

	Name of the School	School of Computer Science and Engineering	Name of the Department	MLDS/ Compsec/CA
	Name of the Program	B. Tech CSE	Course Code/ Course Name	UCS1003/ Programming in C
	Session	2024-25	Branch, Year & Semester	CSE, 1st yr. & 1st Sem
	Time/Max Marks	1 1/2 Hours/50	Set	A
	Note: Attempt all sections (A, B & C).			

S. No.	QUESTIONS	MARKS	CO/Unit
SECTION-A: Attempt all the questions			(5x3=15)
1	Define a computer system. List its main components. Also draw the block diagram.	3	1
2	Explain printf and scanf functions with examples.	3	1
3	Describe the basic components of a C program.	3	2
4	Define the term algorithm. Explain its significance in problem-solving.	3	2
5	Describe the purpose of a flowchart in algorithm representation.	3	3
SECTION-B: Attempt all questions.			(5x5=25)
6	Differentiate between a compiler and an interpreter. Explain any four differences	5	1
7	Explain the role of variables in C and their relation to memory locations.	5	1
8	Explain the difference between the logical AND (&&) and logical OR () operators. Provide an example to illustrate your answer.	5	2
9	Explain how the assignment operator (=) work in an expression involving arithmetic operations? Provide an example to explain your answer.	5	2
10	Explain how the else if construct help in evaluating multiple conditions in an if-else structure. Provide a brief code example.	5	3
SECTION-C: Attempt all questions.			(1x10=10)
11	Write a c program to find the sum and average of three numbers provided by the user. Also mention algorithm and flow chart.	10	2



Name of the School	School of Computer Science and Engineering	Name of the Department	ML & DS
Name of the Program	B. Tech CSE	Course Code/ Course Name	UCS1003/ Programming in C
Session	2024-25	Branch, Year & Semester	CSE, 1st yr. & 1st Sem
Time/Max Marks	3 Hours/100	Set	A
Note: 1) Attempt all sections (A, B & C). 2) Attempt all questions in section A & B. 3) Section C consists of 5 questions. One question from each unit. Questions may have internal choice from the same unit. Attempt all questions.			

Q No.	QUESTIONS	MARKS	CO
SECTION-A:		(10x2=20)	
Q1(a)	Discuss about loader, and why is it necessary in program execution?	2	1
(b)	Explain the difference between the if and switch statements. Also mention their syntax.	2	1
(c)	Define an algorithm and give one example of its application.	2	2
(d)	Differentiate between syntax errors and logical errors in C programming.	2	2
(e)	Define object code and executable code in the context of program compilation.	2	3
(f)	Explain how arrays are represented in memory with example.	2	3
(g)	Define functions in C	2	4
(h)	Mention the purpose of Return statement in a function.	2	4
(i)	Compare the while loop and do-while loop in C programming with their syntax.	2	5
(j)	Explain, how are pointers declared, and how do they operate on data?	2	5
SECTION-B:		(5x6=30)	
Q2(a)	Describe the different types of storage available in a computer system. Compare primary storage (like RAM) with secondary storage (like hard drives) and tertiary storage (like cloud storage), focusing on their speed, cost, and usage.	6	1
(b)	Describe the structure of a C program. Explain the significance of the main() function and how it is used in program execution.	6	2
(c)	Describe the different types of functions in C. Provide examples of each type	6	3
(d)	Write a C program that swap two integers using both Pass by value and Pass by Reference.	6	4
(e)	Write a C program that uses a pointer to access and modify the value of an integer variable.	6	5
SECTION-C: Attempt any one part of each question.		(5x10=50)	

Q3(a)	Write a C Program to read radius value from the keyboard and calculate the area of circle and print the result in both floating and exponential notation.	10	1
Q3(b)	OR Write a C program to print the sum of all numbers up to a given number using for loop.		
Q4(a)	Discuss about Switch Statement in C. Explain the usage of Switch statement by taking an example of your choice. Also discuss how it is different from if-else statement.	10	2
Q4(b)	OR Explain the difference between While loop and do-while loop and for loop. Also mention their syntax with example.		
Q5(a)	Explain about recursive function. Also write a recursive function to calculate the factorial of a given number.	10	3
Q5(b)	OR Write a C program to find the sum of all the elements of 1D array.		
Q6(a)	Design a C program for the addition of two matrices of order $m \times n$ and display the resultant matrix.	10	4
Q6(b)	OR Describe the difference between Call by Value and Call by Reference with the help of program.		
Q7(a)	Explain the term pointers also Write a C program to swap two elements using the concept of pointers.	10	5
Q7(b)	OR Write a recursive function to find the Fibonacci sequence up to a given term.		