

Total number of printed pages = 4

**63/1(SEM-5) DSE1A ZOORE5016**

**2024**

**ZOOLOGY**

Paper : ZOORE5016

**( Immunology )**

Full Marks : 60

Pass Marks : 24

Time : 3 hours

***The figures in the margin indicate full marks for the questions.***

1. Choose the correct answer form the followin:1×5=5
- (a) Which of the following is a part of the innate (non-specific) immunity?
- (i) Lysogymes
  - (ii) B.cells
  - (iii) T-cells
  - (iv) Antigen presentivy cell
- (b) The function of Luper T-cell is to \_\_\_\_.
- (i) Stimulate B-cells
  - (ii) Kill the antigen
  - (iii) Kill the antibodies
  - (iv) Supress B-cells

- (c) The most abundant immunoglobulin class is of\_\_.
- (i) Ig A
  - (ii) Ig D
  - (iii) Ig E
  - (iv) Ig G
- (d) Immunodeficiency can be used from which of the following\_\_.
- (i) Gene mutation
  - (ii) Infection
  - (iii) Malnutrition
  - (iv) All of the above.
- (e) The antigen-antibody reaction during allergies releases \_\_\_\_.
- (i) Interferous
  - (ii) Pyrogens
  - (iii) allergens
  - (iv) histamind
- (f) In immune system, interferons are a part of\_\_.
- (i) Physiological barriers
  - (ii) Cellulas barriers
  - (iii) Cytokine barriers
  - (iv) Macrophoges
- (g) Passive immunity can be obtained through\_\_.
- (i) Antigens
  - (ii) Vaccines
  - (iii) Antibodies
  - (iv) Antibiotics

- (h) The antigen binding site in an antibody is found between \_\_\_\_.
- (i) Two light chains
  - (ii) One heavy and one light chain
  - (iii) Two heavy Chains
  - (iv) Either 'i' or 'ii' depending on nature of antigen.
- (i) Antigens are present \_\_\_\_.
- (i) Inside nuclears
  - (ii) On the cell surface
  - (iii) Inside Cytoplasm
  - (iv) On nuclear membrane
- (j) Lysis of foreign cells is mediated through \_\_\_\_.
- (i) Ig M only
  - (ii) Ig A only
  - (iii) Ig M and Ig G
  - (iv) Ig D and Ig E

2. Answer **any five** of the following: 2×5=10
- (a) Distinguish between primary and secondary response.
  - (b) Define passive immunity. Give its significance.
  - (c) What are the Components of immune system?
  - (d) What is the role of antihistamines and memory T-cell in body defence?
  - (e) Define inframatory response.
  - (f) What is autoimmunity? Give an example of an autoimmune disease.
  - (g) What are haptens and adjuvants?

3. Write Short notes (*any five*): 5×5=25
- (a) Role of interferons and helper-T cells.
  - (b) Structure of antibody molecule with diagram.
  - (c) Functions of MHC
  - (d) Principle of adaptive immune system.
  - (e) Exogenous and Endogenous Pathways.
  - (f) Gell and Coombs Classification of hyper sensitivity.
  - (g) Vaccination and Immunisation.
  - (h) Types of antibodies and its functions.
  - (i) Antigen-Antibody interaction.
4. Answer *any two* of the following: 10×2=20
- (a) What do you mean by innate immunity? Explain the barriers of innate immunity. 2+8=10
  - (b) What are the Components of Complement System? Explain how the Complement System provide immunity to the body. 3+7=10
  - (c) Write the components of Acquired immune System. Describe how does the humoral immune System of our body works. 4+6=10
  - (d) What are Lymphoid organs? Explain the types and functions of primary and secondary lymphoid organs. 2+8=10
-