B.E. (Information Technology) Seventh Semester (CBS)

Elective-I : Bio-Informatics

P. Pages : 2 **AHK/KW/19/2351**

Time : Three Hours * 1697 * 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.
10. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) What is bio-informatics? Describe its scope in modern technology. **7**

b) Explain the interdisciplinary nature of Bio-informatics. **6**

OR

2. a) What skill should Bio informatician possess? **6**

b) Explain reference systems for metadata. **7**

3. a) What is multiple sequence alignment? Describe the applications of multiple sequence alignment? **7**

b) Write a note on Transcription of DNA. **7**

OR

4. a) Explain translation of mRNA into protein. **7**

b) Introduce important application of bio-informatics. **7**

5. a) Describe Tertiary and quaternary structure of proteins. **6**

b) Explain methods of predicting protein structures. **7**

OR

6. a) How DNA sequencing take place. **6**

b) Name and explain the various steps evolved in recombinant DNA Technology. **7**

7.	a)	Explain parsing BLAST output using perl.	**7**
	b)	Write a note on Bioperl.	**7**

OR

8.	a)	Explain how CORBA is used in biostatistics.	**7**
	b)	Write a note on CORBA architecture.	**7**
9.	a)	Explain the importance of controlled vocabularies.	**6**
	b)	Define Genome outline structure and composition of any one genome.	**7**

OR

10.	a)	Explain biological data warehouses.	**6**
	b)	Explain single nucleotide polymorphism.	**7**
11.	a)	State the significance of genetic variability.	**6**
	b)	How the graphical models are used to identify patterns.	**7**

OR

12.	a)	Explain major steps in pattern recognition and discovery process.	**7**
	b)	Explain the use of regular expression for representation of pattern and relationship.	**6**

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