M.E. Second Semester (Digital Electronics) (Part Time / Full Time) (C.G.S.- New)

13234 : Elective-II : Bio-Informatics : 2 UMEF 5 / 4 UMEP 3

P. Pages : 2 | **AW - 3766**

Time : Three Hours | Max. Marks : 80

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Notes : 1. Due credit will be given to neatness and adequate dimensions.
2. Assume suitable data wherever necessary.
3. Illustrate your answer necessary with the help of neat sketches.

1. a) What is bioinformatics? Explain the challenges in information processing? **7**

b) Describe applications of bioinformatics in detail? **6**

OR

2. a) Explain the scope and importance of bioinformatics. **6**

b) Explain the present Scenario of bioinformatics? **7**

3. a) Explain the basic searching methods from protein sequence database. **7**

b) Explain the sample swiss-prot format. **7**

OR

4. a) Explain various secondary nucleotide sequence database. **7**

b) Explain the following terms: **7**
i) Unigence ii) STACK

5. a) Explain the protein prediction process from a primary sequence. **6**

b) Explain sequence or S family level of CATH. **7**

OR

6. a) Explain the domain assignment flow sheet of PDB structure. **7**

b) Explain the activity of DALI server with schematic diagram. **6**

7. a) Explain the process of knowledge discovery. **7**

b) Explain the applications of Data mining tool in bioinformatics. **6**

OR

8. Explain the command line arguments for submitting files to command line tools for GenBank. **13**

9.	a)	Explain the following terms: i) BLAST algorithm ii) FASTA algorithm	**7**
	b)	Explain Biological Algorithm in brief.	**7**

OR

10.	a)	Explain the bioinformatics tasks and corresponding algorithms used to perform the task.	**7**
	b)	Explain the bioinformatics software for bioinformatics task.	**7**
11.	a)	Explain similarity based approaches to Gene Prediction for a unknown DNA with state transitions and evolution of Hidden Markov model.	**7**
	b)	Explain in brief phylogenetic prediction algorithm.	**6**

OR

12.	a)	Explain the types of analysis algorithm? Explain any one analysis algorithm.	**7**
	b)	Explain the Drawbacks of DOT plots and its uses.	**6**

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