

2125

NEP U.G. Common-Inter Disciplinary Course-1st Semester
Bioinformatics

BIFIDC: Introduction to Bioinformatics - I

Time allowed: 3 Hours

Max. Marks: 40

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

x-x-x

I. Answer the following:-

- a) Define bioinformatics.
- b) Give full forms of EMBL & PIR.
- c) What is the significance of E-Value and Bit-Score?
- d) Give full forms of BLOSUM and BLAST. (4x2)

UNIT - I

- II. a) Differentiate between secondary and specialized databases giving examples.
b) Discuss FASTA format. (4,4)
- III. a) Write a note on Uniprot consortium.
b) Enlist applications of bioinformatics. (5,3)
- IV. Write notes on the following:-
a) Gquery
b) Genbanks flat file (3,5)

UNIT - II

- V. a) Differentiate between BLAST and FASTA.
b) What is the evolutionary basis of alignments? (5,3)
- VI. Differentiate between the following:-
a) PAM & BLOSUM
b) Global and local alignments (5,3)
- VII. a) Taking a suitable example explain Smith Waterman algorithm.
b) Distinguish between general and affine gap penalties. (5,3)

x-x-x