

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI 600 086
(For candidates admitted during the academic year 2008 – 09)

SUBJECT CODE : CS/PC/AD14

M.Sc. DEGREE EXAMINATION, NOVEMBER 2008
INFORMATION TECHNOLOGY
FIRST SEMESTER

COURSE : MAJOR CORE
PAPER : ALGORITHM AND DATA STRUCTURES
TIME : 3 HOURS **MAX. MARKS: 100**

SECTION – A
ANSWER ALL THE QUESTIONS **(10X2=20)**

1. What is an Algorithm?
2. Define a Graph.
3. What is a Binary tree?
4. Write the syntax for the looping statements.
5. What is the advantage of Insertion Sort?
6. What is TSP?
7. Explain the term Merging.
8. What is Cost Amortization?
9. Explain Breadth first
10. Write a C function to explain Recursion function.

SECTION – B
ANSWER ANY FIVE QUESTIONS **(5X6=30)**

11. Differentiate between LIFO and FIFO.
12. Explain the All-pairs shortest path.
13. What is the Minimum Spanning Tree?
14. Explain the stages of Prim's Algorithm
15. Explain knap sack problem
16. Explain Hashing.

SECTION – C
ANSWER ANY FIVE QUESTIONS **(5X10=50)**

17. Explain Quick-Sort with an example.
18. Write the Algorithm to solve eight Queen problems
19. Explain Optimal Binary Search Tree.
20. Briefly explain the Time Complexity and Space Complexity.
21. What is a Stack and a Queue? Explain with example.
22. Explain Priority Queues model.
23. Explain Dijkstra.
