MAY 2012 **P/ID 17413/RBP**

Time : Three hours Maximum : 75 marks

PART A — ($5 \times 5 = 25$ marks)

Answer ALL questions.

All questions carry equal marks.

1. (a) Write about the Control abstraction for divide and conquer method.

Or

(b) Discuss on Binary search.

2. (a) Let n = 3 and $(l_1, l_2, l_3) = (5, 10, 3)$. There are n! = 6 possible ordering. Find out optimal storage on tapes ordering and their respective D values.

Or

(b) Write down the control abstraction for greedy method.

3. (a) Discuss on And/Or graph.

Or

(b) Describe Biconnected components.

4. (a) Explain the concept of sum of subset problem.

Or

(b) Write short notes on Hamiltonian cycles.

5. (a) Discuss on LC – Search.

Or

(b) Write short notes on Branch and Bound.

PART B — ($5 \times 10 = 50$ marks)

Answer any FIVE questions.

All questions carry equal marks.

6. Explain merge sort. Write the algorithm and analyse it.

7. Explain Quick sort with example.

8. Write the algorithm to find the maximum and minimum values from a set of n elements.

9. Explain Kruskal's minimum cost spanning tree algorithm.

10. Explain greedy strategy Knapsack problem.

11. Explain multistage graph with example.

12. Describe the 8 - queens problem.

13. Explain travelling sales person problem in Branch and Bound method.

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