

OR

- (a) Therapeutic uses of mab. 5
- (b) Role of tumor suppressor genes. 5
- (c) Various phages of tumour immuno-surveillance. 5
- (d) Example of ELISA based immunodiagnostics. 5



AQ - 858

First Semester M.Sc. (CBCS Scheme) Examination

BIOTECHNOLOGY

Paper - IV

Biology of Immune System

1BTB-4 / BT104

P. Pages : 4

Time : Three Hours]

[Max. Marks : 100

- Note :** (1) All questions are compulsory and carry equal marks.
 (2) Draw well labelled diagrams whenever necessary.

1. Describe in detail the phylogeny of immune system. Write a note on each type of immunity with their specific role in life span.

OR

What are antibodies ? Write a detail note on their types, structure and functions of each. 20

2. Discuss the following :—

- (a) Characteristics of Polymorphonuclear (PMN) leucocytes. 5

- (b) Structure and function of dendritic cells. 5
- (c) Importance of immunological memory. 5
- (d) Lymphocyte trafficking. 5

OR

- (a) Types of major lymphoid organs. 5
- (b) T cell-receptors. 5
- (c) Importance of Antigen presenting cells (APC). 5
- (d) Consequences of Antigen and Antibody binding. 5

3. What is Complement System and the components associated with it ? Write in detail about Alternative complement pathway of complement system.

OR

What are major histocompatibility complex (MHC)? Write in detail the types of MHC molecules with their peptide interactions. 20

4. Discuss the following :—

- (a) Gell and Coomb's classification of hypersensitivity reaction. 5

- (b) Hyperacute rejection of organ transplantation. 5
- (c) Role of mast cell degranulation in allergy. 5
- (d) Specific and nonspecific immunity for helminthes. 5

OR

- (a) Skin testing method for allergens. 5
- (b) Types of organ transplants. 5
- (c) Characteristics of delayed type of hypersensitivity. 5
- (d) Types of immunosuppressive drugs used to treat transplant rejection. 5

5. Write notes on following.

- (a) Differentiate between benign and malignant tumor. 5
- (b) Applications of synthetic vaccines. 5
- (c) Structure of retrovirus HIV-I virion. 5
- (d) HAT selection of mab. 5