2010

Time : 3 hours

Full Marks : 75

Candidates are required to give their answers in their

Own words as far as practicable.

The question are of equal value.

*Answer any **five** questions.*

1. (a) Define and explain the concept of data structures.

    (b) What do you mean by abstract data structures ?

2. What do you mean by stack ? Explain the primitive operation which can be performed on stack.

3. What do you mean by queues ? Discuss Circular queue and priority queul.

4. What do you mean by linked list of stack and linked list of queue ? Explain doubly linked list and circular linked list.

5. Discuss the basic terminology of tree. Explain the tree representation of array and linked list.

6. What are the applications of binary tree and threaded binary tree ? Explain the binary tree representation of trees.

7. Explain sequential searching and binary search. Discuss insertion sort, selection sort and quick sort.

8. What do you mean by Hash table ? Explain collision resolution technique.

9.   What do you mean by directed, undirected and weighted graphs ? Discuss the representation of graphs.

10.   Write short notes on any **three** of the following :
   (a)   Bubble sort
   (b)   Comparison of sorting methods
   (c)   Representation of Graphs
   (d)   Analysis of algorithms