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Roll No

MCA-505 (C)

M.C.A. V Semester

Examination, November 2018

Bio-Informatics

(Elective-III)

Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions.
 ii) All questions carry equal marks.

1. a) What are different types of databases? Distinguish between nucleotide sequence databases and protein sequence database.
 b) Describe the general simulation techniques applicable to biological problems.
2. a) What is bioinformatics? Explain the challenges in information processing.
 b) Explain primary structure of proteins.
3. a) Explain the approaches for gene hunting.
 b) Discuss different approaches to EST analysis.
4. a) State the difference between global and local alignment.
 b) Explain the concept of scoring matrices for aligning amino acid sequence. Briefly explain how PAM is derived.

5. a) Illustrate multiple alignment with suitable example.
 b) Discuss Needleman algorithm for global alignment.
6. a) Explain the working of BLAST based on your knowledge of sequence alignment.
 b) What is an analysis package? Discuss DNA analysis.
7. a) Explain Drug designing.
 b) Write the salient features of standard genetic code.
8. Write short notes on:
 - i) Secondary database
 - ii) DNA sequence

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