

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**