BACHELOR OF COMPUTER APPLICATION
SECOND SEMESTER
DATA STRUCTURES THROUGH C
BCA – 202(OLD)

Duration: 2 Hrs. 40 Mins.   Marks: 50

$$\left\{ \begin{array}{l} \text{Part : A (Objective)} = 20 \\ \text{Part : B (Descriptive)} = 50 \end{array} \right\}$$

[PART-B : Descriptive]

[Answer question no. One (1) & any four (4) from the rest]

1. Define Stack with diagram. Explain push, pop and display functions.   4+6=10

2. Explain the different types of queues. Discuss the Delete operation for a normal queue.   7+3=10

3. Define Circular singly linked list with diagram. Explain the steps to insert a node at the rear end in a circular singly linked list.   5+5=10

4. Explain the tree traversal technique with algorithm, and example for each. Define Binary tree, Strictly Binary tree and Complete Binary tree.   6+4=10

5. What is Depth First and Breadth First traversal? Explain Kruskal's algorithm to find minimum spanning tree.with suitable examples.   4+6=10

6. Explain the types of basic searching techniques. Write a 'C' program to search for an item using Binary Search.   5+5=10

7. Write a 'C' program to arrange the numbers in ascending order using Selection Sort technique.   10

8. Explain the following: 5+5=10
   (c) Quick sort
   (d) Doubly Linked List

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