

OCTOBER 2011

P/ID 17413/RBP

Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) Write down the procedure for sort ' n ' series of numbers using merge sort with an example.
Or
(b) Explain in brief about time complexity analysis using relevant examples.
2. (a) Discuss the procedure for optical storage on tapes.
Or
(b) How to solve Knapsack problem using greedy method?
3. (a) Write short notes on biconnected components.
Or
(b) Describe the method of depth first search traversal with an illustration.
4. (a) Write notes on method of backtracking.
Or
(b) Discuss about Hamiltonian cycle.

5. (a) Define Branch and Bound – Explain.

Or

(b) Write an algorithm to solve travelling salesperson problem.

PART B — ($5 \times 10 = 50$ marks)

Answer any FIVE questions.

6. Write detailed notes on various asymptotic notations used in performance analysis.
7. Explain the procedure of binary search using divide and conquer method with an example.
8. How to solve minimum spanning tree problem? Illustrate.
9. Give an algorithm to solve single source shortest path problem.
10. Illustrate the method of solving O/I Knapsack problem using dynamic programming.
11. Write notes on various traversal techniques.
12. Describe 8 queens problem.
13. Explain the procedure for finding sum of subsets.