

2071
B.Sc. (Hons.) Biotechnology
Sixth Semester
BIOT- Sem-VI-IV-T: Genomics and Proteomics

Time allowed: 3 Hours

Max. Marks: 67

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

x-x-x

I. Answer briefly:

- a) Contig
- b) TEMED
- c) Zwitter ion
- d) Hydrophobic interactions
- e) Phrap
- f) Mouse genome database
- g) Scaffold
- h) VISTA
- i) Proteome
- j) BAC

(10x1½)

UNIT – I

- II. a) Write a note on the Sanger sequencing method.
- b) Discuss any one genome sequence assembly software.
- III. Explain the shotgun genome sequencing method.

(7,6)

(13)

UNIT – II

- IV. a) Write a note on :
 - i) ENSEMBL
 - ii) UCSC Genome browser
- b) What is the need for having a model organism database?
- V. a) Write a note on managing genome data.
- b) Discuss any one model organism genome database.

(10,3)

(5,8)

P.T.O.

(2)

UNIT – III

- VI. a) Discuss any two physical interactions that determine the property of proteins.
b) Explain the applications of SDS PAGE. (8,5)
- VII. a) How is sedimentation analysis used for size determination?
b) Write a note on Edman degradation. (5,8)

UNIT – IV

- VIII. a) Write a note on proteomics.
b) Discuss the applications of 2D PAGE. (6,7)
- IX. a) Elaborate on the resolution and reproducibility of 2D PAGE.
b) Explain De novo sequencing using mass spectrometric data. (6,7)

x-x-x