

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

I. Multiple Choice

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

11. **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

12. **IgG antibody is responsible for:**

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

Answer: c

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

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

d) CD4

Answer: b

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

a) CD4+ T-cells

b) CD8+ T-cells

c) B-cells

d) Plasma cells

Answer: b

15. **Antigen presenting cells include:**

a) Dendritic cells

b) Macrophages

c) B-cells

d) All of the above

Answer: d

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

a) TCR + epitope + MHC

b) BCR + antigen

c) IgG + epitope

d) MHC only

Answer: a

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

a) Immune complex reaction

b) Delayed type reaction

c) Allergic reaction

d) Cytotoxic reaction

Answer: c

18. **Autoimmune disease among the following:**

a) Tuberculosis

b) Rheumatoid arthritis

c) Influenza

d) Malaria

Answer: b

19. **Monoclonal antibodies are produced by:**

a) Hybridoma technology

b) ELISA

c) Western blotting

d) PCR

Answer: a

20. **Vaccines work primarily by inducing:**

a) Passive immunity

b) Active immunity

c) Hypersensitivity

d) Autoimmunity

Answer: b

II. Fill-in-the-Blanks

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**)

III . 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