



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.																			
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End - Term Examinations - December 2025

Date: 15-12-2025

Time: 09.30am to 12.30pm

School: SOIS	Program: BCA		
Course Code: CSA1500	Course Name: Problem Solving Using C		
Semester: I	Max Marks: 100	Weightage: 50%	

CO - Levels	C01	C02	C03	C04	C05
Marks	26	26	24	24	--

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

1.	Define an algorithm. List any two characteristics of a good algorithm.	2 Marks	L1	C01
2.	Name the four basic data types in C language.	2 Marks	L2	C01
3.	List the arithmetic operators available in C.	2 Marks	L1	C01
4.	Define typecasting in C. Give an example.	2 Marks	L1	C02
5.	Differentiate between implicit and explicit typecasting.	2 Marks	L1	C02
6.	What is operator precedence? Give an example.	2 Marks	L1	C02
7.	Define an array in C.	2 Marks	L1	C03
8.	What is a string in C?	2 Marks	L1	C03
9.	What is meant by a string function in C?	2 Marks	L1	C04
10.	List any two categories of string functions in C	2 Marks	L1	C04

Part B

Answer the Questions.

Total Marks 80M

11.	a.	Explain the basic structure of a C program with a neat diagram and example.	10 Marks	L2	CO1
	b.	<p>1. Explain the Integer (int) and Floating-point (float) data types in C. Discuss their size, range, and format specifiers. (5M)</p> <p>2. What are operators? Explain Relational and Logical Operators with examples and their truth tables. (5M)</p>	10 Marks	L3	CO1
Or					
12.	a.	<p>1. What are Keywords and Identifiers? List the rules for naming a valid identifier in C(5M)</p> <p>2. Explain the Bitwise AND (&) and Bitwise OR () operators with examples.5M)</p>	10 Marks	L2	CO1
	b.	<p>1. Explain the conditional (ternary) operator (? :) with its syntax and a suitable example.</p> <p>2. Differentiate between Formatted and Unformatted Input/Output functions. Give examples for each type</p>	10 Marks	L2	CO1
13.	a.	Explain explicit typecasting with examples. Discuss valid and invalid cases.	10 Marks	L3	CO2
	b.	Describe expression evaluation in C with operator precedence and associativity. Give an example with step-by-step evaluation.	10 Marks	L2	CO2
Or					
14.	a.	Explain all types of looping statements (for, while, do-while) with syntax, flowchart, and examples.	10 Marks	L1	CO2
	b.	<p>Evaluate the below Expressions step by step</p> $10 + 4 * 3 - 8 / 2 + (6 + 2) * 5 - 3$	10 Marks	L2	CO2
15.	a.	Explain the concept of arrays in C with syntax, examples, and memory representation.	10 Marks	L2	CO3
	b.	Describe the declaration, initialization, and accessing of elements in one-dimensional arrays with suitable examples.	10 Marks	L1	CO3
Or					
16.	a.	Define a string. Explain how strings are declared, initialized, and displayed in C.	10 Marks	L2	CO3
	b.	Describe various string manipulation functions (strlen, strcpy, strcat, strcmp, strcmp) with syntax and examples.	10 Marks	L3	CO3

17.	a.	Explain in detail the different categories of string functions in C with examples for each type.	10 Marks	L2	CO4
	b.	Explain user-defined data types in C with examples for typedef and enum.	10 Marks	L3	CO4
Or					
18.	a.	Explain file input/output functions (fopen(), fprintf(), fscanf(), fclose(), fgets(), fputs()) with their syntax and usage.	10 Marks	L2	CO4
	b.	Explain pointers in C. Describe pointer arithmetic and pointer to pointer with examples.	10 Marks	L2	CO4