Exam.Code:0440
Sub. Code: 3500

1059

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

Time allowed: 3 Hours Max. Marks: 60

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

x-x-x

I. Answer the following briefly:

a) Super antigens

b) Cell mediated lysis

c) MHC restriction

d) IgG and Its domain

e) Hypersensitivity Type-1

f) SCID

g) Monoclonal antibodies

h) Passive immunity (8x1½)

UNIT – I

II. a) Define haematopoiesis. Describe the process of lymphocytes origin and differentiation.

b) Explain the process of antigen processing in the cell to mediate the immune response. (7,5)

III. a) How the various cells of immune system work specifically and non specifically against antigens?

b) How MHC-1 and MHC-11 differ structurally and functionally? (7,5)

UNIT – II

IV. Write note on the following:-

a) Data Base prediction softwares and vacdne design

b) Immunofluorescence techniques and their applications (6,6)

V. A) How the regulation of immune response take place? Which factors regulate the activation of B-Cells?

b) Describe the principle of El-ISA, its types and applications in immunology. (6,6)

P.T.O.

UNIT – III

VI. a) Explain the mechanism of transport of macromolecules in cell. Give appropriate examples to support your answer.

b) Write in detail any one of secretory pathway which you have studied. Give its significance as well .. (6,6)

VII. Write note on the following:-

a) Translocation across the ER

b) Signal transduction : P13mechanian (6,6)