VIT
Vellore Institute of Technology

SLOT – B2

SCHOOL OF COMPUTER SCIENCE ENGINEERING AND INFORMATION SYSTEMS

CONTINUOUS ASSESSMENT TEST – I - WINTER SEMESTER - 2023-24

Programme Name & Branch: M.TECH - SE

Class Number(s): VL2023240503413, 3417, 3405, 3407, 3422

Course Code: ICSE102L

Course Name: **Structured and Object-Oriented Programming**

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Maximum Marks: 50

Exam Duration: 90 Mins

ANSWER ALL THE QUESTIONS (5 X 10 = 50 MARKS)

Q.NO.	Questions	Max. Marks
1.	You're developing a program that asks the user to input a positive integer. If the user enters a negative number, the program should prompt them to input again until a positive integer is provided. Once a positive integer is entered, the program should calculate and display the factorial of that number. Implement this program in a C, ensuring appropriate error handling and looping until valid input is provided.	10
2.	Write a C program to find the Sum of Each Row and Column of an MxN Matrix.	10

3.	**a.** Write the output for the following C program. (5 Marks)
	#include<stdio.h>
	void main()
	{
	int a[5]={5,1,15,20,25};
	int i,j,k=1,m;
	i=++a[1];
	j=a[1]++;
	m=a[i++];
	printf("\n%d%d%d",i,j,m);
	printf("\n%d",a[1]);
	}
	
	b. Code a program in C to calculate the Sum of Series. (5 Marks)
	$1^3 + 2^3 + 3^3 + \ldots + n^3$
		10

4. Write a C program to accomplish each of the following tasks. .

   a) Declare a variable papayaWar of type string. Initialize it to the value "No, sir, away! A papaya war is on!"
   b) Print the length of the papayaWar string. **10**
   c) Append the string "rotator" to the end of papayaWar.
   d) Print the contents of papayaWar in reverse order as well its length.
   e) Print the content of papayaWar in upper case.

5. Design two user defined functions in C, one to find the area of circle and triangle, other to print all prime numbers from 1 to n. **10**