SSR DEGREE & PG COLLEGE (5029)

M.Sc BIOTECHNOLOGY

INTERNAL ASSESSMENT -I

QUESTION BANK

SEM – II

PAPER : IMMUNOLOGY

I)CHOOSE THE CORRECT ANSWERS:

1)Who is known as the “Father of Immunology”?

a) Robert Koch

b) Edward Jenner

c) Louis Pasteur

d) Paul Ehrlich

Answer: b) Edward Jenner

2)Edward Jenner developed the first vaccine against:

a) Polio

b) Rabies

c) Smallpox

d) Tuberculosis

Answer: c) Smallpox

3)The term “immunity” refers to:

a) Digestion of food

b) Resistance against diseases

c) Blood clotting

d) Respiration

Answer: b) Resistance against diseases

4)Immunity is mainly classified into:

a) Cellular and humoral

b) Natural and artificial

c) Innate and acquired

d) Active and inflammatory

Answer: c) Innate and acquired

5)Innate immunity is:

a) Present from birth

b) Developed after vaccination

c) Produced only after infection

d) Temporary immunity

Answer: a) Present from birth

6)Which of the following is an anatomical barrier of innate immunity?

a) Skin

b) Antibodies

c) Vaccines

d) Memory cells

Answer: a) Skin

7)Tears and saliva help in defense due to the presence of:

a) Hemoglobin

b) Lysozyme

c) Insulin

d) Histamine

Answer: b) Lysozyme

8)Fever is considered which type of innate defense barrier?

a) Anatomical barrier

b) Physiological barrier

c) Phagocytic barrier

d) Mechanical barrier

Answer: b) Physiological barrier

9)Inflammation is characterized by:

a) Redness and swelling

b) Hair fall

c) Blindness

d) Bone formation

Answer: a) Redness and swelling

10)Phagocytosis is the process of:

a) Antibody production

b) Engulfing and destroying microbes

c) Blood clotting

d) Hormone secretion

Answer: b) Engulfing and destroying microbes

11)Which cells are mainly involved in phagocytosis?

a) RBCs

b) Neutrophils and macrophages

c) Platelets

d) Plasma cells

Answer: b) Neutrophils and macrophages

12)Toll-like receptors (TLRs) are important for:

a) Digestion

b) Recognition of pathogens

c) Oxygen transport

d) Protein synthesis

Answer: b) Recognition of pathogens

13)Toll-like receptors are mainly associated with:

a) Acquired immunity

b) Innate immunity

c) Artificial immunity

d) Passive immunity

Answer: b) Innate immunity

14)Acquired immunity develops:

a) At birth

b) After exposure to antigens

c) Only in old age

d) Without infection

Answer: b) After exposure to antigens

15)Which of the following is a feature of acquired immunity?

a) Non-specific response

b) Memory

c) Present at birth

d) No antigen recognition

Answer: b) Memory

16)Immunity developed after vaccination is called:

a) Passive immunity

b) Innate immunity

c) Active immunity

d) Natural immunity

Answer: c) Active immunity

17)Passive immunity involves:

a) Production of antibodies by the body

b) Transfer of ready-made antibodies

c) Activation of TLRs

d) Inflammation only

Answer: b) Transfer of ready-made antibodies

18)An example of natural passive immunity is:

a) Vaccination

b) Antibiotic therapy

c) Antibodies from mother to baby

d) Fever

Answer: c) Antibodies from mother to baby

19)Rabies vaccine provides:

a) Passive immunity

b) Active immunity

c) Innate immunity

d) Physiological immunity

Answer: b) Active immunity

20)Which scientist proposed the “side-chain theory” of immunity?

a) Edward Jenner

b) Louis Pasteur

c) Paul Ehrlich

d) Robert Hooke

Answer: c) Paul Ehrlich

II)FILL IN THE BLANKS:

1. The thymus is a _____ lymphoid organ.

Answer: Primary

2. Bone marrow is responsible for _____.

Answer: Hematopoiesis

3. Lymph nodes are examples of _____ lymphoid organs.

Answer: Secondary

4. The spleen helps in filtering _____.

Answer: Blood

5. Tonsils are part of the _____ system.

Answer: Lymphatic

6. Tertiary lymphoid organs develop during chronic _____.

Answer: Inflammation

7. The fluid present in lymphatic vessels is called _____.

Answer: Lymph

8. Granulocytes contain cytoplasmic _____.

Answer: Granules

9. Neutrophils are a type of _____.

Answer: Granulocyte

10. Monocytes belong to the group of _____.

Answer: Agranulocytes

11. Lymphocytes are important cells of the _____ system.

Answer: Immune

12. B cells mature in the _____ marrow.

Answer: Bone

13. T cells mature in the _____.

Answer: Thymus

14. Natural killer cells destroy _____ cells.

Answer: Infected

15. An antigen stimulates an _____ response.

Answer: Immune

16. The antigenic determinant is also called an _____.

Answer: Epitope

17. A hapten becomes immunogenic only after binding to a _____.

Answer: Carrier

18. Adjuvants are added to vaccines to increase _____.

Answer: Immunity

19. Super antigens cause excessive activation of _____ cells.

Answer: T

20. The property of an antigen to induce immune response is called _____.

Answer: Immunogenicity

III) ANSWER THE FOLLOWING QUESTIONS:

1)Describe the anatomical, physiological, inflammatory and phagocytic barriers involved in innate immunity.

2)Differentiate between active immunity and passive immunity with suitable examples.

3)Explain the history and development of immunology.

4)Explain the structure and functions of primary lymphoid organs.

5)Define antigens. Explain the properties of antigens.