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Total No. of Pages : 02

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## B.Sc.(CS) (Sem.-3) DATA STRUCTURES Subject Code : BCS-305 M.Code : 71777 Date of Examination : 21-12-22

Time: 3 Hrs.

Max. Marks : 60

## INSTRUCTIONS 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. Answer briefly :
  - a) Data
  - b) Pointers
  - c) Underflow
  - d) Stack
  - e) Deque
  - f) Sorting
  - g) Polish notation
  - h) Small 'o' notation
  - i) Tree
  - j) Tracks

## **SECTION-B**

- 2. Differentiate between arrays and linked list.
- Perform bubble and quick sort on given array.
  55, 47, 88, 12, 30, 99, 23, 65, 71
- 4. Create a BST of 15 nodes. Write all 3 traversals
- 5. What do you mean by infix, prefix and postfix expressions? How to evaluate postfix?
- 6. Discuss various operations on queue.
- 7. Write algorithm for creating a stack using linked list. How to add and delete from stack.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.