SET-2

INDIRA UNIVERSITY, Pune

SCHOOL OF INFORMATION TECHNOLOGY-SOIT BSC (CYS)

Term End Examination (2025 Pattern) December – 2025 - Semester – I

Subject Name: - Problem Solving using 'C' Programming **Max. Marks: 25**
Subject Code: 25CYS102T **Time: 1:30 Hrs.**

Instructions

- All Questions are Compulsory.

CO #	Cognitive Ability	Course Outcome
CO1	**Remember**	Recall fundamental concepts of problem-solving, algorithms, and C programming syntax.
CO3	**Apply**	Apply programming skills to write simple and efficient C programs using control structures and functions.
CO4	**Analyse**	Analyze problems and evaluate appropriate algorithms and control structures to implement solutions.

Q1.	**Attempt any 5 out of 7. (1 mark each)** **(5 Marks)** a) Define Compiler? b) Name two basic (built-in) data types in C. c) Write the syntax of While statement. d) What is actual parameter? e) Define the term an array ? f) Which symbol is used for decision making in a flowchart? **g)** List different Logical operator in C?	CO1
Q2.	**Attempt any 2 out of 4. (5 marks each)** **(10 Marks)** a) Write an algorithm and draw the flowchart to calculate X to the Power of Y (X raised to Y). b) What do you mean by conditional operators, explain with proper example? c) Write a program to find the largest of three numbers. d) Write a Recursive function to find factorial of given number.	CO3
Q.3.	Attempt all questions. (5 marks each) (10 Marks) a) Write a C program to calculate the sum and average of elements in an array.	CO4

	b) Guess the output of the following with the explanations
	1.
	#include <stdio.h>
	int main()
	{
	int a = 3, b = 4, c = 5;
	printf("%d", a < b && b < c);
	return 0;
	}
	
	2.
	#include <stdio.h>
	int main() {
	double x = 1.2;
	int y = (int)x + 1;
	printf("%d", y);
	return 0;
	}	

Q.3	**OR** **(Alternative) (10 marks)** **Write a C program to perform the transpose of the matrix using functions.** The program should include separate functions for: 1. Input of the matrix 2. Transpose of the matrix 3. Display of the result	CO4

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