

Exam. Code : 103201

Subject Code : 1317

B.A./B.Sc. Ist Semester

BIOINFORMATICS

**(Fundamentals of Computers, Molecular Biology &
rDNA Technology)**

Time Allowed—3 Hours] [Maximum Marks—75

Note :— Question 1 is compulsory. Candidates are required to attempt **one** question from each unit.

1. Write short notes on the following terms :

- (a) Minicomputers
- (b) ROM
- (c) WAN
- (d) HTML
- (e) FTP
- (f) RNA
- (g) Transcription
- (h) Translation
- (i) Tryptophan operon
- (j) Physical maps.

1½×10=15

UNIT—I

- 2. Explain in detail the evolution and generations of computers. Also differentiate between minicomputers and supercomputers. 15
- 3. Introduce the term MS PowerPoint. Write down important elements of PowerPoint, text formatting and methods of creating, opening and saving a PowerPoint file. 15

UNIT—II

- 4. Comparatively illustrate properties and applications of Mobile Computing, E-mail and World Wide Web. 15
- 5. What is internet ? Explain basic concepts of intranet and extranet. Also discuss important parameters of computer networks and security. 15

UNIT—III

- 6. What are amino acids and proteins ? Explain secondary, tertiary and quaternary structures of proteins using suitable examples. 15
- 7. Explain in detail the mechanism of translation in bacteria. Outline important features of the Genetic Code. 15

UNIT—IV

- 8. Discuss methods and significance of regulation of gene expression in bacteria and eukaryotes. Describe properties and regulation of lactose operon. 15
- 9. Write illustrated notes on :
 - (a) Restriction digestion
 - (b) PCR and
 - (c) Plasmid vectors. 15