

Roll No.

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F - 3956**B.C.A. (Part - II) Examination, 2022****(Old Course)****Paper Third****DATA STRUCTURE****(201)***Time : Three Hours]**[Maximum Marks:50***Note: Attempt any two parts from each unit. All questions carry equal marks.****Unit - 1**

1. (a) Describe classification of data structure.
- (b) Explain application and advantages of data structure.
- (c) What is array ? Describe memory representation

of array with example.

Unit - II

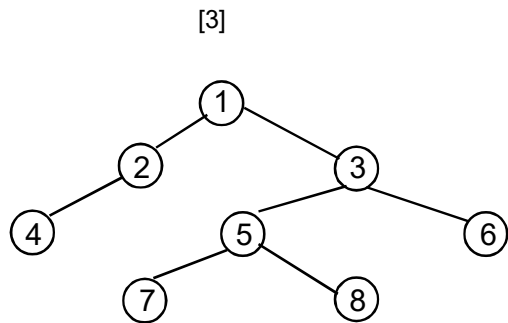
2. (a) What are the differences between linear search and binary search? Explain with example.
- (b) What is pointer ? What are their uses? Also, explain pointer array.
- (c) Explain structure of record with suitable example.

Unit - III

3. (a) What do you understand by doubly linked list ? Describe about its applications.
- (b) What is Stack? Explain stack operations.
- (c) Write an algorithm to insert a data into linked list.

Unit - IV

4. (a) Write pre order, post order and in order traversal sequence from given binary tree -



- (b) How to insert data into binary search tree.
Explain with suitable example.
- (c) What is tree? Describe terminologies used in tree.

Unit - V

- 5. (a) What is insertion sort ? Write algorithm for insertion sort.
- (b) Explain bubble sort with suitable example.
- (c) Discuss merge sort with appropriate example.