EXAM QUESTIONS
structure questions

1. Ischemic cell injury. The causes and pathogenesis. Reversible and irreversible injury.
2. Role of ionized intracellular calcium and lipid peroxidation in aggravation of this pathological condition.
3. The mediators of inflammation which are the metabolites of arachidonic acid. Their role in inflammation.
5. Vascular reactions in the site of an acute inflammation. The role of biological active substances in these processes.
6. Phagocytosis. Stages and the events characteristic of each stage. The most important chemoattractants and their origin. The role of the phagocytosis in course of inflammation.
7. Leukocytes emigration in acute inflammation. The stages and characteristic of each stage. Biological significance of the phenomena.
8. Cellular events in acute inflammation. Emigration of the leukocytes: stages and corresponding events in their dynamic.
9. Mediators of inflammation. The sources and mechanisms of their action in course of an acute inflammation.
10. Acute phase response. Definition and the main mechanisms of its realizing. The most important mediators which are involved in this defensive reaction.
11. The proteins of an acute phase response and their role in this condition.
12. Fever as a basic sign of an acute phase response. Classification, causes and clinical description of three steps of fever. The mechanism of elevation of body temperature. Positive and negative features of fever.
15. Classification of hypersensitivity reactions. Role of the mast cells and basophils in type I of hypersensitivity reactions.
17. The clinical examples and common pathogenesis of hypersensitivity type II.
18. The 1st type of hypersensitivity. The causes and mechanism of patient sensitization to etiologic factors. The basic diagnostic methods and possible methods of treatment.
19. Type III of hypersensitivity reaction. Diseases belong to this type of hypersensitivity. The stages and their pathogenesis.
20. Type IV of hypersensitivity reaction. The most important clinical variants. Etiologic factors and pathogenesis. The mediators which are involved in this type of immunopathology.

21. Primary hemostasis. The factors which are involved in the thrombus formation. The diseases of primary hemostasis with their pathogenesis.


27. Diabetus mellitus type II. The most important features of its pathogenesis. Clinical signs with their explanation. Early and late complications of the pathology.


29. General adaptation syndrome (GAS). The stages and Selye’s triad of changes in special organs and systems. Adaptive hormones and their role in the defensive reactions realizing in course of stress.


31. Primary aldosteronism. The main causes. Clinical syndromes and their pathogenesis.

32. Hypothyroidism. The main causes and specific syndromes. Characteristics of clinical features with their pathogenesis.


34. Hyperproduction of growth hormone. The most important clinical forms. Mechanisms of symptoms, that characterize these forms.

35. The main causes and pathogenesis of B-12(folate) deficiency anemia. Characteristic of clinical features, blood and bone marrow.


43. Classifications of heart insufficiency. The causes of heart pre- and postload forms (overload by volume and by pressure). Cardiac and extracardiac hemodynamic indexes characteristic of heart insufficiency.

44. Acute and chronic left-sided heart insufficiency. The causes, main symptoms, consequences of chronic heart failure.

45. Right-sided heart insufficiency. The causes of acute and chronic forms. The main clinical symptoms and their pathogenesis.

46. The mechanism of the development of secondary aldosteronism in course of chronic heart insufficiency.

47. Myocardial infarction. The causes. Clinical features and laboratory investigations. The principles of therapy.


49. ECG in myocardial infarction. ECG characteristic of each of three zones of completely formed myocardial infarction. ECG pattern evolution and their picture at the different stages.

50. Secondary hypertensions. Clinical variants and mechanisms of their development.

51. Bronchial asthma. Classification. The mechanisms of the main clinical manifestations. Clinical complications in the patients with bronchial asthma.

52. Obstructive lung diseases. The clinical examples. The most important clinical symptoms and ventilation indexes that are characteristic of these diseases.


54. Pathogenesis of impaired ventilation. The causes and specific spirogramm indexes which characterize restrictive disturbance of ventilation.


56. Acute respiratory syndrome in the adults and newborns. The main causes and mechanism of development.

57. Peptic ulcer disease. The most important factors which are involved in this pathology and life-threatening complications. Methods of therapy.


59. The main syndromes which characteristic of chronic hepatic failure.
Portal-to systemic shunting: clinical signs with their corresponding mechanisms.
60. Three types of jaundice. Intrahepatic form. The main causes and mechanism of this type of jaundice. Clinical and laboratory manifestations.
61. The forms of an acute renal failure. Intrarenal form: the causes, stages, and symptoms with their explanation. The role of RAAS system activation as vicious circle in this type of pathology
63. The causes and symptoms of upper and lower motoneurons injury.
64. Neurotransmission disorders in the peripheral cholinergic synapses on the examples of such diseases as botulism, myasthenia gravis and poisoning with cholinesterase blockers.
65. General characteristics of movement disorders associated with basal ganglia impairment (Parkinsonism and Huntington’s disease).
66. Pain receptors and substances, which can activate them. Two kinds of pain. The central pathways of pain transmission. Endogeneous antinociceptive mechanisms of pain suppression.