Reg.No: | | | | | | | |

SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)
Coimbatore – 641 035.

A

B.E / B.Tech – Internal Assessment Exam- II

Academic Year 2023-2024 (ODD)

FIRST SEMESTER (REGULATION R2023)

23CST101- PROBLEM SOLVING AND C PROGRAMMING

Time: $1^{1/2}$ Hours **Maximum Marks: 50**

Answer All Questions

PART A — (5 x 2 = 10 Marks)

1.	What are the various types of Operators in C.	CO2	REM
2.	Differentiate While and do- While loop	CO2	ANA
3.	List out the Jump Statements in C.	CO2	UND
4.	Write the logic for performing sorting of numbers in ascending order.	CO3	UND
5.	Apply the string functions to find the length of given string S1= "welcometosnsct" and convert S1 to uppercase	CO3	App

PART B — (13+13+14 = 40 Marks)

6. (a) Assume an example of grading system of the students in an institution. The grading is done according to the following rules:

Obtained marks	Grade
100-95	A+
85-94	A
75-84	B
60-74	C
50-59	D
<50	FAIL

CO2 App 13

Now Construct a C program to Calculate students' grade using if–else ladder concept.

(OR)

	(b)	i)Write a C-Program to generate a Fibonacci series	CO2	App	6
		ii)Create a C Program to perform various calculator arithmetic operations using Switch case Statements	CO2	App	7
7.	(a)	Write a C program to perform matrix multiplication for the matrix size 3 X 3.	CO3	App	13
		(OR)			
	(b)	Explain briefly about the concept of one dimensional array with declaration and initialization with an example.	CO3	Und	13
8.	(a)	i) An Armstrong number is a three-digit integer such that the sum of the cubes of its digits is equal to the number itself. For example, 371 is an Armstrong number since 3^3 + 7^3 + 1^3 = 371. Write a c program to find whether a given number 417 is an Armstrong number or not	CO2	APP	7
		ii) Utilize the looping concept to generate the given Patterns * ** *** **** ***** ****** *******	CO2	APP	7
		(OR)			
	(b)	Ram and Seetha studying in SNS college of Technology, The professor Anuman want to update the details of Ram & Seetha in ERP portal so that the professor want to perform the string operations with the following strings. String1=SNSCT String2=DEPARTMENT OF CSE strcat(), strcmp(), strncpy(), strrev(),strupr(),strlwr(),strlen()	CO3	APP	14

(Note: UND-Understand REM-Remember ANA-Analyze APP-Apply CRE-Create)

Prepared By **Verified By** **HoD**