

# CBCS SCHEME

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## First Semester B.E./B.Tech. Degree Examination, Dec.2025/Jan.2026 Programming in C

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.  
2. M : Marks , L: Bloom's level , C: Course outcomes.*

Module – 1			M	L	C
Q.1	a.	Define C. Explain the HISTORY of C.	5	L2	CO1
	b.	Explain the System development life cycle.	5	L2	CO1
	c.	Explain the General form of a C program with example.	5	L2	CO1
	d.	Explain the steps in Compiling a C Program. With suitable Example.	5	L2	CO1
<b>OR</b>					
Q.2	a.	Define data type. Explain primitive data types supported in C language with example.	5	L2	CO1
	b.	Define Operators. Explain the Increment and Decrement operators with suitable Examples.	5	L2	CO1
	c.	Show the evaluation of the following expressions with intermediate and final values. i) $x = a - b / 3 + c * 2 - 1$ when $a = 9, b = 12, c = 3$ $10! = 10    5 < 4 \ \&\& \ 8.$	5	L2	CO1
	d.	Develop a C program to multiply, subtract and division by taking two whole numbers. Choose suitable data types for variables.	5	L3	CO5
<b>Module – 2</b>					
Q.3	a.	Explain the Reading and Writing characters.	5	L2	CO2
	b.	With a suitable example, Explain formatted input and output statements.	5	L2	CO1
	c.	List the conditional branching statements in 'C'. Explain any two with suitable examples.	5	L2	CO2
	d.	Develop a C program to print Floyd's triangle for N rows ( $N > 0$ ). Choose suitable control statements. [form=4] 1 23 456 78910	5	L3	CO5
<b>OR</b>					

Q.4	a.	Explain the Iteration Statements with suitable Examples.	5	L2	CO1
	b.	Explain the role of break and continue statements in C with suitable examples.	5	L2	CO2
	c.	Explain the go to , return and Block Statements in C with suitable examples.	5	L2	CO2
	d.	Develop a program to find the roots of quadratic equations.	5	L3	CO5
<b>Module – 3</b>					
Q.5	a.	Define an array. How a single dimension and two-dimensional arrays are declared and initialized? Illustrate with suitable examples.	5	L2	CO2
	b.	Explain how arrays are passed to Functions.	5	L2	CO2
	c.	Define variable length array. Illustrate how variable length array is different from static array.	5	L2	CO2
	d.	Develop a C Program to find the Transpose of MATRIX.	5	L3	CO5
<b>OR</b>					
Q.6	a.	Define a pointer. How do you declare and initialize pointer in C. Explain accessing array elements using a pointer.	5	L2	CO2
	b.	Explain any two pointers operators and pointer Expressions with suitable Examples.	5	L2	CO2
	c.	Explain the concept of Multiple Indirection in Pointers	5	L2	CO2
	d.	Develop a C program to add two numbers using pointers to the variables.	5	L3	CO5
<b>Module – 4</b>					
Q.7	a.	Define function. Explain the syntax of function definition and function declaration with a simple example.	5	L2	CO3
	b.	Explain the Function Arguments and Return statements in C.	5	L2	CO3
	c.	Explain the Function Prototypes with suitable Examples.	5	L2	CO3
	d.	Define recursion. Develop a C program and a function to compute factorial of a given number using recursion.	5	L3	CO3
<b>OR</b>					
Q.8	a.	Define Dynamic memory allocation. List and explain the different functions to handle dynamic memory allocation in C.	5	L2	CO3
	b.	List the advantages of functions in programming.	5	L2	CO3
	c.	Explain TWO techniques of parameter passing to functions with suitable program segments.	5	L2	CO3

	<b>d.</b>	Develop a C-program and a function to check whether the given number is Prime or not.	5	L3	CO3
<b>Module – 5</b>					
<b>Q.9</b>	<b>a.</b>	Define a structure in C. Explain the different types of structure declarations with examples.	5	L2	CO4
	<b>b.</b>	Explain how Array of Structures is passed to a function.	5	L2	CO4
	<b>c.</b>	Explain the differences between structures and unions.	5	L2	CO4
	<b>d.</b>	Develop a C program to store and display the Employee details using Structures.	5	L3	CO5
<b>OR</b>					
<b>Q.10</b>	<b>a.</b>	Describe a method to compare two structure variables of the same type, and provide a simple example.	5	L2	CO4
	<b>b.</b>	Define Enumerated data type. Explain the declaration and access of enumerated data types with the help of C program segment.	5	L2	CO4
	<b>c.</b>	What are Bit-fields and typedef in C. Explain with example.	5	L2	CO4
	<b>d.</b>	Develop a C program to access and modify the members of structures, in array of structures in C.	5	L3	CO5

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