

2103001106020002
EXAMINATION FEBRUARY-MARCH 2024
BACHELOR OF SCIENCE (SIXTH SEMESTER)
INTRODUCTION TO BIO-INFORMATICS – LEVEL 2

[Time: As Per Schedule]

[Max. Marks:50]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **BACHELOR OF SCIENCE (SIXTH SEMESTER)**
- b. Name of the Subject : **INTRODUCTION TO BIO-INFORMATICS – LEVEL 2**
- c. Subject Code No : **2103001106020002**

2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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Student's Signature

Q.1 Give Specific Answer (Any Four):

8

- A. Define: Genomics.
- B. What is Entrez?
- C. Give two examples of Protein sequence databases.
- D. What is gap penalty?
- E. What shall be difference between BLAST & FASTA?
- F. Give Full form of CATH & KEGG.

Q.2 Attempt Any Two:

14

- A. Write in details on "Branches of Bioinformatics".
- B. Discuss about Protein structure prediction server in India.
- C. Nucleotide sequence database - NCBI.

Q.3 Explain in detail Any Two:

14

- A. Protein databank - A database of Protein structure.
- B. Describe smith waterman algorithm for pairwise sequence alignment.
- C. Explain the concept of gap penalty in sequence alignment.

Q.4 Write Short note (Any Two):

14

- A. Explain working of Dot Plot method.
- B. Sum of Pair method of multiple sequence alignment
- C. Basic Local Alignment Search Tool (BLAST)
