**Microcirculation**

1. Arterial hyperemia. Causes. Pathogenesis. Manifestations.
2. Venous hyperemia. Causes. Pathogenesis. Manifestations.
3. Ischemia. Causes. Pathogenesis. Manifestations.
4. Hydrostatic edema. Causes. Pathogenesis.
5. Hypooncotic edema. Causes. Pathogenesis.
6. Hyperosmolar edema. Causes. Pathogenesis.
7. Membranogenic edema. Causes. Pathogenesis.
8. Cardiac edema.
9. Hepatic edema.
10. Renal edema.
11. Endogenous embolism. Pathogenesis. Consequences.
12. Exogenous embolism. Pathogenesis. Consequences.
13. Pathogenesis of cerebral and pulmonary trombembolism.
14. Pathogenesis of white and red thrombus.
15. Stasis. Causes. Pathogenesis, consequences.

**Inflammation**

1. Secondary alteration in inflammatory focus. Mechanisms of injury expansion.
2. Mechanisms of necrosis and apoptosis in inflammatory focus.
3. Pathogenesis of inflammation. Role of PAMP, DAMP, Toll-like and NOD-like receptors in inflammation.
4. Role of inflammasome in inflammatory reaction.
5. Pro- and antiinflammatory effects of cytokines. Effects of mast cell derived mediators.
6. Pathogeny of leucocyte emigration into inflammatory focus.
7. Origin and role of eucosanoids in inflammation.
8. Role of complement in inflammatory reaction.
9. Acute-phase proteins. Their pathogenetic role in development of inflammation and sistemic inflammatory response syndrome.
10. Plasma–derived mediators. Pathogeneic role in inflammation development.
11. Mechanisms of exudation in inflammatory focus. Types and characteristics of exudate.
12. Proliferation and regeneration in inflammatory focus. Cellular sources of proliferation.
13. Pathogeny of systemic changes in inflammation.

**Allergy**

1. Allergy. General pathogenesis. The stages. The general characteristic.
2. Type 1 hypersensitivity disorder. The hallmark of antigen, antibodies. Pathogenesis.
3. Anaphylactic shock. Causes. Pathogenesis. Manifestations.
4. Pathogenesis of circulatory and respiratory failure in anaphylactic shock.
5. Local anaphylactic reactions: atopic dermatitis, allergic rhinitis.
6. Type 2 hypersensitivity disorders. The role of NK cells in antibodies mediated cytotoxity.
7. Type 2 hypersensitivity disorders. The hallmark of antigens, antibodies. Pathogenesis. Manifestations.
8. Type 2 hypersensitivity disorders. Pathogenesis of autoimmune hemolytic anemia.
9. Type 3 hypersensitivity disorders. The hallmark of antigens, antibodies. Pathogenesis. Manifestations.
10. Pathogenesis of tissues lesions in type 3 hypersensitivity disorders.
11. Type 3 hypersensitivity disorders. Pathogenesis of serum sickness.
12. Type 3 hypersensitivity disorders. Pathogenesis of local Arthus phenomenon.
13. Type 4 hypersensitivity disorders. The hallmark of antigens. Pathogenesis. Manifestations. Contact dermatitis.
14. Pathogenesis of type 4 allergic reactions: reaction to tuberculin (Mantoux test).
15. Pathogenesis of autoimmune reactions. Stimulation and blocking reactions: Graves disease, Hashimotto, miastenia gravis.
16. Pseudoallergic reactions. Pathogenesis. Manifestations.
17. Pathogenetic therapeutic principles of allergic reactions.