1059
B.Sc. (Hons) Bio-Informatics
Sixth Semester
BIN-6003: Immunology

Time allowed: 3 Hours   **Max. Marks: 60**

NOTE: Attempt <u>five</u> questions in all, including Question No. I which is compulsory
and selecting two questions from each Unit.

x-x-x

I.   Attempt the following briefly:-

   a) Class switching

   b) Suppresor T cells

   c) TgM

   d) Allotype

   e) Allelic exclusion

   f) Passive immunization

   g) Immunodeficiency

   h) Anergy $(8 \times 1\frac{1}{2})$

UNIT – I

II.   a) Write an overview on the cells of the immune system.

   b) Explain the process of antibody affinity maturation.   (8,4)

III. How is antibody diversity generated?   (12)

IV.   a) Explain the structure of the antibody molecule.

   b) Write a note on T cell receptor.   (2x6)

UNIT – II

V.   a) Diagrammatically explain the structure of MHC I molecule.

   b) Describe in detail a systemic autoimmune disorder.   (2x6)

VI.   a) What is the significance of adjuvant in increasing immunogenicity of an antigen?

   b) Write a note on two techniques used for immune diagnostics.   (4,8)

VII.   a) Discuss the differences in the peptide binding pocket of MHC I and MHC II molecules.

b) Elaborate on the use of live inactivated microbes for use as vaccines with examples.   (2x6)

x-x-x