

CBCS SCHEME

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MMC101

First Semester MCA Degree Examination, June/July 2025 Programming and Problem Solving 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.	Write the structure of C program and explain with an example program	6	L1	CO1
	b.	List the different operators in C and explain any two with an example program	6	L2	CO1
	c.	List out four conditional branching statements in C program and explain any two of them with an example program	8	L1	CO1
OR					
Q.2	a.	List out three iterative statements in C program and explain any two of them with an example program	10	L1	CO1
	b.	Write short note on the following i. Input /output statements ii. Preprocessor directives	10	L2	CO1
Module – 2					
Q.3	a.	What are arrays? How to declare and initialize an array in C? How to access the elements of an array? Explain in detail along with example program	6	L2	CO3
	b.	List the operations on Arrays and explain any two of them with an example program	8	L2	CO3
	c.	Write a C program to sort the given set of n numbers using selection sort	6	L3	CO3
OR					
Q.4	a.	What is a string? Explain any four string handling functions with an example each	10	L2	CO4
	b.	How to declare and initialize two dimensional arrays in C? How to access the elements of two dimensional array? Explain in detail along with an example program	10	L2	CO3
Module – 3					
Q.5	a.	What is a function? What is the need for user defined function? how to declare, define and call a function in C explain along with syntax and an example program	10	L2	CO4

	b.	Write a C program to search the key in the given set of n numbers using recursive binary search	10	L3	CO4
OR					
Q.6	a.	What is pointer? How do you declare pointer variable? Write a program to implement pointer expressions and pointer arithmetic	10	L2	CO3
	b.	Explain the following with example program i. Call by value ii. Call by reference	10	L2	CO3
Module – 4					
Q.7	a.	What is Structures and Union in C programming Language? Write the syntax for defining structure and union in C. Explain how the individual members are accessed in each? Explain with example	10	L2	CO3
	b.	List out the four different types of storage classes in C. Explain in detail	10	L2	CO4
OR					
Q.8	a.	What is linked list? Write a C function for i. Inserting a node at the beginning ii. Delete the last node from the list	10	L3	CO3
	b.	Define dynamic memory allocation? Discuss the four dynamic memory allocation functions along with example	10	L3	CO4
Module – 5					
Q.9	a.	What are files in C? Explain the sequential access and random access of files	10	L2	CO4
	b.	List the different functions to read the data from files and explain them in detail	10	L2	CO4
OR					
Q.10	a.	List the different functions to write the data to files and explain them in detail	10	L2	CO4
	b.	What are Command Line Arguments? Write a program to demonstrate command line argument	10	L2	CO3
