

Roll No.

24032

**B. Tech. 3rd Semester (CS & IT)
Examination – March, 2021**

DATA STRUCTURE USING 'C'

Paper : CSE-201-F

Time : Three Hours] [Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. Write short note on following : 20

- (i) Structures
- (ii) Pointer
- (iii) Graph
- (iv) Skip list

UNIT - I

2. Define Algorithm. Describe how to design and develop an Algorithm. Also explain complexity of algorithms. 20
3. Explain the following : 20
 - (i) Merge Sort
 - (ii) Application of Queues
4. Explain the following : 20
 - (i) Dynamic Allocation
 - (ii) Array of Pointers
5. Give a complete description about Linked Lists. 20

UNIT - III

6. Define Binary Tree. Explain its types, Also describe traversing of Binary Trees. 20
7. (i) What are the different ways to represent a graph ? 10
(ii) Describe different types of operations on graph. 10

UNIT - IV

8. Define file. Describe different types of operations on files. Also describe about file handling. 20
9. Describe the following : 20
 - (i) Applications of Lots
 - (ii) Skip Lists