B. Tech: 1ˢᵗ Semester
Course Name: Programming in C   *Course Code: CS1402*
Maximum Time: 2 Hours   **Max. Marks:40**

Instructions:
1. Attempt all questions. Assume missing data if any. Put as much comment as possible to make your programming answers readable.
2. The Marks, CO (Course Outcome) and BL (Bloom's Level) related to questions are mentioned on the right-hand side margin.

S.No.	Questions	Marks	CO	BL

1	a) Suppose, a = 28 and b = 39 then, what will be the output of the following expressions? [4] .
	a&b, a|b, ~a, a^b, a<<2, b>>3, a&&b, a||b
	
	b) Consider a C compiler which allots 7 bits to the integer variable. What will be range of unsigned and signed integer on this compiler? [2]
	
	c) What is the output of the following code snippet?[2]
	
	``c
	#include<stdio.h>
	int main()
	{
	  unsigned char i = 0;
	   for(;i<=0;i++) ;
	   printf("%d\n",i);
	    return 0;
	}
	``
	
	d) Does C programming have boolean data type? If yes, provide syntax, if no how boolean data are handled in C.[2]
		10	CO2	1, 2

2	a) Write a program to print the following pattern. [5] 1 2 1 2 3 2 1 2 3 b) Write a C program to divide the given number by 8 without using / (division) operator.[5]	10	CO2	2, 3, 4
3	a) Write the complete steps (Compilation and Execution) of a C program in detail. b) Write the syntax for the following C statements. *if, if-else, if-else-if, switch, for, while, do-while*	10	CO1, CO2	3, 4
4	Write a C program to input three numbers from user. Program should check and print if a) all the input numbers are equal or b) all the three numbers are different or c) any two of them are equal without using equality operator [10]	10	CO	2, 4