

M. Sc. (Biotechnology) Sem-II / M. Sc. (Medical Biotechnology) Sem- II
(CBCS 2018 Course) : SUMMER - 2019

SUBJECT : GENOMICS & PROTEOMICS

Day : Monday
Date : 15/04/2019

S-2019-1430

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

N. B. :

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in the **SAME** answer books.

SECTION - I

Q.1 Define **Any FIVE** of the following : (10)

- a) Bioinformatics
- b) BLAST
- c) Genome Annotation
- d) OMIM
- e) Multiple sequence alignment
- f) Operon

Q.2 Attempt **Any TWO** of the following : (10)

- a) Differentiate between Needleman-Wunsch and Smith-Waterman algorithm.
- b) Differentiate between structural Genomics and Functional Genomics.
- c) Explain prediction of genes with the help of bioinformatics approach.

Q.3 Attempt **Any TWO** of the following : (10)

- a) What are different generations of sequencing? Explain with example.
- b) Explain hierarchy of Biological databases with example.
- c) Write a note on Genetic disorder databases.

SECTION - II

Q.4 Define **Any FIVE** of the following : (10)

- a) MGD
- b) Tertiary structure of protein
- c) Protein engineering
- d) PROCHECK
- e) Gene Synteny
- f) STRING database

Q.5 Attempt **Any TWO** of the following : (10)

- a) Explain different protein primary databases.
- b) Explain different comparative genomics databases.
- c) Give applications and scope of proteomics.

Q.6 Write short notes on **Any TWO** of the following : (10)

- a) Any two secondary structure prediction algorithms
- b) Proteomics and its scope
- c) Structure visualization tools

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