manifestations . Consequences.
3. Extra-parenchymal restrictive pulmonary ventilation disorders. Causes. Pathogenesis. Manifestations. Pneumogram changes. Consequences.
4. Intra-parenchymal restrictive pulmonary ventilation disorders. Causes. Pathogenesis. Manifestations. Pneumogram changes. Consequences.
5. Pulmonary atelectasis. Definition. Types. Causes. Pathogenesis. Manifestations. Pneumogram changes. Consequences.
6. Pulmonary fibrosis. Causes. Pathogenesis. Manifestations . Pneumogram changes. Consequences.
7. Pulmonary edema. Definition. Causes. Pathogenesis. Manifestations . Pneumogram changes. Consequences.
8. Obstruction of lower airways. Bronchial asthma. Definition. Immune and non-immune mechanisms of asthma. Manifestations. Pneumogram changes. Consequences.
9. Pulmonary emphysema. Definition. Types. Causes. Pathogenesis. Manifestations . Pneumogram changes. Consequences.
10. Respiratory failure. Definition. Classification. Causes. Pathogenesis. Manifestations. Consequences.
11. Dyspnea. Definition. Types. Causes. Pathogenesis. Manifestations. Pneumogram changes.
12. Obstruction of upper airways. Causes. Pathogenesis. Manifestations. Pneumogram changes. Consequences.
13. Hypoxemia. Causes. Pathogenetic mechanisms. Compensatory reactions.
14. Hypercapnia. Causes. Pathogenetic mechanisms. Compensatory reactions.