

**MASTER OF SCIENCE (BIOINFORMATICS) (CBCS-2019 COURSE)**  
**M. Sc. (Bioinformatics) Sem-I : WINTER :- 2021**  
**SUBJECT: BIOLOGICAL INFORMATICS**

**Day : Friday**  
**Date 4/2/2022**

**W-21152-2021**

Time : 10:00 AM-11:30 AM  
Max. Marks: 30

**N.B.**

- 1) All questions carry equal marks.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Answer to both the sections should be written in **SAME** answer book.
- 4) Draw neat diagrams **WHEREVER** necessary.

**SECTION - I**

- Q.1** Define : (**any five**) **(05)**
- a) Primary databases
  - b) Specialized databases
  - c) Primary resource institutes
  - d) TrEMBL
  - e) Rasmol
  - f) BankIt
- Q.2** Write short notes on : (**any two**) **(10)**
- a) Nucleotide flat file formats
  - b) PIR-PSD
  - c) PDB

**SECTION – II**

- Q.3** Explain in short. (**any five**) **(05)**
- a) Gap penalties
  - b) DotPlot
  - c) MDM
  - d) Heuristic method
  - e) Dotlet
  - f) ProDom
- Q.4** Answer the following : (**any two**) **(10)**
- a) Explain in detail BLAST algorithm.
  - b) Explain the concept of motif, pattern and profiles with example.
  - c) Write a note on ClustalW.

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