

**Advanced Diploma in Bioinformatics Sem.-II (C.B.C.S.) (2013 Course
: SUMMER - 2019
SUBJECT : ADVANCED BIOINFORMATICS**

Day : Friday
Date : 05/04/2019

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

S-2019-1474

N. B. :

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Out of remaining attempt **ANY TWO** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SAME** answer books.

SECTION – I

- Q. 1** Explain in brief: (10)
- a) Probabilistic framework
 - b) Bayesian modeling
- Q. 2** Answer the following: (10)
- a) Explain the utilization of Dynamic Programming in bioinformatics.
 - b) Differentiate between supervised and unsupervised Genetic algorithm.
- Q. 3** Write short notes on: (10)
- a) HMM
 - b) NN
- Q. 4** Write in detail on Machine learning algorithm. (10)

OR

How machine learning becomes useful tool of data analysis in bioinformatics.

SECTION – II

- Q. 5** Explain in brief: (10)
- a) Gene prediction algorithm
 - b) Operon prediction algorithm
- Q. 6** Answer the following: (10)
- a) Explain with principle any one Genome alignment method.
 - b) What are the applications of gene order comparison tools?
- Q. 7** Write short notes on: (10)
- a) Gene annotations
 - b) Microarray databases
- Q. 8** Explain in detail pipeline of protein array data analysis. (10)

OR

Describe stepwise molecular modeling procedure. State its applications in drug designing.