



School of Computer Science Engineering and Information Systems
Winter Semester 2023-2024
Continuous Assessment Test – I

Programme Name & Branch: MIS

Course Name & code: ISWE102L-Data Structures and Algorithms

Class Number (s): VL2023240503050, VL2023240503062, VL2023240503066

Faculty Name (s): VIJAYAN E, MYTHILI N, DEENADAYALAN T

Exam Duration: 90 Min.

Maximum Marks: 50

General instruction(s):

Q.No.	Question	Max Marks
1.	a) What does the following function do for a given Linked List ? void fun2(struct node* head) { temp=head; While(temp!= NULL) { printf("%d", temp->data); temp=temp->next; } }	4
	b) Write a <u>code snippet</u> for counting the total number of nodes in a singly linear linked list.	6
2.	a) Explain how queue is used in job scheduling. b) Explain the following operations on singly linked list. i. insertion at middle (3 marks) ii. display the list in reverse direction (3 marks)	4 6
3.	Evaluate the following <u>postfix</u> expression using stack and write the steps in detail. <u>2 3 + 6 4 - * 8 9 + /</u> (assume all the digits are single digit numbers)	10
4.	Write a method " <u>operation</u> " that accepts a <u>queue of integers</u> as a parameter. Create the resultant queue by adding the <u>elements</u> (Elements: 10, 8, 2, 5, 8, 7, 6) using descending priority queue.	10
5.	Convert the following infix expression to prefix. Write the procedure for conversion using stack and show every step in detail. (a+b)/c*d-e	10