

1056

M.Sc. (Bio-Informatics) Second Semester
MBIN-8010: Immunology and Cell Biology

Max. Marks: 60

Time allowed: 3 Hours

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting atleast one questions from each Unit.

x-x-x

I. Answer briefly:-

- a) ELISA
- b) Secretory antibody
- c) Dendritic cells
- d) GPCR
- e) Passive division
- f) Na⁺/K⁺Pump
- g) CDR
- h) Uniprot transport

(8x1½)

UNIT - I

- II. a) Write a note on B cell activation. (6,6)
b) Elaborate on the process of phagocytosis. (12)
- III. Explain the generation of antibody diversity. (12)

UNIT - II

IV. Write notes on:-

- a) Monoclonal antibodies
- b) Immuno suppression
- c) Immuno florescence

(3x4)

- V. a) Explain one software used for vaccine design. (6,6)
b) Write the process of T cell mediated cytotoxicity.

UNIT- III

- VI. a) Explain the JAK-STAT signaling pathway. (6+6)
b) How are proteins targeted to the mitochondrial matrix?
- VII. a) How is passive transport mediated across the cell membrane?
b) Explain the mechanism of vesicular budding and fusion in the secretory pathway. (6,6)

x-x-x