

DECEMBER 2014

**P/ID 17461/
RCL/PCAL**

Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) Discuss on how to validate algorithms.

Or

- (b) Write about recursive algorithm.

2. (a) State Kuapsack problem in detail.

Or

- (b) Give the general method of Dynamic programming.

3. (a) Explain graph coloring.

Or

- (b) Write down the solution for Hamiltonian cycles problem.

4. (a) Discuss on LC Branch-and-Bound method.

Or

- (b) Write about FIFO Branch-and-Bound.

5. (a) Describe order searching.

Or

- (b) Explain finding the convex Hull.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

6. Write about performance analysis.
7. Give the selection sort algorithm and describe its method.
8. Explain the problem tree vertex splitting and give the solution.
9. Discuss on optimal binary search trees.
10. Write about 8-queens problem and give the solution using backtracking.
11. Discuss on traveling salesperson problem using branch and bound solution.
12. Explain oracles and Adversary arguments.
13. Give the basic concepts of Nondeterministic algorithms.