PRESIDENCY UNIVERSITY

BENGALURU

Mid - Term Examinations – October 2025

Date: 07-10-2025   **Time:** 11.45am to 01.15pm

School: SOE	**Program:** ECE, EEE,VLSI
Course Code : CSE2280	**Course Name:** C Programming and Data Structures
Semester: III	**Max Marks**: 50 **Weightage**: 25%

CO - Levels	CO1	CO2	CO3	CO4	CO5
Marks	26	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.   **5Q x 2M=10M**

1	Define recursion in the context of functions.	2 Marks	L1	CO1
2	Differentiate between variables and data types with an example.	2 Marks	L1	CO1
3	List any two loop statement. Write a small code snippet to print from 1 to 5 using the two loop statements.	2 Marks	L1	CO1
4	What is the difference between structure and union statement.	2 Marks	L1	CO2
5	Explain the use of void pointer data type.	2 Marks	L1	CO2

Part B

6.	a.	Explain any five operators in C. Write a small C program that uses all the arithmetic operators in C	10 Marks	L2	CO1
	b.	Explain conditional statements in C. Using if...else construct, write a program to find the bigger among two numbers.	10 Marks	L2	CO1
		Or			
7.	a.	Explain in brief the three looping statements and continue and break statements in C with the help of a small code.	10 Marks	L2	CO1
	b.	Describe switch-case statement. Write a menu-driven C program to read two integers and perform 1.addition, 2.subtraction, 3.exit ; and display the results using switch case statement and function.	10 Marks	L2	CO1

8.	a.	Explain structures in C. What are the different ways to declare a structure. Write the code for declaring a structure containing `name`, `rollno`, `section`, `mgpa` of a student using both methods.	10 Marks	L3	CO2
	b.	Contrast arrays and structures. Write code to store the `physics`, `chemistry`, `maths` marks for 5 students using arrays and using structures.	10 Marks	L3	CO2
		Or			
9.	a.	Explain pointer arithmetic. Illustrate how array elements can be accessed with the help of pointer arithmetic by printing the array {10,20,30,40,50}	10 Marks	L3	CO2
	b.	Explain the use of enumerated data types in C. Illustrate how they are declared. Develop the code for reading gender of a person, where gender can be MALE, FEMALE or OTHER. If the input is MALE, print on the screen "You will be referred as he/him". If the input is FEMALE, print on the screen "You will be referred as she/her". If the input is OTHER, print on the screen "You will be referred as they/them".	10 Marks	L3	CO2