

MAY 2013

**P/ID17461/
RCL/PCAL**

Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) Write short notes on recursive algorithms.

Or

- (b) Explain the probability theory fundamentals.

2. (a) Illustrate the Greedy algorithm for sequencing unit time jobs with deadlines and profit.

Or

- (b) Explain the multistage graph pseudo code algorithm.

3. (a) Explain how to solve 8-Queens problem.

Or

- (b) Explain Breadth first search and traversal.

4. (a) Write short notes on LIFO branch and bound solution.

Or

- (b) Illustrate on Lagrange's interpolation algorithm.

5. (a) Discuss the comparison trees with example.

Or

- (b) Illustrate the basic concepts of NP-hard and NP-complete problems.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

6. Describe about the fundamentals of randomized algorithms.
7. How do you solve tree vertex splitting problem? Discuss.
8. Briefly explain the basic concepts of graph coloring.
9. Describe the fundamental aspects of sum of subsets.

10. Discuss the overview of branch and bound techniques.
 11. Illustrate the generic view of algebraic problems.
 12. Illustrate any two NP -hard scheduling problems.
 13. Write detailed notes on lower bounds through reductions.
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