Model Question Paper- I

CBCS SCHEME

First/ Second Semester B.E Degree Examination, 2025-26

Programming in C (1BEIT105/205)

TIME: 03 Hours **Max.Marks:100**

Notes:

1. *Answer any FIVE full questions, choosing at least ONE question from each MODULE*
2. *M: Marks, L: Bloom's level, C: Course outcomes.*
3.

		Module - 1	M	L	C
Q.1	a	Define data type. Explain primitive data types supported in C language with example.	6	L2	CO1
	b	Explain the general form of a C program with example.	8	L2	CO1
	c	Develop a C program to multiply, subtract and division by taking two whole numbers. Choose suitable datatypes for variables.	6	L3	CO5
		OR			
Q.2	a	What is variable? Explain the rules to construct variables. Classify the following as valid/invalid Identifiers. i) num2 ii) $num1 iii) +add iv) a_2 v) 199_space vi) _apple vii) #12	6	L2	CO1
	b	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 ii) 10! = 10 || 5 < 4 && 8.	8	L2	CO1
	c	Develop C program which takes as input p, t, r and calculates the simple interest. Choose suitable data types for variables.	6	L3	CO5
		Module – 2			
Q.3	a	With a suitable example, explain formatted input and output statements.	6	L2	CO1
	b	List the conditional branching statements in 'C'. Explain any two with suitable examples.	6	L2	CO2
	c	Develop a C program to print Floyd's triangle for N rows (N >0). Choose suitable control statements. [for n=4] 1 2 3 4 5 6 7 8 9 10	8	L3	CO5
		OR			
Q.4	a	Explain Jump Statements, Expression Statements, Block Statements with suitable examples.	6	L2	CO1
	b	Explain the role of break and continue statements in C with suitable examples.	6	L2	CO2
	c	Develop a simple calculator program in C language for simple operations like addition, subtraction, multiplication and division. Choose suitable selection statement.	8	L3	CO5
		Module – 3			
Q.5	a	Define an array. How a single dimension and two-dimensional arrays are declared and initialized? Illustrate with suitable examples.	8	L2	CO2
	b	Define variable length array. Illustrate how variable length array is different	6	L2	CO2

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		from static array.			
	c	Develop a C program to swap the values of two integer variables using pointers.	6	L3	CO2
OR					
Q.6	a	Define a pointer. How do you declare and initialize pointers in C. Explain accessing array elements using a pointer.	8	L1	CO2
	b	Show with a suitable program, how a single dimensional array can be passed to a function.	6	L2	CO2
	c	Develop a C program that reads N integers, stores them in an array and calculates the sum of all array elements.	6	L3	CO2
Module – 4					
Q.7	a	Define function. Explain the syntax of function definition and function declaration with a simple example.	6	L2	CO3
	b	Define dynamic memory allocation. List and explain the different functions to handle dynamic memory allocation in C.	6	L2	CO3
	c	Define recursion. Develop a C program and a function to compute factorial of a given number using recursion.	8	L3	CO3
OR					
Q.8	a	List the advantages of functions in programming. With suitable program, how pointer is initialized to a function for call/reference?	6	L2	CO3
	b	Explain TWO techniques of parameter passing to functions with suitable program segments.	6	L2	CO3
	c	Develop a C-program and a function to check whether the given number is prime or not.	8	L3	CO3
Module – 5					
Q.9	a	Define a structure in C. Explain the different types of structure declarations with examples.	6	L2	CO4
	b	Describe a method to compare two structure variables of the same type, and provide a simple example.	6	L2	CO4
	c	Define a structure with a name **student**. Develop a C program that uses a structure named **student.** The program should read and display the details of 'N' students, compute the average marks of the class, and identify the students who have scored marks above and below the class average.	8	L3	CO4
OR					
Q.10	a	Compare the structure and union in terms of syntax, storage and uses/applicability.	6	L2	CO4
	b	Define Enumerated data type. Explain the declaration and access of enumerated data types with the help of C program segment.	6	L2	CO4
	c	Develop a C program to access and modify the members of structures, in array of structures in C.	8	L3	CO4