

Total No. of Questions – [6]

Total No. of Printed Pages: 1

G.R. No.

MARCH 2020 INSEM (T1)
S. Y. B.TECH. (PROGRAM) (SEMESTER - IV)
COURSE NAME: Data Structures
COURSE CODE: ETUA22182

(PATTERN 2018)

Time: [1 Hour]

[Max. Marks: 20]

(*) Instructions to candidates:

1. Attempt Q.1 **OR** Q.2, Q.3 **OR** Q.4, Q.5 **OR** Q.6
2. Figures to the right indicate full marks.
3. Use of scientific calculator is allowed.
4. Assume suitable data wherever required.

Q. 1) Describe parameter passing by reference using "swap" function. [4]

Write a C++ program to calculate factorial of a number. [4]

OR

Q. 2) Write a C++ program to perform linear search on an array. [4]

Write a short note on constructors and explain with suitable example. [4]

Q. 3) Differentiate between Singly linked list and Doubly linked list. [4]

Write function to create and display singly linked list. [4]

OR

Q. 4) Write a C++ program to create and display a Doubly linked list. [8]

Q. 5) Explain conditions to check whether stack is empty and stack is full. [4]

OR

Q. 6) Define stack and write applications of stack. [4]