B.E. Eighth Semester (Computer Technology) (C.B.S.)

Elective - III : Bio Informatics

P. Pages : 2 **NKT/KS/17/7600**

Time : Three Hours * 0 7 6 0 * Max. Marks : 80

Notes :
1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Due credit will be given to neatness and adequate dimensions.
9. Assume suitable data whenever necessary.

1. a) State the significance of programming language Perl in bioinformatics. **7**

b) Explain FTP in detail. **4**

c) State and explain three challenges in information processing. **3**

OR

2. a) Explain various elementary commands utilized in bioinformatics. **7**

b) Describe Bioinformatic application with reference to phylogenetics analysis. **7**

3. a) Describe the regulation of gene expression in prokaryotes. **6**

b) In detail explain gene prediction tools. **7**

OR

4. a) Write a note on "Darwin's theory of evolution based upon natural selection." **7**

b) Discuss homology theory based on Willie Henning. **6**

5. a) Describe DNA mapping and sequence. **7**

b) Define shotgun sequencing and state its significance. **6**

OR

6. a) Enlist the applications of multiple sequence alignment. **6**

b) Write a note on sanger method. **7**

7. a) Explain Needleman Wunsch algorithm in detail. **7**

b) Explain PAM substitution metrics of sequence alignment in details. **6**

OR

8.	a)	Briefly explain BLOSUM.	**6**
	b)	Enlist and explain various methods of aligning sequence.	**7**
9.	a)	Write a note on fold classes of protein.	**7**
	b)	Explain the primary databases with the help of examples.	**6**

OR

10.	a)	Discuss about searching and retrieval system from www.	**6**
	b)	In detail explain PIR and Swissprot.	**7**
11.		Write a short note on. i) EXGESCY ii) BRENDA iii) WIT	**14**

OR

12.	a)	Explain the biochemical databases extension by metabolic surveys.	**7**
	b)	Explain various features of KEGG.	**7**

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