Roll No. _____ [Total No. of Pages : 2

CAIIS - N 121 A-15

B.C.A IInd Semester Degree Examination

Computer Science

(Data Structures Using C)

Paper - 2.6

(New)

Time : 3 Hours Maximum Marks : 80

Section -A

1. Answer **all** the questions. Each questions carries **2** marks. **(10×2=20)**

a) Define abstract data type

b) BST stands for?

c) What is linked list?

d) Define Binary tree.

e) Mention the terminologies of tree.

f) What is FRONT and REAR

g) Define Recursion.

h) Which sorting devide and conquer technique?

i) What is queue?

Section -B

Answer any **four** questions. Each questions carries **5** marks.
(4×5=20)

2. What is a graph? Explain different terms of graph.

3. What is circular quere? Explain

4. Explain memory representation of linked list

5. Write an algorithm for deleting an element from queue

6. Write a note on space complexity

7. Write an algorithm to insert an element in a array .

Section -C

Answer any **four** questions. Each questions carries **10** marks. **(4×10=40)**

8. Write the program for pre-order post-order and in-order traversals of a binary tree using non-recursive method.

9. Explain threaded binary tree with an example

10. What is sorting? Discuss heap sort with its efficiency

11. What is double linked list? Write an algorithm for insertion of a node at any position in the double linked list

12. What are the basic operations performed on a queue? Explain

13. Write a 'C' program for Insertion sort.
