

M. Sc. (Biotechnology) Sem-IV (2012 Course)(Choice Based Credit System) : WINTER - 2018

SUBJECT: BIOINFORMATICS

Day: Saturday
Date: 27/10/2018

W-2018-1219

Time: 02.00 PM TO 05.00 PM
Max. Marks: 60

N.B:

- 1) **Q. No 1 and Q.No. 5 are COMPULSORY.** Out of the remaining, attempt **ANY TWO** from each section.
 - 2) Both the sections should be solved in **SEPARATE** answer books.
 - 3) Figures to the right indicate **FULL** marks.
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SECTION – I

- Q.1** Explain **ANY FIVE** the following: (10)
- a) Storage Devices
 - b) Supercomputer
 - c) Topology
 - d) Scope of Bioinformatics
 - e) PMC
 - f) Pubchem
- Q.2** Answer the following: (10)
- a) Explain the principal of any one NGS technology.
 - b) Compare the flat file of Genbank and ENA.
- Q.3** Differentiate Between: (10)
- a) Protein array and DNA array
 - b) SRS and Entrez
- Q.4** Write short notes on: (10)
- a) Cloud computing
 - b) Pfam

SECTION – II

- Q.5** Answer in brief: (**ANY FIVE**) (10)
- a) Diagrammatically represent eukaryotic gene.
 - b) What is the use of ProCheck?
 - c) How do you align two sequences?
 - d) Enlist and explain the principal of two protein structure determination methods.
 - e) Differentiate with two points, active site and binding site.
 - f) What are the criteria to use *ab initio* method?
- Q.6** Answer the following: (10)
- a) Explain in detail PDB.
 - b) Give a brief account of Transfec.
- Q.7** Differentiate Between: (10)
- a) Rasmol and SPDBV
 - b) SCOP and CATH
- Q.8** Write short notes on: (10)
- a) Genome annotation
 - b) Enzyme Database

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