U.S.N.										

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

Autonomous Institute Affiliated to VTU

May 2023 Semester End Main Examinations

Programme: B.E. **Semester: I**
Branch: Common to all Branches **Duration: 3 hrs.**
Course Code: 22CS1ESPOP **Max Marks: 100**
Course: Principles of Programming in C **Date: 15.05.2023**

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.

UNIT - I

1	a)	Describe the structure of a C program. Illustrate the same with an example program for finding the sum of two integers.	**06**
	b)	Explain with examples, the arithmetic, relational, logical and assignment operators used in C language.	**10**
	c)	Develop a C program to print the numbers from 4 to 9 along with their squares.	**04**

UNIT - II

2	a)	Design a C program to read the year as input and find whether it is a leap year or not.	**04**
	b)	Explain the switch statement with syntax and suitable example.	**08**
	c)	Explain the if, if-else, if-else-if and nested if-else in C along with their syntax.	**08**

OR

3	a)	Explain the different types of loops in C with their syntax and examples.	**08**
	b)	Differentiate between break and continue statements with examples.	**06**
	c)	Develop a C program to reverse an integer number "NUM" and check whether it is a palindrome or not.	**06**

UNIT - III

4	a)	Detail out on the components of functions i.e function declaration, function definition and function call with an example program.	**08**
	b)	Explain the declaration and initialisation of one dimensional and two dimensional arrays with examples.	**06**
	c)	Explain void and parameterless functions in C with an example program.	**06**

OR

5	a)	Differentiate between call by value and call by reference. Illustrate with an example program.	**10**

	b)	Write C programs to illustrate the working of insertion and deletion operations of an array.	**10**

UNIT - IV

6	a)	Design a C program to find the length of the string and to separate the individual characters from the string.	**06**
	b)	What is a structure? Explain the syntax of different ways of structure declaration.	**06**
	c)	Design a C program using structures to read, write and compute the average marks of the students; and display the students scoring marks above and below the average marks for a class of N students.	**08**

UNIT - V

7	a)	What are pointers? Explain how pointer variables are declared and initialized.	**06**
	b)	Write a C program to swap two numbers using call by reference method.	**06**
	c)	Design and develop a C program to read and display text from the file.	**08**

****