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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