



RAN-7019

S. Y. B. Sc. (Computer Science) Sem-IV Examination

March / April - 2019

Paper No. -3: Data Structure Using C++ (Course No-401)

(Old)

Time: 2 Hours]

[Total Marks: 50

सूचना : / Instructions

नीचे दृशविले निशानीवाणी विगतो उत्तरवही पर अवश्य लभवी.
Fill up strictly the details of signs on your answer book

Name of the Examination:

S. Y. B. Sc. (Computer Science)

Name of the Subject :

Paper No. -3: Data Structure Using C++ (Course No-401)

Subject Code No.: 7 0 1 9

Seat No.:

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Student's Signature

Q.1. Answer in short

(10)

- What do you mean by Stack Data Structure? List uses of stack in computer Science.
- What is Doubly Link List? How it is better than singly link list.
- What is Polish and Reverse Polish notations.
- How element are stored in array. Compare array and link list in terms of element storage.
- Define Data Structure. In which areas of computer science Data Structure is used.

Q.2. (a) What is link list? Discuss various types of link list.

(07)

(b) Write an algorithm to find factorial of given number using recursion.

(04)

OR

(a) Discuss algorithms to create ordered singly link list.

(07)

(b) Draw binary tree for given mathematical expression

(04)

$a + b / c - (d + e) / f^g$

(c) What is priority queue? Discuss its applications.

(03)

- Q3.** (a) Discuss algorithm to insert and delete element in input restricted Dequeue. (06)
- (b) Discuss Breath first searching in graph (04)
- OR**
- (a) Write algorithm to sort a list using quick sort. (06)
- (b) Explain 2-3 tree with example (04)
- (c) Discuss classification of Data Structure (04)
- Q4. Answer the following (any three) (12)**
- (a) Discuss storage representation in two dimensional arrays.
- (b) Discuss applications of stack.
- (c) Discuss Threaded presentation of Tree.
- (d) Explain Binary tree with proper example.
- (e) Discuss different operation on Linear Data Structure.
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