

ANNUAL EXAMINATION 2020

(Only for Regular Students)

Centre No. 135

Class-BCA-II (Old Course)

Paper No- BCA 201 Paper III

Time- 3 hrs.

Centre Name- Disha College, Raipur (C.G.)

Subject- Data Structure

Paper Name- Data Structure

M.M.-50

Note: All question carry equal marks.

UNIT I

1. What are different categories of data structures? Explain. Differentiate linear and non linear data structure.

OR

1. What do you mean by complexity of an algorithm? Explain various notations used to denote complexity.

UNIT II

2. Write algorithm for bubble sort. Explain.

OR

Explain insertion and deletion operations for a linear array.

UNIT III

3. Explain and write algorithm to insert a node into a linked list.

OR

What is a circular queue? Write algorithm to insert and delete an element from a circular queue.

UNIT IV

4. Explain binary search tree and its advantages. Construct a binary search tree for following elements: 10, 15, 12, 7, 8, 18, 6, 20

OR

Explain traversing a binary tree. Write algorithm for preorder traversal of a binary tree.

UNIT V

5. Write and explain algorithm to merge two arrays.

OR

Arrange following list in ascending order using insertion sort. Give Steps : 77, 44, 11, 55, 22, 33

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