

OCTOBER 2013

P/ID 17413/RBP

Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) Describe asymptotic notations in performance analysis.

Or

- (b) How to sort 'n' numbers using Quick sort algorithm? Analyze its performance.

2. (a) Illustrate the procedure for Greedy method.

Or

- (b) Write notes on optimal merge pattern.

3. (a) Illustrate any one problem solved using dynamic programming method.

Or

- (b) Compare and contrast the functions and features of breadth first and depth first using examples.

4. (a) Explain the method of graph colouring with an example.

Or

- (b) Write notes on 4 Queens problem.

5. (a) Analyze the performance of travelling salesman problem with $n = 5$ cities.

Or

- (b) Write notes on Branch and bound techniques.

PART B — ($5 \times 10 = 50$ marks)

Answer any FIVE questions.

6. Write an overview on Divide and conquer method.
7. How to analyze the performance of an algorithm? Illustrate.
8. Explain the procedure for solving shortest path problem using Greedy method.
9. What is a multistage graph? Explain its representation and traversals.
10. Illustrate the various basic search techniques.

11. Write detailed notes on backtracking problem.
 12. Explain Euler graph and Hamiltonian cycle.
 13. How to solve 0/1 knapsack problem using Branch and Bound technique?
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