NagpurStudents

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B.E. (Information Technology) Seventh Semester (C.B.S.)

Elective - I : Bio-Informatics

P. Pages : 2 **NRT/KS/19/3587**

Time : Three Hours * 0 3 0 4 * 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 it's scope in modern biology. **7**

b) What challenges does biology offer to computer scientists? **6**

OR

2. a) Write a note on reference system of metadata. **7**

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

3. a) Explain Transcription of DNA. **4**

b) With the suitable diagram explain replication of one strand of the DNA Helix. **10**

OR

4. a) Describe the CATH databases. **7**

b) What is multiple sequence alignment? Describe the application of multiple sequence alignment. **7**

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

b) Explain the structure of RNA with suitable diagram. **7**

OR

6. a) Write a note on Nucleic Acids. **6**

b) How DNA sequencing take place? **7**

7. a) Write a short note on Biostatistics. **6**

b) Explain flat file database with example. **7**

OR

8.	a)	Explain parsing BLAST output using perl.	**6**
	b)	What are the computational skill required for bioinformation? Write elementary commands in Linux operating system.	**7**
9.	a)	Write a note on CORBA architecture.	**7**
	b)	Explain Biological data warehouses.	**6**

OR

10.	a)	What is single nucleotide polymorphism.	**7**
	b)	Write a short note on Fuzzy search & Boolean search.	**6**
11.	a)	Explain macromolecular structure.	**7**
	b)	State the significance of Generic variability.	**7**

OR

12.	a)	How the graphical models are used to identify patterns.	**7**
	b)	Explain major steps in pattern recognition and discovery process.	**7**

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Itâ€™s hard to beat a person who never gives up.

~ Babe Ruth