Total No. of Questions : 10]

SEAT No. :

P2368

[Total No. of Pages : 2

[5254] - 700-A
B.E. (Information Technology) (Semester - II)
BIOINFORMATICS (Elective - IV)
(2012 Pattern)

Time :2½ hours] *[Max. Marks :70*

Instructions to the candidates:

1) *Attempt Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.*
2) *Neat diagrams must be drawn whenever necessary.*
3) *Full marks for right and well labeled diagram.*
4) *Assume suitable data, if necessary.*

Q1) a) What is the scope of bioinformatics? Discuss challenges of bioinformatics. **[5]**

b) Enlist biological database? Give an example of database. **[5]**

OR

Q2) a) What is Baye's rule? Explain any two limitations of Baye's Theorem. **[5]**

b) Write a structure visualization tools available on web. **[5]**

Q3) a) What is Data mining? Explain data mining applications in genomic sequences. **[5]**

b) What is the role of microarray in bioinformatics? **[5]**

OR

Q4) Explain methods of computational sequence alignment.

a) Dynamic programming **[5]**

b) Dot matrix methods **[5]**

Q5) a) Write about the impact of drug discovery process in business management. **[8]**

b) What are the component of modeling and simulation system. **[8]**

P.T.O.

OR

Q6) a) Discuss the issues of collaboration in bioinformatics. **[8]**

b) What is pattern matching? Discuss different methods of pattern matching. **[8]**

Q7) a) Enlist different bioinformatics tools. Explain any one in brief. **[8]**

b) Explain FASTA algorithm in detail with neat diagrams. **[8]**

OR

Q8) a) Explain i) GAP penalty ii) E- Value iii) Dot plots with respect to BLAST. **[8]**

b) Explain the ralative merits of BLAST And FASTA in Database similarity Searches. **[8]**

Q9) a) What is modern biotechnology? What is biotechnology in agriculture? **[6]**

b) What is GE? What is GMO (Genetically modified organism) **[6]**

c) Write about dangers of genetic Engineering. **[6]**

OR

Q10)a) Define Biotechnology. What is the significance of environmental Biotechnology. **[8]**

b) Explain various applications of genetic engineering. **[10]**