CBCS SCHEME

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BPOPS103/203

First/Second Semester B.E./B.Tech. Degree Examination, Dec.2023/Jan.2024
Principles of Programming Using C

Time: 3 hrs. Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. M : Marks , L: Bloom's level , C: Course outcomes.

		Module – 1	M	L	C
Q.1	a.	Define a Computer. Explain the characteristics of a digital computer.	10	L1	CO1
	b.	Explain the basic structure of a C program with a neat diagram.	10	L1	CO1
		OR			
Q.2	a.	With a neat diagram explain the steps in the execution of C program.	10	L1	CO1
	b.	Explain the input and output statements in C with examples for each.	10	L2	CO1
		Module – 2			
Q.3	a.	Explain the various operators in C.	10	L2	CO1
	b.	Explain the different forms of if statement with flowcharts.	10	L1	CO2
		OR			
Q.4	a.	Explain the switch statement with an example.	10	L2 L3	CO2
	b.	Explain break and continue statements with examples for each.	04	L2 L3	CO2
	c.	Write a C program to find the largest of 3 numbers using nested if statement.	06	L3	CO2
		Module – 3			
Q.5	a.	Discuss in detail the parts of a user-defined function.	10	L2	CO3
	b.	Discuss the storage classes in C.	10	L2	CO3
		OR			
Q.6	a.	Define recursion. Write a C program to find the factorial of 'n' using recursion.	05	L1 L3	CO3
	b.	What is an array? Explain the declaration and initialization of 1-D arrays.	05	L1 L2	CO3
	c.	Write a C program to perform Matrix Multiplication.	10	L3	CO3
		Module – 4			
Q.7	a.	Write functions to implement string operations such as compare concatenate and string length. Convince the parameter passing techniques.	10	L3	CO4
	b.	Develop a program using pointers to compute, sum, mean and standard deviation of all the elements stored in an array.	10	L3	CO4
		OR			
Q.8	a.	Define a pointer. Discuss the declaration of pointer variables.	05	L2	CO4
	b.	Discuss the various string handling functions in C.	10	L2	CO4
	c.	Write a C program to swap two numbers using call by reference technique.	05	L3	CO4
		Module – 5			
Q.9	a.	Define a structure. Explain the types of structure declarations with examples for each.	10	L1	CO4
	b.	Implement structures to read, write and compute average marks and the students scoring below and above average in a class of 'N' students.	10	L3	CO4
		OR			
Q.10	a.	Differentiate between structures and union.	06	L2	CO5
	b.	Define a structure by name DOB consisting of three members dd, mm and yy. Develop a C program that would read values to the individual member and display the date in the form dd/mm/yyyy.	06	L3	CO5
	c.	Explain the various file operations with syntax for each.	08	L2	CO5

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