MAY 2011 **P/ID 17461/RCL/PCAL**

Time : Three hours Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) Write short notes on space complexity.

Or

(b) Illustrate the basics of probability theory.

2. (a) Write down the greedy algorithm to generate shortest path.

Or

(b) Write short notes on string editing.

3. (a) How do you solve 8 – Queen's problem?

Or

(b) Write down the algorithm for generating a next color.

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

Or

(b) Write down the algorithm for Newtonian interpolation.

5. (a) Explain in detail about comparison trees.

Or

(b) Write down the Cook's theorem.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

6. Explain the fundamentals of quick sort.

7. Illustrate the tree vertex splitting problem.

8. Briefly discuss the traveling salesman problem in dynamic programming.

9. Explain Breadth first search and depth first search traversal.

10. Write down the overview of branch and bound techniques.

11. Explain the basic aspects of algebraic problems.

12. Discuss about lower bounds through reductions.

13. Illustrate any two NP–hard scheduling problems.

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