B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

February / March 2024 Semester End Main Examinations

Programme: B.E.   Semester: I / II
Branch: Common to all branches   Duration: 3 hrs.
Course Code: 18CS1ESCCP / 18CS2ESCCP   Max Marks: 100
Course: 'C' PROGRAMMING

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
                 2. Missing data, if any, may be suitably assumed.

			UNIT - I	CO	PO	Marks
1	a)		Describe the basic datatypes in C? Explain them with examples.	CO1		**06**
	b)		Write an algorithm and draw flowchart to calculate area of a triangle.	CO2	PO1	**06**
	c)		Identify the different categories of operators available in C language and illustrate any four with suitable examples for each.	CO1		**08**
			UNIT - II			
2	a)		Write a program to calculate the sum of first N natural numbers.	CO2	PO1	**06**
	b)		Using switch statement, write a program to simulate simple calculator to perform arithmetic operations.	CO2	PO1	**06**
	c)		Discuss do-while loop. Demonstrate the usage of do-while to list all the leap years from 1990 to 2100.	CO3	PO2	**08**
			OR			
3	a)		Compare break and continue statements.	CO2	PO1	**06**
	b)		Discuss various conditional branching statements with flowcharts.	CO2	PO1	**06**
	c)		Write a program to find the sum of odd numbers and sum of even number from 1 to N. Print the computed sums on two different lines with suitable headings.	CO3	PO2	**08**
			UNIT - III			
4	a)		Develop a program to implement linear search.	CO3	PO2	**06**
	b)		Write a program to calculate the sum of first N natural numbers.	CO3	PO2	**06**
	c)		Define an Array. Demonstrate how to declare and initialize 1D and 2D array with suitable examples.	CO3	PO2	**08**

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

			UNIT - IV			
5	a)	Write a program to read a sentence and replace lowercase character by uppercase and vice-versa. Output the given sentence as well as the case converted sentences on different lines.	CO4	PO3	**06**
	b)	Consider a simple structure and describe how to copy and compare structures with an example.	CO3	PO2	**06**
	c)	Develop a program to find the transpose of 3x3 matrix.	CO4	PO3	**08**
		OR			
6	a)	Define structure and different ways of initializing structure.	CO1		**06**
	b)	With suitable examples describe the different functions used to Read and Write Strings	CO3	PO2	**06**
	c)	Develop a program to read and display information of a student using nested structures	CO4	PO3	**08**
		UNIT - V			
7	a)	Explain different file operations in C.	CO1		**06**
	b)	Write a program to perform addition operation on two integers using pointers.	CO2	PO1	**06**
	c)	Develop a C program to read an employee data such as id, name and salary from the keyboard, write the data to a file. Read the data from the same file and display on the screen.	CO3	PO2	**08**

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