

**S. Y. B. Sc. (Biotechnology) SEM – III (CBCS - 2015 COURSE) :
SUMMER - 2019**

Subject: Immunology

Day: Tuesday
Date: 02/04/2019

S-2019-1379

Time: 02.00 PM TO 05.00 PM
Max. Marks: 60

N.B.:

- 1) Q1 and Q5 are compulsory.
- 2) Answer ANY TWO questions from Q 2, 3, 4 in Section I.
- 3) Answer ANY TWO questions from Q 6, 7, 8 in Section II.
- 4) Answers should be written in **SAME** answer book.
- 5) Draw a labeled diagram WHEREVER necessary.

SECTION - 01

Q.1) Answer the following: (ANY FIVE) (2 Marks X 5 = 10)

- a) Name two primary lymphoid organs and state their function
- b) Name two cells of the myeloid lineage and state their function
- c) Name: i) Macrophages found in liver ii) Dendritic cells found in epidermis and mucus membrane
- d) Name the antibody i) involved in hypersensitivity reactions ii) is most abundant isotype in serum
- e) State the function of TCR-CD3 complex
- f) Explain the role of perforins and granzymes

Q.2) Answer the following: (5 Marks X 2 = 10)

- a) State the subclasses of T lymphocyte and explain the function of each subclass
- b) Differentiate between humoral and cell mediated immune response

Q.3) Explain the following: (5 Marks X 2 = 10)

- a) Antibody Dependent Cell Cytotoxicity
- b) Describe in detail the exogenous pathway of antigen presentation

Q.4) Write short notes on the following: (5 Marks X 2 = 10)

- a) IgM
- b) Inflammation

SECTION - 02

Q.5) Answer the following: (ANY FIVE) (2 Marks X 5 = 10)

- a) Explain antagonism of cytokines with a suitable example
- b) Name two cytokines produced by T_H2 cells
- c) State Gell and Coombs classification of hypersensitivity
- d) State the function of the membrane attack complex
- e) Name two commonly used chromogens in ELISA
- f) Give two examples of agglutination reaction

Q.6) Answer the following: (5 Marks X 2 = 10)

- a) Explain in brief any two applications of monoclonal antibodies
- b) Describe in detail the classical pathway of complement activation

Q.7) Explain the following: (5 Marks X 2 = 10)

- a) Explain structure and function of MHC-Class-II molecules
- b) Graves Disease

Q.8) Write short notes on the following: (5 Marks X 2 = 10)

- a) Western blotting
- b) Immuno electrophoresis
