Introduction to Immunology

Immunology · Practice Test · 20 Questions

1. What is the primary function of the immune system as described in the text?

A) To produce antibodies
B) To defend the organism against external and internal aggressions
C) To regulate body temperature
D) To digest food

2. Which of the following are key components of the immune system mentioned in the overview?

A) Hormones and enzymes
B) Soluble substances and cells
C) Nervous system and muscles
D) Digestive enzymes and bile

3. How is communication within the immune system primarily ensured?

A) Through nerve impulses
B) Via electrical signals
C) By cytokines and cell adhesion molecules
D) Using mechanical forces

4. Which of the following is NOT listed as a disease related to immune system dysfunction?

A) Immune deficiencies
B) Allergies
C) Diabetes mellitus
D) Autoimmune diseases

5. What are the two main branches of immunity discussed?

A) Humoral and cellular immunity
B) Innate and adaptive immunity
C) Active and passive immunity
D) Primary and secondary immunity

6. Which type of immunity is described as natural and innate?

A) Specific immunity
B) Adaptive immunity
C) Non-specific immunity
D) Acquired immunity

7. What is a characteristic of non-specific immunity?

A) It has immunological memory
B) It acts immediately
C) It is highly specific to antigens
D) It develops over time

8. Which type of immunity intervenes after 5 to 6 days and involves mechanisms like neutralization by antibodies and phagocytosis via opsonization?

A) Innate immunity
B) Non-specific immunity
C) Specific immunity
D) Natural immunity

9. What is the definition of an antigen?

A) A molecule that enhances immune response
B) A substance capable of inducing an immune response
C) A type of white blood cell
D) A substance that causes inflammation

10. What is an epitope?

A) An entire antigen molecule
B) A small portion of an antigen recognized by an antibody
C) A type of cytokine
D) A cell adhesion molecule

11. What is immunogenicity?

A) The ability of an antigen to induce an immune response
B) The specificity of an antibody
C) The process of phagocytosis
D) The formation of memory cells

12. What is a hapten?

A) A large, immunogenic molecule
B) A small molecule that is not immunogenic by itself but can induce an immune response when coupled to a carrier protein
C) A type of T cell receptor
D) A cytokine that suppresses immune responses

13. Which factor is NOT listed as dependent on the antigen for immunogenicity?

A) Origin
B) Chemical nature
C) Host's genetic constitution
D) Molecular weight

14. What is the role of adjuvants in immunology?

A) To suppress immune responses
B) To increase the immunogenicity of antigens
C) To directly kill pathogens
D) To block antibody production

15. What is antigenic specificity?

A) The ability of an antigen to bind to multiple antibodies
B) The specific reaction of an antibody to a particular antigenic determinant
C) The general recognition of antigens by the immune system
D) The process of antigen presentation

16. What are the main functions of immunoglobulins (antibodies)?

A) To transport oxygen
B) To neutralize pathogens and toxins, opsonization, and complement activation
C) To regulate blood pressure
D) To catalyze metabolic reactions

17. Which type of hypersensitivity is immediate and often associated with allergies like asthma and anaphylaxis?

A) Type II hypersensitivity
B) Type III hypersensitivity
C) Type I hypersensitivity
D) Type IV hypersensitivity

18. What is the primary role of T helper (CD4+) cells?

A) To directly kill infected cells
B) To produce antibodies
C) To regulate and control immune responses
D) To present antigens to B cells

19. Which type of T cell is primarily responsible for cell-mediated cytotoxicity?

A) T helper cells (CD4+)
B) Regulatory T cells (Treg)
C) Cytotoxic T lymphocytes (CTLs) (CD8+)
D) B cells

20. What is the main function of the Major Histocompatibility Complex (MHC) molecules (HLA in humans)?

A) To produce antibodies
B) To present antigens to T cells
C) To transport oxygen
D) To regulate body temperature