

**SSR DEGREE COLLEGE (AUTONOMOUS) NIZAMABAD**  
**II SEMESTER INTERNAL – II QUESTION BANK**  
**BSC BIOTECHNOLOGY**  
**SEMESTER – II**  
**MICROBIOLOGY & IMMUNOLOGY**

**MCQs**

1. **Innate immunity is also known as:**  
a) Acquired immunity  
b) Non-specific immunity  
c) Passive immunity  
d) Active immunity  
**Answer: b**
2. **Adaptive immunity is mainly mediated by:**  
a) Neutrophils  
b) Natural killer cells  
c) T-cells and B-cells  
d) Mast cells  
**Answer: c**
3. **Helper T-cells are also called:**  
a) CD4+ cells  
b) CD8+ cells  
c) NK cells  
d) Macrophages  
**Answer: a**
4. **The primary lymphoid organ where T-cells mature is:**  
a) Spleen  
b) Thymus  
c) Liver  
d) Lymph node  
**Answer: b**
5. **Bone marrow is a:**  
a) Secondary immune organ  
b) Site of T-cell maturation  
c) Primary immune organ  
d) Site of antigen presentation  
**Answer: c**
6. **Examples of secondary organs of immune system include:**  
a) Thymus and bone marrow  
b) Spleen and lymph nodes

- c) Bone marrow only
- d) Liver and spleen

**Answer: b**

**7. Antigenicity refers to:**

- a) Ability to produce immunity
- b) Ability to bind to antibody or TCR
- c) Ability of antigens to become immunogenic
- d) Ability to cause hypersensitivity

**Answer: b**

**8. Immunogenicity depends on:**

- a) Size and complexity
- b) Foreignness
- c) Dose and route of administration
- d) All of the above

**Answer: d**

**9. A hapten becomes immunogenic only when attached to:**

- a) Saline
- b) Carrier protein
- c) Antibody
- d) Microorganism

**Answer: b**

**10. Adjuvants are added to vaccines to:**

- a) Destroy antibodies
- b) Reduce immune response
- c) Enhance immune response
- d) Decrease antigen strength

**Answer: c**

**The antigen-binding portion of an immunoglobulin is located in the:**

- a) Fc region
- b) Variable region
- c) Light chain only
- d) Heavy chain only

**Answer: b**

**IgG antibody is responsible for:**

- a) Primary immune response
- b) Allergic response
- c) Secondary immune response
- d) Local mucosal immunity

**Answer: c**

**Major Histocompatibility Complex (MHC) in humans is known as:**

- a) BCR
- b) HLA
- c) APC
- d) CD4

**Answer: b**

**MHC-I molecules present antigens to:**

- a) CD4+ T-cells
- b) CD8+ T-cells
- c) B-cells
- d) Plasma cells

**Answer: b**

**Antigen presenting cells include:**

- a) Dendritic cells
- b) Macrophages
- c) B-cells
- d) All of the above

**Answer: d**

**The ternary complex in T-cell activation consists of:**

- a) TCR + epitope + MHC
- b) BCR + antigen
- c) IgG + epitope
- d) MHC only

**Answer: a**

**Type I hypersensitivity is also known as:**

- a) Immune complex reaction
- b) Delayed type reaction
- c) Allergic reaction
- d) Cytotoxic reaction

**Answer: c**

**Autoimmune disease among the following:**

- a) Tuberculosis
- b) Rheumatoid arthritis
- c) Influenza
- d) Malaria

**Answer: b**

**Monoclonal antibodies are produced by:**

- a) Hybridoma technology
- b) ELISA
- c) Western blotting

d) PCR

**Answer: a**

**Vaccines work primarily by inducing:**

- a) Passive immunity
- b) Active immunity
- c) Hypersensitivity
- d) Autoimmunity

**Answer: b**

### **Fill-in-the-Blanks (with Answers)**

1. Innate immunity is \_\_\_\_\_ (non-specific).
2. Adaptive immunity develops \_\_\_\_\_ exposure to an antigen. **(after)**
3. T-cells originate in the bone marrow and mature in the \_\_\_\_\_. **(Thymus)**
4. B-cells mature in the \_\_\_\_\_. **(Bone marrow)**
5. Lymph nodes and spleen are \_\_\_\_\_ lymphoid organs. **(secondary)**
6. Antigens contain specific reactive sites called \_\_\_\_\_. **(epitopes)**
7. The ability of an antigen to induce an immune response is \_\_\_\_\_. **(immunogenicity)**
8. Small molecules that are antigenic but not immunogenic are called \_\_\_\_\_. **(haptens)**
9. Adjuvants function to \_\_\_\_\_ immune response. **(enhance)**
10. \_\_\_\_\_ cells act as antigen-presenting cells in innate immunity. **(Dendritic)**
11. • Immunoglobulins are also known as \_\_\_\_\_. **(antibodies)**
12. • The constant region of antibody is called \_\_\_\_\_. **(Fc region)**
13. • Human MHC system is termed \_\_\_\_\_. **(HLA – Human Leukocyte Antigen)**
14. • \_\_\_\_\_ T-cells express CD4. **(Helper)**
15. • Type IV hypersensitivity is \_\_\_\_\_ type reaction. **(delayed)**
16. • Cytokines are chemical \_\_\_\_\_ used by immune cells for communication. **(messengers)**
17. • \_\_\_\_\_ is a chronic autoimmune disease causing butterfly rash. **(Systemic lupus erythematosus)**
18. • Hybridoma cells are formed by fusion of B-cell and \_\_\_\_\_. **(myeloma cell)**
19. • Passive immunity provides \_\_\_\_\_ protection. **(temporary)**
20. • Vaccines stimulate \_\_\_\_\_ immunity. **(active)**

### **C. Descriptive questions**

1. WRITE ABOUT TYPES OF IMMUNITY
2. WRITE ABOUT PRIMARY ORGANS OF IMMUNE SYSTEM
3. WRITE STRUCTURE OF IMMUNOGLOBULINS
4. WRITE ABOUT CELL MEDIATED IMMUNITY
5. WRITE ABOUT PRODUCTION OF MONOCLONAL ANTIBODIES