

Roll No.

Total No. of Pages : 02

Total No. of Questions : 07

BCA (2011 & Onward) (Sem.-3)

DATA STRUCTURES

Subject Code : BSBC-302

Paper ID : [B0229]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and a student has to attempt any FOUR questions.**

SECTION -A

1. Write briefly :

1. **What is Big O Notation?**
2. **How does Binary Search differ from Linear Search?**
3. **Define Sorting.**
4. **Differentiate between Stacks and Queues.**
5. **What is the role of Polish Notation in arithmetic expression evaluation?**
6. **What is the function of Dynamic Storage Management?**
7. **What is the significance of Circular Linked List?**
8. **Name and explain different types of Queues in Data Structures.**
9. **List any three applications of trees.**
10. **What do you mean by Depth of a tree?**

SECTION-B

2. What are the points to be considered before choosing a Data Structure? Discuss different types of Data Structure(s) available.
3. What is Recursion? Explain in detail by means of an example.
4. Write down the algorithm to reverse a doubly linked list.
5. Discuss in detail, different tree traversal algorithms. Also discuss applications of tree(s).
6. How Selection Sort works? Write down the algorithm for the same.
7. What do you mean by Garbage Collection? Discuss its significance. Also specify its advantages and limitations.