

2056
B.Sc. (Hons.) Bio-Informatics
Second Semester
BIN-2006: Introduction to Bioinformatics

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.

x-x-x

I. Answer the following:-

- (a) Compare and contrast PDB & PDBsum.
- (b) What is G-query?
- (c) Give full form of PIR and name its founder.
- (d) Compare and contrast general and affine gap penalty.
- (e) How does profile differ from motif?
- (f) Compare and contrast Clustal X and Clustal W. (6x2)

UNIT - I

II. Write notes on the following:-

- a) PDB file format
- b) SCOP
- c) Swissprot (3x4)

- III. a) Explain the various parts of GenBank file format.
b) Discuss specialized databases giving suitable examples. (2x6)

- IV. a) Write a note on Uniprot consortium.
b) Compare and contrast SCOP & CATH. (8,4)

UNIT - II

- V. a) Discuss FASTA algorithm and its output.
b) Enlist any three types of BLAST and give their applications. (2x6)

P.T.O.

(2)

- VI. a) Discuss Clustal algorithm.
b) Compare and contrast BLOSUM and PAM. (2x6)
- VII. a) What are the advantages of the following:-
i) Local alignment over global alignment
ii) T-Coffee over Clustal (2x3)
- b) Compare and contrast BLAST & FASTA (6)

x-x-x