

Roll No:

MCA
(SEM I) THEORY EXAMINATION 2025-26
PROBLEM SOLVING USING C

TIME: 3 HRS

M.MARKS: 70

SECTION A

1. Attempt all questions in brief. 2 x 07 = 14

Q no.	(Question)	CO
a.	Differentiate between Keyword and Identifier.	1
b.	Write a C program that checks whether the two numbers entered by the user are equal or not.	2
c.	Write the syntax of ternary operator.	2
d.	Define Pointer to Pointer.	3
e.	Differentiate between character and string.	4
f.	In which situation, members of structure are accessed using arrow operator?	5
g.	Compare text file and binary file.	5

SECTION B

2. Attempt any three of the following: 07 x 3 = 21

a.	Explain the concept of structured programming.	1
b.	What is recursion? Write a C program using recursion to print GCD of 2 numbers.	2
c.	Explain different parameter passing techniques through suitable example.	3
d.	Differentiate between structure and union. Define a union "un" with three members a,b and c, which are of integer, float and char type respectively.	4
e.	Write a program to append text in an already existing text file.	5

SECTION C

3. Attempt any one part of the following: 07 x 1 = 07

a.	What is Algorithm? What are the properties of Algorithm? Write an algorithm to check year is a leap year or not.	1
b.	Explain various types of Data types which we can use in C programming language.	1

4. Attempt any one part of the following: 07 x 1 = 07

a.	Explain switch case statement and write a program using C to check character entered by user is a vowel or not.	2
b.	Write a C program and draw flowchart to check number is an Armstrong number or not.	2

5. Attempt any one part of the following: 07 x 1 = 07

a.	Define Array and write a C program to print multiplication of 2 different matrices of order 3*3 each.	3
b.	Write a program in C which accepts names and age of 10 persons and print the name of that person, who is youngest in age. Make use of pointer method to declare the array.	3



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6. Attempt any *one* part of the following: 07 x 1 = 07

a.	What are the different storage classes of C programming language? Explain through suitable example.	4
b.	When do you use pointers to structure? Write a C program to accept different goods with the number, price and date of purchase and display them.	4

7. Attempt any *one* part of the following: 07 x 1 = 07

a.	What are the different functions used for dynamic memory allocation? Explain through proper syntax and example of each.	5
b.	Distinguish between symbolic constants and literal constants with examples.	5