



Code No: 9FC01

Date: 24-Mar-2023 (FN)

B.Tech I-Year I- Semester External Examination, March-2023 (Regular)

**PROBLEM SOLVING USING C (CIVIL, ECE, CS and IOT)**

Time: 3 Hours

Max.Marks:60

**Note:** a) No additional answer sheets will be provided.  
 b) All sub-parts of a question must be answered at one place only, otherwise it will not be valued.  
 c) Missing data can be assumed suitably.

**Bloom's Cognitive Levels of Learning (BCLL)**

Remember	L1	Apply	L3	Evaluate	L5
Understand	L2	Analyze	L4	Create	L6

**Part - A****Max.Marks: 6x2=12****ANSWER ALL QUESTIONS, EACH QUESTION CARRIES 2 MARKS.**

	BCLL	CO(s)	Marks
1 Define global and local variables in C language.	L1	CO1	[2M]
2 Define Conditional Operator. Give an example.	L1	CO2	[2M]
3 Define array. Is it static or dynamic? Justify your answer.	L1	CO3	[2M]
4 Define macro. Is it a function.	L1	CO4	[2M]
5 Define a pointer. Give an example.	L1	CO5	[2M]
6 Give any two examples for I/O function.	L1	CO6	[2M]

**Part – B****Max.Marks: 6x8=48****ANSWER ALL QUESTIONS. EACH QUESTION CARRIES 8 MARKS.**

	BCLL	CO(s)	Marks
7. a) Sketch the syntax of C Programming Language and discuss the features of C programming.	L2	CO1	[8M]
<b>OR</b>			
b) Write an algorithm and draw the flow chart to test whether the given integer is an even or an odd number.	L3	CO1	[8M]
8. a) Write a C Program to demonstrate arithmetic operators using Switch control statement.	L3	CO2	[8M]
<b>OR</b>			
b) Discuss evaluating expression with suitable example in C program.	L2	CO2	[8M]
9. a) Write a function to perform addition of two square matrices with size n x n.	L4	CO3	[8M]
<b>OR</b>			
b) How many ways can we pass the individual elements to an array? Discuss with example.	L2	CO3	[8M]
10. a) Write a recursive function to count binary digits of a given positive non-zero integer and write a sample output for input n = 11.	L4	CO4	[8M]
<b>OR</b>			
b) Write the format and an example for the following math functions. i) Absolute    ii) Ceil    iii) Truncate    iv) Round	L1	CO4	[8M]
11. a) Write a function to print sum of the elements of a matrix with size n x m if input elements are integers else print as invalid input.	L3	CO5	[8M]
<b>OR</b>			
b) Discuss the following string handling functions with syntax and suitable example program in C language. i) strcmp()    ii) strchr()    iii) strcat()    iv) strrev()	L2	CO5	[8M]
12. a) Write the syntax for the following positioning functions and give an example code. i) rewind()    ii) fseek()	L1	CO6	[8M]
<b>OR</b>			
b) Discuss stream file processing with suitable example.	L2	CO6	[8M]