

Roll No.

D-3840

B. C. A. (Part II) EXAMINATION, 2020

(Old Course)

Paper Third

DATA STRUCTURE

(201)

Time : Three Hours]

[Maximum Marks : 50

Note : Attempt any *two* parts of each Unit. All questions carry equal marks.

Unit—I

1. (a) Explain need of Data Structures.
- (b) Explain classification of Data Structure.
- (c) Write operations on Data Structure.

Unit—II

2. (a) Write algorithm for Linear Search.
- (b) Write advantages of Pointer Arrays.
- (c) Write advantages and disadvantages of Arrays.

Unit—III

3. (a) Write algorithm to insert and delete element in queue.
- (b) Write an algorithm to insert element in linked list at front of the list.
- (c) Write a note on Array representation of stack.

(A-28) P. T. O.

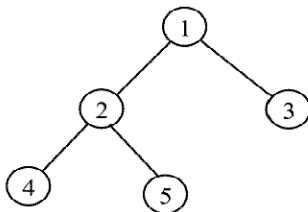
[2]

Unit—IV

4. (a) Create the binary search tree using the following data elements :

43, 10, 79, 90, 12, 54, 11, 9, 50

- (b) Write Pre-order, Post-order and Inorder traversal of the following tree :



- (c) Explain the following :

- (i) Complete Binary Tree
- (ii) Expression Tree

Unit—V

5. (a) Write algorithm for Merge Sort.
(b) Write Program/Algorithm for selection sort.
(c) Write advantages of Binary Search.