

***EXAM QUESTIONS / SUB-QUESTIONS for students of the educational program Dentistry***

1. The function of the central organs of the immune system: bone marrow, and thymus.
2. Peripheral organs of the immune system: lymph nodes, spleen, lymphatic follicles of the gastrointestinal tract.
3. Cells of the immune system:  
Lymphocytes - populations and subpopulations of lymphocytes;  
Phagocytes - macrophages and monocytes, neutrophils, eosinophils;  
Basophils and mast cells.
4. Mechanisms of immunity.
5. Humoral immunity, primary immune response, secondary immune response.
6. The structure of immunoglobulins.
7. Classes of immunoglobulins: IgG, IgM, IgA, IgD, IgE.
8. Cellular immunity, major histocompatibility complex, HLA.
9. Phagocytes, circulating and tissue; Chemotaxis, opsonization, phagocytosis.
10. Addition. Classical and alternative pathways of complement activation.
11. Formation of a membrane attack complex.
12. Antigens. Complete antigens, haptens. Routes of entry into the body.
13. Classification of allergic reactions.
14. Allergic reactions of immediate type.
15. Cytotoxic allergic reactions.
16. Immune complex allergic reactions.
17. Delayed allergic reactions.
18. Mast Cells. Mechanisms for the release of mediators.
19. The role of inflammatory mediators in developing an immediate allergic reaction.
20. Mediators-granules of mast cells. histamine, enzymes,
21. Proteoglycans, chemotaxis factors.
22. Synthesis of mediators during cell activation. Metabolism of arachidonic acid. Prostaglandins, leukotrienes, platelet-activating factor.

23. Other inflammatory mediators: adenosine, bradykinin, and serotonin.
24. Diagnosis of diseases caused by immediate allergic reactions.
25. Allergological history.
26. Medical examinations.
27. Laboratory research. General blood analysis. Eosinophilia. Eosinophils in a smear.
28. The level of total IgE in blood serum.
29. Skin sampling, screening, and selection of allergens.
30. Indications and contraindications for skin sampling. Conducting technique. Prick tests. intradermal tests.
31. Evaluation of the results of skin sampling.
32. Provocative samples. main advantage. The main disadvantage.
33. Specific methods for the determination of IgE.
34. Study of the function of external respiration.
35. X-ray examination in allergology practice.
36. Atopic diseases.
37. Inhalation allergens. Their origin and particle sizes.
38. Pollen allergens of plants. Ambrosia. Flakes. plants.
39. Fungal allergens.
40. Epidermal allergens. The epidermis of cats and dogs.
41. Room dust. micro pliers.
42. Particles of insects. Cockroaches.
43. Negative environmental factors. Climatic conditions (influence of high humidity on indoor allergens).
44. Air pollution:  
Smog.  
photochemical smog.  
Air pollution in buildings. Tobacco smoke. volatiles.
45. Viruses and bacteria as allergens.
46. Basic principles of treatment of allergic diseases. Stop contact with allergens.
47. Visiting the patient's apartment to inspect the living environment and identify possible allergens.

48. Changing the environment to eliminate allergens.
49. Drug treatment of allergic diseases.
50. H1- and H2-blockers.
51. Pharmacokinetics and pharmacodynamics of H1-blockers.
52. Indications for the appointment of H1-blockers.
53. Side effects of H1-blockers.
54. Adrenostimulators and adrenoblockers.
55. Alpha-agonists. reviews. Doses and routes of administration. side effects
56. Beta-agonists. Pharmacokinetics and pharmacodynamics.
57. Catecholamines in allergology practice.
58. Theophylline.
59. M-anticholinergics in allergology practice.
60. Cromons. Indications for use.
61. Corticosteroids. Chemical structure. Pharmacodynamics.  
Replacement of corticosteroids. Secretion, transport, metabolism, and excretion.  
Indications for systemic use of corticosteroids.  
Doses of corticosteroids and side effects.
62. Expectorants and mechanisms of their action.
63. The essence of desensitization (specific immunotherapy in allergology practice).  
Indications and effectiveness of desensitization.  
desensitization schemes. increasing doses. maintenance doses.
64. The role of patient education in better control of allergic diseases.
65. Allergic rhinitis.  
Seasonal allergic rhinitis.  
Perennial allergic rhinitis. pathogenesis. clinical picture. diagnosis.
66. Vasomotor rhinitis.
67. Eosinophilic non-allergic rhinitis.
68. Other forms of rhinitis (infectious, medicinal, rhinitis in endocrine diseases).
69. Allergic conjunctivitis. pathogenesis. clinic. diagnosis. treatment.

70. Bronchial asthma. definition.

71. Pathogenesis of bronchial asthma.

72. Pathological changes are causing airway obstruction.

73. Examination of a patient with bronchial asthma.

Laboratory and instrumental studies of a patient with bronchial asthma.

The study of the function of external respiration in a patient with bronchial asthma.

Provocative tests in patients with asthma.

74. Complications of bronchial asthma:

Pneumothorax and pneumomediastinum.

bronchiectasis.

Complications of the cardiovascular system in bronchial asthma.

asthmatic status.

Confused breath.

75. Differential diagnosis in an attack of bronchial asthma.

76. Differential diagnosis in the period between attacks of bronchial asthma.

77. Treatment of bronchial asthma (BA):

78. Non-drug treatment. Patient education. Elimination of factors that cause asthma attacks. Desensitization.

79. Medical treatment of asthma. Bronchodilators. Methylxanthines.

M-anticholinergics in the treatment of asthma. Cromolyn. nedocromil.

Corticosteroids in the treatment of AD. Indications, routes of administration, and doses (treatment regimens). side effects

BA management principles.

Anti-IgE therapy. omalizumab.

80. Anaphylactic reactions. Etiology of anaphylaxis.

81. Pathogenesis of anaphylaxis.

82. Clinic of anaphylaxis.

83. Diagnosis of anaphylaxis.

84. Differential diagnosis of anaphylaxis.

85. Treatment of anaphylaxis.
86. Prevention of anaphylactic reactions.
87. Anaphylactoid reactions.
88. Classification of complications (adverse reactions) of drug treatment (type A and B reactions).
89. Drug intolerance.
90. Idiosyncrasy.
91. Drug allergy.
92. Manifestations of drug allergy.
93. Immunological classification of drug allergy.
94. Clinical classification of drug allergy.
95. The difference between drug allergy and toxic effects of drugs.
96. Diagnosis of drug allergy. History data.
97. Skin tests for immediate-type allergic reactions to drugs.
98. Skin tests for delayed-type allergic reactions to drugs.
99. Tests used in drug allergy.
100. Prevention of drug allergy.
101. Treatment of drug allergy.
102. Individual cases of treatment complications. Allergy to penicillin.
103. Intolerance to aspirin.
104. Side effects of local anesthetics.
105. Anaphylactic reactions during general anesthesia.