Bankura University
B.Sc. 5th Semester (Honours) Theory Examination, 2021
SUB: MICROBIOLOGY

Course ID: 52216   **Course Code:SH/MCB/503/DSE-1**
Course Title: BIOINFORMATICS
Full Marks: 25   **Time: 1 Hour 15 mins**

The figures in the margin indicate full marks

UNIT-I

1. **Answer *any five* of the following questions:**   **1x5=5**

    a) What is a clade?
    b) Who is regarded as a pioneer in the field of bioinformatics?
    c) What is a open-source software?
    d) What is the url of NCBI?
    e) What are the advantages of using LINUX?
    f) What is a transcriptome?
    g) Give the full form of UPGMA.
    h) What is the size of human genome?

UNIT-II

2. **Answer *any two* of the following questions:**   **5x2=10**

    a) What are the features of FASTA format? What is KEGG?   3+2=5
    b) What is a proteome? Schematically describe 2-D gel electrophoresis.   1+4=5
    c) What is a dendrogram? What are the different types of phylogenetic trees? 2+3=5
    d) Elucidate the various methods for *Insilico* protein structure prediction.

UNIT-III

3. **Answer *any one* of the following questions:**   **10x1=10**

    a) Differentiate between local and global sequence alignments. What is gap penalty? Briefly discuss about scoring matrices.   2+3+5=10

    b) What are the chief characteristics of *Arabidopsis* genome? With suitable example describe the features of a viral genome.   5+5=10

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