

2053

B.Sc (Hons) Bio-Informatics
Sixth Semester

BIN-6002: Introduction to Proteins and Proteomics

Time allowed: 3 Hours

Max. Marks: 60

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

1-1-1

1. Attempt the following :-

- a) How does the pH affect solubility of proteins?
- b) What is the importance of study of proteome?
- c) What is microheterogeneity in proteins?
- d) Give full form of DIP.
- e) Name any two methods for identifying PPIs.
- f) What are advantages of glycosylation of proteins?

(6x2)

UNIT - I

II. a) What are protein arrays and their applications?

b) How are proteins stabilized?

(8,4)

III. a) How is the sequence of proteins determined?

b) What is peptide mapping and its importance?

(8,4)

IV. a) Explain the principles and use of MS in protein structure determination.

b) What is the effect of organic solvents on protein solubility? Give suitable examples.

(8,4)

UNIT - II

V. a) Discuss PPIs present in ribosomes.

b) Giving suitable examples, explain the difference between inter and intra chain disulphide bonds.

(8,4)

P.T.O.

(2)

Sub. Code: 1016

VI. Write notes on the following:-

- a) Yeast two-hybrid method for mapping PPIs
- b) STRING database and its importance.

(8,4)

VII. a) How can MS be used to map PPIs?

- b) How are proteins phosphorylated and its importance?

(8,4)

x-x-x