STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086

(For candidates admitted from the academic year 2015 – 2016)

SUBJECT CODE: 15BI/PC/AB34

M. Sc. DEGREE EXAMINATION, NOVEMBER 2016

BIOINFORMATICS

THIRD SEMESTER

COURSE : CORE
PAPER : ALGORITHMS FOR BIOINFORMATICS
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION - A

ANSWER ANY TEN QUESTIONS: (10x10=100)

1. Explain the Design Techniques in Algorithms.
2. Describe with an example the restriction mapping algorithm with an example.
3. Explain Dynamic Programming.
4. Write notes on Greedy Algorithm.
5. String Matching Algorithm.
6. Graph Algorithm.
7. Discuss the Smith-Waterman algorithm. What is the complexity and the relationship with the problem of finding the longest common subsequences?
8. Describe the distance based tree reconstruction methods with a neat diagram.
9. Describe a bioinformatics application of hidden Markov models.
10. Artificial Neural Network.
11. Heuristic Similarity Search Algorithm.
12. k- Mean Clustering.

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