



School of Computer Science and Engineering

Fall Semester 2023-24

Continuous Assessment Test – 1

SLOT: A1+TA1

Course Name & Code : Programming in C & CSE1008

Programme Name : B.Tech - BBS

Branch : Computer Science and Engineering and Business Systems

Class Number (s) : VL2023240107110 & VL2023240107108

Faculty Name (s) : Dr. A. Viswanathan & Prof. Sivanesan S

Exam Duration : 90 Min.

Maximum Marks: 50

Answer All Questions

Qno.	Question	Max Marks	CO	BL
1.	Investigate the following terminologies using relevant examples: • Algorithm • Flowchart Illustrate the exact output of the following C-program:- <pre>#include <stdio.h> int main() { int marks[10], i, n, sum = 0; int average; scanf("%d", &n); for(i=0; i < n; ++i) { printf("Enter number-%d: ", i+1); scanf("%d", &marks[i]); sum += marks[i]; } average = sum / n; printf("Average = %d", average); return 0; }</pre> Modify the above given program to meet the following objectives:- • Better readability • Enhanced precision for the output Justify the improvements using at least one detailed trial run.	10	CO1	BL4
2.	Describe various data types available in the C programming language and, using relevant real-world examples, Analyze how a few data types enhance accuracy and precision. Design and demonstrate a C program to perform the following operations:- • Initialize an integer array with 12 random numbers	10	CO2	BL4

	• Create two sub-arrays: ✓ Odd-array by adding pair wise numbers stored in odd locations ✓ Even-array by multiplying pair wise numbers stored in even locations • Print all three arrays (original, Odd-array and Even-array)			
3✓	Determine and analyze the requirements for "ENTRY Controlled" & "EXIT Controlled" loops using relevant real-life examples and appropriate "C" programs. Write a C program to read the age of a candidate and determine whether the candidate is eligible to cast his own vote using conditional operator.	10	CO3	BL3
4.	Will the while and do...while loops run indefinitely? If so, use an example code fragment to illustrate and investigate the scenario. Write a C program to print the following pattern using for and while loop. <pre> 1 1 1 1 1 2 2 3 3 4 4 5 5 5 5 5 </pre>	10	CO3	BL3
5.	Write a C programme that generates a multiplication table with 20 entries using the optimal programming techniques, and then use a trail run to illustrate the same for number 5 (5's multiplication table).	10	CO2	BL2