U.S.N.										

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

Autonomous Institute Affiliated to VTU

December 2023 Supplementary Examinations

Programme: B.E. **Semester: I / II**
Branch: Common to all Branches **Duration: 3 hrs.**
Course Code: 22CS1ESPOP / 22CS2ESPOP **Max Marks: 100**
Course: Principles of programming in C

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

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.

				CO	*PO*	Marks
			UNIT - I			
1	a)		Describe the structure of a C program, discuss the same with an example program for finding area of a rectangle.	CO1	PO2	**06**
	b)		Design a C program for finding the smallest of three numbers using ternary operator. Print suitable output messages	CO2	PO3	**06**
	c)		Evaluate the following expression i) a+b-c*d/a **Assume** a=2,b=3,c=2,d=5 ii) (a+b-c)*d/a by **Assume** a=2,b=3,c=2,d=5 iii) (d+c)/(c+b)*(d%b)-c **Assume** a=1,b=2,c=3,d=4 iv) a+b<b+c>=c/a==d*a-b **Assume** a=1,b=2,c=3,d=4	CO1	PO1	**08**
			UNIT - II			
2	a)		Design a C program to print 1 12 123 1234 12345	CO2	PO3	**06**
	b)		Design C program to find largest of 3 numbers using nested if else statement. Print suitable output messages.	CO2	PO	**06**
	c)		Differentiate between pretest loop and post test loop. Write a C program to print the reverse of a given number using while loop, give the output.	CO1	PO2	**08**
			OR			
3	a)		Design a factorial program using for loop. Print suitable output messages.	CO2	PO3	**06**
	b)		Differentiate between break and continue with proper example.	CO1	PO2	**06**
	c)		Design a calculator using switch statement for add, subtract, multiply, division. Print suitable output messages.	CO2	PO3	**08**

			UNIT - III			
	4	a)	Discuss the function definition, function call and function declaration with example.	CO1	PO2	**06**
		b)	Design a C program to find transpose of a 3×3 matrix. Print suitable output messages.	CO2	PO3	**06**
		c)	Design a C program to i) Inserting elements at the middle of array elements. ii)Deleting elements at the middle of array elements. Print suitable output messages.	CO2	PO3	**08**
			OR			
	5	a)	Develop a C program to implement Binary search. Print suitable output messages.	CO2	PO3	**06**
		b)	Design a C Program to find sum of two 2D matrices. Print suitable output messages.	CO2	PO3	**06**
		c)	Discuss parameter passing technique using call by value and call by reference with an example	CO1	PO2	**08**
			UNIT - IV			
	6	a)	What are strings? Explain the different ways of reading and writing the strings.	CO1	PO2	**06**
		b)	Explain with syntax and example for typedef declaration of structure and discuss how to access the members of structure.	CO1	PO2	**06**
		c)	Design a C Program using structure which read and display three student information. The student details are name, roll, marks.	CO2	PO3	**08**
			UNIT-V			
	7	a)	Define pointers. Explain how pointers are declared and initialized with example.	CO1	PO2	**06**
		b)	Design a C Program which add two numbers using pointers. Print suitable output messages.	CO2	PO3	**06**
		c)	Design a C program to read data from keyboard and write into a file. Also read the data from the same file and display it on screen.	CO2	PO3	**08**

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