

M.Sc. Bio-Informatics - Ist Sem.

(2119)

Paper : BI-511

Basic Concepts in Biology

Time allowed : 3 hrs.

Max. Marks : 75

Attempt any five questions selecting at least one from each section.

Each question carries 15 marks

SECTION A

Q1. Differentiate between the following and make a well labeled diagram also:

- a. Eukaryotic and Prokaryotic cell
- b. Cell wall and Plasma membrane

7.5x2

Q2. Write a note on the following:

- a. Cell motility
- b. Power house of cell

7.5x2

SECTION B

Q3. What are proteins? Explain structure of proteins.

15

Q4. Write a note on the following:

- a. Structural lipids.
- b. Polysaccharides
- c. Regulation of gluconeogenesis

5x3

SECTION C

Q5. Explain the following:

- a. Inhibition of enzyme
- b. Michaelis-menten equation

7.5x2

Q6 a. Write a note on nomenclature and classification of enzymes?

- b. What is the effect of temperature and pH on enzyme activity?

7.5x2

SECTION D

Q7. Write a note on:

- a. Cell mediated immunity
- b. Maturation and differentiation of T cells
- c. Innate and adaptive immunity.

5x3

Q8. Describe the following

- a. Immunoprecipitation
- b. Humoral Immunity
- c. MHC Polymorphism.

5x3
