USN									

FIRST Semester B. E. Degree Semester End Examination (SEE), Jan/ Feb 2024

Principles of C Programming

(Model Question Paper - 1)

[Time: 3 Hours]		[Maximum Marks: 100]

Instructions to students:

i. **Answer FIVE FULL Questions as per choice.**
ii. **Use BLACK ball point pen for text, figure, table, etc.**
iii. **Assume missing data, if any.**

		Module1	Marks	CO	RBT Level
1.	a	Outline the Characteristics of Computers	08	L2	CO1
	b	Explain the Basic Organization of Computers	08	L2	CO1
	c	List the different types of Operating Systems used in computers.	04	L1	CO1
		OR			
2.	**a)**	List and explain about different types of computers.	10	L2	CO1
	b)	Write a note on system software and application software.	10	L2	CO1
		Module2			
3.	**a)**	Briefly explain about Character Set in C.	08	L2	CO2
	b)	Write a note on identifier and operators in C.	08	L2	CO2
	c)	Outline the basic structure of C program with an example.	04	L2	CO2
		OR			
4.	**a)**	Briefly explain formatted Input/output statements in C	10	L2	CO2
	b)	Write C program to calculate the Indicated Horsepower (IHP), Brake Horsepower (BHP), and Compression Ratio (CR) of a four-stroke gas engine	10	L3	CO2
		Module3			
5.	**a)**	Define branching statements. Explain them with syntax and suitable example.	10	L2	CO3
	b)	Write a C program to check the given character is lowercase or uppercase or special character.	10	L3	CO3
		OR			
6.	**a)**	Compare the working of for, while and do while along with their Syntax.	10	L2	CO3
	b)	Write a C program for simulation of a simple calculator.	10	L3	CO3
		Module4			
7.	**a)**	Briefly explain compile time and run time initialization of arrays.	10	L2	CO4

	b)	Write a program to print the position of the smallest number of n numbers using arrays.	10	L3	CO4

<div align="center">**OR**</div>

8.	**a)**	Explain the string concept and ways of reading (entering) the strings and display the string with suitable C programming examples.	10	L2	CO4
	b)	Discuss about Various String Handling Functions with programming examples.	10	L2	CO4

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Module5

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9.	**a)**	Explain different storage classes in detail with suitable programming, examples	10	L2	CO5
	b)	Program to balance the given Chemical Equation values x, y, p, q of a simple chemical equation of the type: The task is to find the values of constants b1, b2, b3 such that the equation is balanced on both sides and it must be the reduced form.	10	L3	CO5

<div align="center">**OR**</div>

10.	**a)**	Define is recursive function and explain the types of recursive functions.	10	L2	CO5
	b)	Compute sin(x)/cos(x) using Taylor series approximation. Compare your result with the built-in library function. Print both the results with appropriate inferences.	10	L3	CO5

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