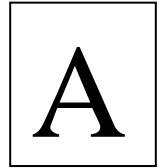**SNS College of Technology, Coimbatore-35.**
(Autonomous)
B.E/B.Tech- Internal Assessment -I
Academic Year 2023-2024(EVEN)
Second Semester (Regulation R2023)
COMPUTER SCIENCE AND ENGINEERING

A

23ITT101 – PROGRAMMING IN C AND DATA STRUCTURES

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

Answer All Questions

PART A — (5 x 2 = 10 Marks)

1.	Define pseudocode. Write a pseudocode to find greatest of two numbers.	CO1	REM
2.	Draw the flow chart to find whether a number even or odd.	CO1	APP
3.	Write a program to determine whether a person is eligible to vote	CO1	APP
4.	List out the significance of break statement in loops	CO2	UND
5.	Give the difference between while and do-while statements.	CO2	REM

PART B — (2 x 13 = 26 Marks & 1 x 14 = 14 Marks)

6. (a)	i) Explain in detail about Structure of C programming with a Sample C program.	CO1	UND	8
	ii) Draw flow chart along with the pseudo code to find area of a Rectangle.	CO1	APP	5

(OR)

(b)	i) Discuss the different types of operators used in C	CO1	UND	6
	ii)Explain the data types and its types in C with suitable examples.	CO1	UND	7

7. (a)	Enumerate the operation of various looping statements in C with suitable examples.	CO2	REM	13

(OR)

(b)	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) Write C program to print first ten natural numbers.	CO2	APP	6

8. (a) Give the algorithm,Flowchart and Pseudo code to check whether given number is positive, negative or zero.   CO1   APP   14

(OR)

(b) 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   14

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

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(Note: Und-Understand   Rem-Remember   Ana-Analyze   App-Apply)