

OCTOBER 2011

**P/ID 17460/
RCK/PCAK**

Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

All questions carry equal marks.

1. (a) Discuss on Abstract Data types.
Or
(b) Write short notes on Complexity Analysis.
2. (a) Describe Single linked list in detail.
Or
(b) Discuss on Circular queue.
3. (a) Draw a full binary tree of depth 5 with sequential node number.
Or
(b) Discuss on Threaded Binary Tree.
4. (a) Develop an algorithm for Selection Sort.
Or
(b) Discuss on Optimal Storing Time.

5. (a) Write down the properties of Splay trees.

Or

(b) Discuss on Red Black Trees.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

All questions carry equal marks.

6. Explain the various representations of arrays.
7. Define a Queue. Explain the operations that can be performed on a Queue.
8. Discuss various operations associated with doubly linked list.
9. Give an account on tree traversal.
10. Discuss in detail about minimum cost spanning tree.
11. Explain sorting with tapes.
12. Write and implement an algorithm for Quick Sort.
13. Explain the various methods of computing Hash values.