

**BACHELOR OF SCIENCE (CBCS-2018 COURSE)**  
**T. Y. B. Sc. Sem-VI :SUMMER- 2022**  
**SUBJECT : MICROBIOLOGY : IMMUNOLOGY**

Day : Tuesday  
Date : 5/7/2022

**S-18487-2022**

Time : 11:00 AM-02:00 PM  
Max. Marks : 60

**N.B.:**

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.

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- Q.1** Attempt **ANY TWO** of the following: [12]
- a) Define the term 'Antigenicity' and discuss 'Molecular weight' as a factor affecting antigenicity.
  - b) Explain 'Burnet's clonal selection theory' for antibody formation.
  - c) Give the cytology and functions of 'Eosinophils'.
- Q.2** Attempt **ANY TWO** of the following: [12]
- a) Explain the 'Mechanism of mast cell degranulation' during Type-I Hypersensitivity.
  - b) What are 'monoclonal antibodies'? Give their applications.
  - c) Enlist 'Antigen Presenting Cells' and describe the role of 'proteasome' in the antigen presentation.
- Q.3** Attempt **ANY TWO** of the following: [12]
- a) Giving suitable examples, explain the 'Mechanism of Type-II Hypersensitivity'.
  - b) Give the Cytology and Functions of 'T Cells'.
  - c) Discuss 'Human Immunoglobulin Allotypes'.
- Q.4** Write short notes on **ANY THREE** of the following: [12]
- a) Conformational Epitopes
  - b) Carrier Protein
  - c) Interleukin 1
  - d)  $\alpha$  -Interferons
- Q.5** Attempt **ANY FOUR** of the following: [12]
- a) Give examples of 'Type-III Hypersensitivity'.
  - b) Justify the statement that ' $\gamma$  Interferons affects antigen presentation process'.
  - c) Give the biological applications of 'TNF-  $\alpha$ '
  - d) Explain the significance of 'B-Lymphocytes'.
  - e) Give the function of 'Natural Killer Cells'.
  - f) What is 'Paratope'? mention its significance.

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