STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI –600 086
(For candidates admitted from the academic year 2010 - 11)

SUBJECT CODE: BI/PE/AB23

M. Sc. DEGREE EXAMINATION, APRIL 2011
BIOINFORMATICS
SECOND SEMESTER

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

ANSWER ANY TEN QUESTIONS (10 x 10 = 100)

1. Differentiate: Computer Algorithm and Biological Algorithm.
2. Explain exact pattern matching Algorithm.
3. Define Clustering and elaborate on different types of Clustering methods
4. Write an essay on Dynamic programming concepts with a few related algorithms.
5. What are the objectives of Motif finding?
6. Define and explain the role of HMM in protein structure prediction.
7. The longest common subsequence algorithm in very useful in Bioinformatics – Explain.
8. Diagrammatically represent hierarchical Clustering algorithm and describe the logical steps.
9. Describe the concept of distance based tree reconstruction & its uses in Evolutionary Analysis.
10. Explain Gene expression Analysis.
11. Elaborate on the corrupted cliques with PCC Algorithm.
12. What is Greedy Algorithm? Enumerate the advantages and disadvantages.

****