



HDV-003-1133003 Seat No. _____

M. Sc. (Biotechnology) (Sem. III) (CBCS)

(W.E.F. 2016) Examination

November / December – 2017

BT - 313 : Bioinformatics

Faculty Code : 003

Subject Code : 1133003

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

Instructions : All questions are compulsory. Support your answers with suitable illustrations where required.

1 Answer Any Seven : (2 Marks each) 14

- (a) What is the significance of Bioinformatics?
- (b) Expand the ERNET, BLAST, ISDN and BSNL
- (c) What are the data bases?
- (d) Enlist 5 data bases in Biotechnology.
- (e) What is the artificial intelligence?
- (f) What are the basic steps in designing the primers?
- (g) What is the PubMed?
- (h) What is SCOPUS and Googol scholar?
- (i) Comment on the functional genomics?
- (j) What is the correlation between metagenomics and bioinformatics?

2 Answer Any Two of the following : 7×2=14

- (a) Discuss FASTA and interpretation of its results.
- (b) Discuss present and future prospects of Bioinformatics.
- (c) What are the key features in creating data bases?
Describe various types of protein data bases.

- 3** Answer the following : (7 marks each) **14**
- (a) Discuss applications of artificial intelligence.
 - (b) Discuss data bases of the nucleic, acids and their applications.

OR

- 3** Answer the following : (7 marks each) **14**
- (a) Discuss various secondary databases and their applications with suitable examples.
 - (b) Discuss various data mining tools.
- 4** Answer the following : (7 marks each) **14**
- (a) Discuss Multiple Sequence Alignments and its applications.
 - (b) Discuss BLAST tools and their applications.
- 5** Write comments on Any **Two** : (7 marks each) **14**
- (a) Bioinformatics based analysis of the protein structures
 - (b) Evaluation of gene prediction
 - (c) Comparative genomics
 - (d) Neural networks.
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