



SOMAIYA
VIDYAVIHAR UNIVERSITY

Maximum Marks: 30	Semester: July 2023-October 2023	Duration :1:15 hrs
Programme code: 01	Examination: In-Semester Examination	
Programme: B. Tech. in Computer Engineering	Class: SY	Semester: III (SVU 2020)
Name of the Constituent College: K. J. Somaiya College of Engineering	Name of the department: COMP/IT	
Course Code: 116U01C302	Name of the Course: Data Structures	

Question No.		Max. Marks
Q1	A. Define ADT. Discuss any two advantages of ADT. B. Suggest and justify appropriate data structures for following :- 1. 'Continue watching' list in OTT app platform 2. Entry and exit from a stadium having two gates both permitting entry and exit	5+5
Q2	Convert the expression given below into its corresponding postfix expression and then evaluate it using stack operation. $10^3 + (2+6) * (12-6) / ((7-5) + 10)$	10
Q3	Discuss the algorithms/pseudocode to implement following operations on circular singly linked lists. Consider all scenarios: 1. Insertion at beginning 2. Deletion after a given node <u>OR</u> Write Algorithm/Pseudo code for Priority Queue Insertion Operation and deletion operation. (List must be sorted on priority of element with the highest priority element at the front)	10