

DECEMBER 2014

**P/ID 17460/RCK/
P/CAK**

Time : Three hours

Maximum : 75 marks

PART A — (5 × 5 = 25 marks)

Answer ALL questions.

1. (a) Write short notes on Abstract Data types.

Or

- (b) Discuss on operations on Arrays.

2. (a) Describe the structure of Circular linked lists.

Or

- (b) Explain the functioning of Circular Queues.

3. (a) Discuss on the characteristics of Trees and Binary trees.

Or

- (b) Describe the importance of Threaded Binary trees with an example.

4. (a) Explain the Bubble sort algorithm.

Or

- (b) Discuss on the Insertion sort algorithm.

5. (a) Describe the characteristics of B-Trees.

Or

- (b) Explain the importance of Red-Black trees.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

6. Explain the representations of Arrays.
7. Write a detailed note on Asymptotic notations and Complexity analysis.
8. Describe the structure of Doubly Linked list and its operations.
9. Discuss on the organization, Operations of Stack and its implementations.
10. Explain the three types of Binary Tree Traversal methods.
11. Describe the two types of Graph Traversal methods.
12. Discuss on the Heap sort algorithm.
13. Write a detailed note on Hashing techniques.