

U.G. 4th Semester Examination - 2021
Molecular Biology & Biotechnology
[HONOURS]
Course Code : MBBT-403-P-CCR-10
(Bioinformatics)
[PRACTICAL]

Full Marks : 20

Time : 2 Hours

The figures in the right-hand margin indicate marks.

1. Perform any **one** of the following experiments:

10×1=10

- a) Retrieve information about the provided gene sequence from nucleotide sequence database(s).
- b) Write a detailed account of various 'Sequence Information Resources' used during the course of bioinformatics research.
- c) Perform a BLAST analysis of the provided protein or nucleotide sequence and interpret the result.
- d) State the application of the following web resources: EMBL, Genbank, Entrez, Unigene and Protein information resource (PIR) in bioinformatics. 2+2+2+2+2

[Turn over]

- e) Construct a Multiple Sequence Alignment (using CLUSTAL W or any other web server) of the provided protein or nucleotide sequence and interpret the result.
- f) What is the application of PDB, Swissprot, TREMBL in proteomics? Write the Uniform Resource Locator (URL) of PDB, Swissprot, TREMBL. 8+2

- 2. Laboratory Notebook: (online submission to the Internal Examiner) 5
- 3. Viva voce: (to be conducted by the Internal Examiner through any online platform). 5
