**Questions of V totalization evaluated through oral 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 hypoplasi/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. Chronic post-bleeding anemia. Etiology. Pathogeny. Hematological changes.
16. Acute post-bleeding anemia. Etiology. Pathogeny. 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.
2. Mechanisms of diastolic heart failure.
3. Compensatory mechanisms of the heart due to workoverload with resistance
4. Compensatory mechanisms of the heart due to workoverload with volume
5. Mechanisms of excessive calcium- loading of cardiomyocyte and consequences.
6. Factors for activating oxidative stress in heart failure (IC) and free radicals in worsening IC evolution.
7. Pathophysiology of myocardial remodeling.
8. Predictors of heart failure and their pathophysiological significance.
9. The role of chronic (systemic) inflammation in the pathogenesis of cardiac insufficiency and essential hypertension.
10. Pathogenesis of essential hypertension.
11. Mechanisms of manifestations in left and right heart failure.
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 cardiac failure in case of decreased venous outflow.
17. Etiology, pathogenesis and patterns of coronary artery disease.
18. Pathogenesis of nephrogenic hypertension.
19. Pathogenesis of endocrine hypertension.
20. The role of endothelial dysfunction in the pathogenesis of essential hypertension.

Pathophysiology of respiratory system

1. Central disorders of pulmonary ventilation. Causes. Pathogenesis. Manifestations. Pneumogram changes. Consequences.
2. Extra-parenchymal restrictive pulmonary ventilation disorders. Causes. Pathogenesis. Manifestations. Pneumogram changes. Consequences.
3. Intra-parenchymal restrictive pulmonary ventilation disorders. Causes. Pathogenesis. Manifestations. Pneumogram changes. Consequences. Pulmonary emphysema. Notion. Types. Causes. Pathogenesis. Manifestations . Pneumogram changes. Consequences.
4. Intra-parenchymal restrictive pulmonary ventilation disorders. Pulmonary atelectasis. Notion. Types. Causes. Pathogenesis. Manifestations. Pneumogram changes. Consequences.
5. Intra-parenchymal restrictive pulmonary ventilation disorders. Pulmonary sclerosis. Causes. Pathogenesis. Manifestations . Pneumogram changes. Consequences.
6. Obstruction of upper airways. Causes. Pathogenesis. Manifestations. Pneumogram changes. Consequences.
7. Obstruction of lower airways. Notion. Causes. Bronchial asthma. Notion. Immune and non-immune mechanisms of asthma. Manifestations. Pneumogram changes. Consequences.
8. Alveolo-capillary gas diffusion disorders. Causes. Pathogenesis. Manifestations . Consequences.
9. Pulmonary congestion. Causes. Pathogenesis. Manifestations. Consequences.
10. Pulmonary edema. Notion. Causes. Pathogenesis. Manifestations . Pneumogram changes. Consequences.
11. Acute respiratory distress syndrome in adults. Notion. Causes. Pathogenesis. Stages. Manifestations . Consequences.
12. Respiratory failure . Notion. Classification. Causes. Pathogenesis. Stages. Manifestations. Consequences.
13. Dyspnea. Notion. Types. Causes. Pathogenesis. Manifestations. Pneumogram changes.
14. Asphyxia. Notion. Stages. Causes. Pathogenesis. Manifestations. Pneumogram changes.