

**T. Y. B. SC. (BIOTECHNOLOGY) SEM – VI (CBCS - 2015
COURSE) : SUMMER - 2018**

Subject: Basics of Bioinformatics

Day: **Friday**
Date: **13/04/2018**

S-2018-1065

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 SEPARATE answer books.
- 5) Draw a labeled diagram WHEREVER necessary.

SECTION - 01

Q.1) Explain with applications: (ANY FIVE) (2 Marks X 5 = 10)

- a) EST
- b) OMIA
- c) EMBL
- d) NIH
- e) Proteomics
- f) SRS

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

- a) Explain Biological datatypes.
- b) Enlist the applications and limitations of Bioinformatics.

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

- a) Explain in brief: UCSC Genome Database.
- b) Differentiate between primary and secondary protein databases.

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

- a) SGD
- b) Biosystem

SECTION - 02

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

- a) Enlist pathway databases.
- b) Define fingerprints.
- c) Define e-value.
- d) Size of Standard Human Genome is _____.
- e) Define PSSM.
- f) What is DNA sequencing?

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

- a) Differentiate between SCOP and CATH.
- b) Explain dot plot with its applications.

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

- a) Explain in brief SPDBV.
- b) Explain BLAST algorithm in brief.

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

- a) CLUSTAL-W
- b) PAM
