

Roll No :

Total No. of Questions : 10]

[Total No. of Printed Pages : 2

BC-270

B.C.A. (Part-III) DUE IIInd Year Examination, 2021

DATA STRUCTURES

Paper - BCA-201

Time : 1½ Hours]

[Maximum Marks : 50

Note :- Attempt any *five* questions in all, selecting *one* question from each Unit.
All questions carry equal marks. Suitable example for each question is a must.

Unit-I

1. (a) What is Stack ? Explain the basic operation on it with example.
(b) Define time and space complexity of Algorithm. 5,5

Or

2. What are the criteria of Algorithm Analysis ? Explain with examples. 10

Unit-II

10 each

3. What is the benefit of link list over array ? Explain basic operations of Linked List.
4. Write a algorithm/program to delete a specific node from doubly linked list.

Unit-III

10 each

5. Explain different traversing in tree with their algorithm and example.
6. What is Tree ? Discuss its types and properties.

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Unit-IV

10 each

7. Explain sequential and binary searching in detail and give their timing analysis.
8. Compare various sorting methods.

Unit-V

10 each

9. Explain Breadth First Search and Depth First Search in graph.
10. What is Graph ? Explain different types of graphs.