

M. Sc. Bioinformatics Sem.-III (2013 Course) (Choice Based Credit Systems) : WINTER - 2018

SUBJECT : BIOLOGICAL DATA MINING

Day : Saturday
Date : 27/10/2018

W-2018-1261

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

N.B.:

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

SECTION – I

- Q.1** Enlist Any two errors: [10]
a) related with sequence
b) related with structure
c) related with biological databases
d) related with micro array data
e) related with machines
- Q.2** Write short notes on: [10]
a) Steepest Descent Method
b) Conjugate Gradient Method
- Q.3** Answer the following: [10]
a) Discuss about supervised and unsupervised genetic algorithms.
b) What are the future prospects of genetic algorithms?
- Q.4** Differentiate between: [10]
a) K-means clustering and Grid based clustering
b) DNA array and Protein array

SECTION – II

- Q.5** Define: [10]
a) GEP b) K-tup c) init 1 d) S' e) e
- Q.6** Write short notes on: [10]
a) Sequence alignment methods
b) Structure alignment methods
- Q.7** Answer the following: [10]
a) What do you mean by machine learning techniques? How they are useful in bioinformatics?
b) Explain the applications of Bayesian modeling.
- Q.8** Differentiate between: [10]
a) SVM and ACO
b) Chau – Fasman and GOR

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