

**M. Sc. Bioinformatics Sem.-I (C.B.C.S.) (2013 Course) / Advanced  
Diploma in Bioinformatics Sem.-I (C.B.C.S.) (2013 Course) :  
WINTER - 2018**

**SUBJECT : BIOLOGICAL INFORMATICS**

Day : Tuesday **W-2018-1251** Time : 10.00 AM TO 01.00 PM  
Date : 23/10/2018 Max. Marks : 60

**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 **SEPARATE** answer books.
- 4) Draw neat and labeled diagram **WHEREVER** necessary.

**SECTION – I**

- Q. 1** Give two examples of : **(10)**
- a) Nucleotide primary database
  - b) Secondary database
  - c) Derived database
  - d) Knowledge database
  - e) Specialized database
- Q. 2** Answer the following: **(10)**
- a) Write a note on literature databases and their applications.
  - b) Give a brief overview on DDBJ tools and databases.
- Q. 3** Write short note on: **(10)**
- a) SRS
  - b) BankIt
- Q. 4** Write in detail on dynamic programming and heuristic methods. **(10)**

**OR**

How to choose a scoring matrix as per the data? Explain with examples.

**SECTION – II**

- Q. 5** Explain **ANY TWO** features of : **(10)**
- a) Dotlet
  - b) MUSCLE
  - c) PhyloGibbs
  - d) BIONJ
  - e) ProDom
- Q. 6** Answer the following: **(10)**
- a) Write the algorithm of MSA.
  - b) Write the algorithm of any one Pairwise Sequence Alignment method.
- Q. 7** Write short note on: **(10)**
- a) CATH
  - b) PROSITE
- Q. 8** Enlist and explain different translational tools. **(10)**

**OR**

Enlist and explain different restriction analysis tools.