

**BACHELOR OF COMPUTER
APPLICATION II YEAR
EXAMINATION, 2010**

Paper — BCAD-402

DATA STRUCTURES in C

Time : 2½ Hours

Maximum Marks : 70

*(Write your Roll No. at the top immediately
on receipt of this question paper.)*

*Answer ALL questions of Section A, any SIX questions
of Section B and any THREE questions of Section C.*

SECTION - A (1 × 10 = 10)

Fill in the blanks and answer questions 2 and 7

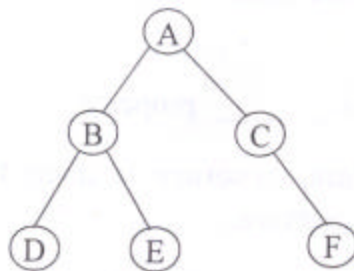
1. ADT stands for _____.
2. What are the two different ways to store 2 dimensional array ?
3. Stack exhibits _____ property.
4. _____ data structure is used for modeling Tierachical structure.
5. Complexity of bubble sort algorithm is _____.

P.T.O.

6. DAG stands for _____.
7. What is the degree of a binary tree ?
8. _____ Data structure is used for scheduling in operating system.
9. The postfix equivalent of $(A + B) * C$ is _____.
10. In _____ tree data resides only the leave nodes.

SECTION - B (6 × 5 = 30)

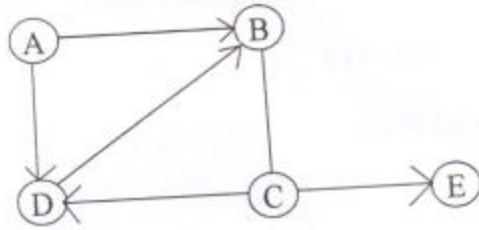
11. Distinguish between static and dynamic memory allocation.
12. Write an algorithm to traverse a linked list.
13. What is priority queue ?
14. Distinguish between full and complete binary tree.
15. Define AVL tree.
16. Perform in order traversal of the tree given below.



17. Sort the following array using merge sort.

5, 7, 9, 2, 10, 1

18. Write the adjacency matrix for the following graph.



SECTION - C (3 × 10 = 30)

19. Write an algorithm to add two polynomials using linked list.

20. Explain the binary search algorithm.

22. Distinguish between DFS and BFS. Write algorithms.

23. What is binary search tree ? Write an algorithm to insert an item in a binary search tree ?

24. Explain the array implementation of Stack.