

Elective – I : Bio-Informatics

P. Pages : 2

Time : Three Hours



TKN/KS/16/7589

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) How technology intersects with Biology. **6**
b) Explain the interdisciplinary nature of Bio-informatics. **7**

OR

2. a) What skills should bioinformatician have? **6**
b) How in data integration and Analysis performed in Bio-informatics. **7**
3. Explain accessing of 3D Molecules through a 1D Representation. **13**

OR

4. a) Explain translation of mRNA into protein. **7**
b) State various problems in molecular approach and the bio-informatics approach. **6**
5. a) Explain the structure of RNA with suitable diagram. **7**
b) How DNA replication takes place? **7**

OR

6. a) What are the functional elements in DNA? **7**
b) Write a note on protein structure. **7**
7. a) Why Perl is preferred programming Language in bio-informatics? **6**
b) Explain flat file database with example. **7**

OR

8. a) Write a note on Bioperl. **7**
b) Explain Parsing BLAST output using perl. **6**
9. a) Explain Boolean search as a data retrieval technique. **6**
b) Explain Biological data warehouses. **7**

OR

10. a) What is single nucleotide polymorphism. **7**
b) Explain the role of neighbouring in retrieval techniques. **6**
11. a) How the graphical models are used to identify patterns? **7**
b) Write a note on macro molecular structures. **7**

OR

12. a) Give the significance of relationships in biological data. **7**
b) With a suitable tree diagram explain role of hierarchies in Unix. **7**
