

2123

M.Sc. (Bio-Informatics) Third Semester
MBIN-8015: Genomics and Proteomics – I

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 briefly:-

- a) Ion torrent
- b) Edman degradation
- c) Pyrosequencing
- d) C value paradox
- e) Telomeres
- f) Centromere
- g) Sample preparation of 2D-PAGE
- h) Native PAGE

(8x1½)

UNIT - I

- II. a) Explain the organization of Chloroplast genome.
- b) Discuss significance of chromatin modification in eukaryotes. (5,7)
- III. a) Write a note on Gene silencing by DNA methylation.
- b) Elaborate on role of Operons in prokaryotes with suitable example. (2x6)

UNIT - II

- IV. Discuss a technique used for analysis of proteomes. (12)
- V. a) Explain any one method used for protein mass determination.
- b) How is the problem of reproducibility addressed in 2D PAGE? (2x6)

UNIT - III

- VI. a) Discuss the process of Base calling and the significance of Phred Score.
- b) Explain the need for post translational modifications in eukaryotic proteins. (7,5)
- VII. Write a note on the Clone contig sequencing strategy. (12)

x-x-x