Academic year 2021-2022 (Odd Sem)

DEPARTMENT OF
COMPUTER SCIENCE AND ENGINEERING

Date		**Maximum Marks**	50
Course Code	21CS13	**Duration**	90 Minutes
Sem	I Semester		

PROGRAMMING IN C
(CHEMISTRY CYCLE)

Sl. No.		Questions	M	BT	CO
1	(a)	What is a program? With an example C program, explain the structure of a typical C program .	4	1	1
	(b)	Write an **algorithm** and a **flowchart** to compare two numbers and print either the message identifying the greater number or the message stating that both numbers are equal.	6	3	2
2	(a)	What is a machine language? Mention the advantages and disadvantages of machine language?	4	2	1
	(b)	Write an **algorithm** and a **flowchart** for calculating the simple interest using the formula SI = (P * T * R)/100, where P denotes the principal amount, T time, and R rate of interest.	6	3	2
3	(a)	What is a compiler, interpreter, linker and loader? Give the difference between compiler and interpreter.	4	1	1
	(b)	Magical pond: In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half the lake? Write a C **program** to take solve this puzzle. Read the input from the user i.e., number of days taken to cover the patch, compute the answer and display.	6	3	2
4	(a)	Write a C Program to find the size of int, float, double and char datatypes.	4	2	1
	(b)	What is a token? Describe the five classes of token in C. Give examples for each.	6	1	1
5	(a)	Write a C program to convert Celsius to Fahrenheit. Read value for Celsius from the user. (Note: Fahrenheit = (9/5) * Celsius) + 32).	4	3	2
	(b)	Describe the different categories of operators that are included in C.	6	2	1

Course Outcomes	
CO1:	Describe the fundamental computer concepts and syntax of C programming.
CO2:	Apply logical skills to design and develop algorithms/flow charts to solve real-world problems.
CO3:	Analyse the logic of the program and output obtained using different sets of input.
CO4:	Design and develop programs using appropriate data structures and functions in C language.

BT-Blooms Taxonomy, CO-Course Outcomes, M-Marks

	Particulars	CO1	CO2	CO3	CO4	L1	L2	L3	L4	L5	L6
Marks Distribution	Test Max Marks	28	22	0	0	14	14	22	0	0	0