

T. Y. B. Sc. (Biotechnology) SEM – VI (CBCS - 2015 COURSE) :

SUMMER - 2019

Subject: Basics of Bioinformatics

Day: Tuesday
Date: 16/04/2019

S-2019-1391

Time: 10.00 AM TO 01.00 PM
Max. Marks: 60

N.B.:

- 1) Q1 and Q5 are compulsory.
- 2) Answer ANY TWO questions from Q 2, 3, 4 in Section I.
- 3) Answer ANY TWO questions from Q 6, 7, 8 in Section II.
- 4) Answers to Both the sections to be written in : **SAME** 3 answer books.
- 5) Draw a labeled diagram WHEREVER necessary.

SECTION - 01

Q.1) Answer the following: (ANY FIVE) (2 Marks X 5 = 10)

- a) UCSC stands for _____.
- b) What is INSCD?
- c) NCBI was founded in _____.
- d) Who is father of Bioinformatics?
- e) Prosite database began in _____.
- f) Which is first preotein sequence database?

Q.2) Answer the following: (5 Marks X 2 = 10)

- a) What is Biological database?
- b) Explain Scope of Bioinformatics.

Q.3) Explain the following: (5 Marks X 2 = 10)

- a) Explain Medline and PMC database features with their respective applications.
- b) Enlist five comands of RASMOL.

Q.4) Write short notes on the following: (5 Marks X 2 = 10)

- a) EMBL
- b) GenBank flat file

SECTION - 02

Q.5) Answer the following: (ANY FIVE) (2 Marks X 5 = 10)

- a) Define Family.
- b) PIR stands for _____.
- c) BLOSUM metrices used for _____.
- d) What is sequence alignment?
- e) Define Homology.
- f) Define sequence similarity.

Q.6) Answer the following: (5 Marks X 2 = 10)

- a) What is proteomics? Explain its applications.
- b) Explain Scoring matrices for Nucleic acids.

Q.7) Explain the following: (5 Marks X 2 = 10)

- a) Explain Smith-Waterman algorithm.
- b) Explain in brief Multiple sequence alignment.

Q.8) Write short notes on the following: (5 Marks X 2 = 10)

- a) Protein sequencing techniques.
- b) FASTA
