Islampur, Sangli - 416415

Second Year B. TECH. (Computer Science and Engineering)
MSE , ODD SEMESTER, AY 2022-23
Data Structures (6CS202)

MSE

Day, Date and Time: Wednesday, 12/10/2022, 03.00 pm to 04.30 pm

PRN: _____

Max Marks: 30

IMP: Verify that you have received question paper with correct course, code, branch etc.

Instructions:
a) All questions are compulsory.
b) Writing question number on answer book is compulsory otherwise answers may not be assessed.
c) Assume suitable data wherever necessary.
d) Figures to the right of question text indicate full marks.
e) Mobile phones and programmable calculators are strictly prohibited.
f) Except PRN anything else writing on question paper is not allowed.
g) Exchange/Sharing of stationery, calculator etc. not allowed.

Text on the right of marks indicates course outcomes (only for faculty use).

		Marks	
Q1 A)	Write pseudocode to give a recursive solution to the Towers of Hanoi problem for N disks.	4	CO2
Q1 B)	Explain 1. Abstract Data Type 2. Big O Notation	4	CO1
Q2 A)	1. Convert following infix expression to prefix expression. A + B * (C - D) / (P - R) 2. Convert following infix expression to postfix expression. (A + B) * C + D + E * F – G	6	CO2
Q2 B)	Illustrate Double Ended Queue and insert operations on it.	6	CO1
Q3 A)	Write a function to search an element from doubly linked list.	4	CO2
Q3 B)	Write an algorithm for addition of two polynomials using linked lists.	4	CO2
Q3 C)	Differentiate between Linked List and Array.	2	CO1