



Seat No. : _____

NB-106

November-2025

B.Sc., Sem.-V

MI-303 : Microbiology (Principles of Immunology)

Time : 2:30 Hours]

[Max. Marks : 70

- Instructions :**
- (1) All questions are compulsory.
 - (2) Figures on the right indicates marks.
 - (3) Mention correct question number against the answer.
 - (4) Draw figures wherever necessary.

1. Discuss the characteristics and functions of B cells and T cells. **14**

OR

1. (A) Describe the innate immunity with suitable examples. **7**

1. (B) Write a brief note on types and characteristics of immune response. **7**

2. Discuss the types and characteristics of different classes of antibodies. **14**

OR

2. (A) Write a note on physicochemical characteristics of antigen. **7**

2. (B) Discuss the production and applications of monoclonal antibodies. **7**

3. Describe two different methods of using radioisotope in advance antigen antibody reactions. **14**

OR

3. (A) Describe the Immunofluorescence test. **7**

3. (B) Write the principle, methods and applications of precipitation reactions. **7**

4. Enlist types of hypersensitivity and describe type one hypersensitivity reactions. **14**

OR

4. (A) Write brief note on autoimmunity. **7**

4. (B) Discuss the modern concept of blood banking. **7**

5. Give short and specific answers in **1-2** lines only : (any **seven**)

14

- (1) Write two representative cells of MHC type II.
 - (2) Write two examples of passive immunity.
 - (3) Write two characters of acquired immunity.
 - (4) Write two functions of f(c) component.
 - (5) Write two names of sulphur containing amino acid used in disulphide bonds present in antibody.
 - (6) Write names of two major types of antigens.
 - (7) Write two names of enzymes used in ELISA test.
 - (8) Name antibodies fixing complement components.
 - (9) Write one name of skin test and disease detected.
 - (10) Mention two congenital immune disorders.
 - (11) Write two names of immunosuppressive drugs.
 - (12) Write two names of abnormal blood groups.
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