

# Introduction to Immunology

Immunology · Answer Key · 20 Questions

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**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