USN | | | | | | | | | | | BPOPS103/203

First/Second Semester B.E./B.Tech. Degree Examination, Dec.2024/Jan.2025
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.	List and explain any 5 characteristics of a computer.	10	L2	CO1
	b.	Draw the block diagram of a computer, explain all of its blocks such as input, output storage and CPU.	10	L2	CO1
		OR			
Q.2	a.	Explain the following programming paradigms. i) Procedural programming ii) Object-oriented programming	10	L2	CO1
	b.	Explain the structure of a C program with an example.	10	L2	CO1
		Module – 2			
Q.3	a.	Explain Arithmetic and Relational operators of C with an example.	10	L2	CO2
	b.	Develop a complete C program to find the real roots of a quadratic equation by accepting the coefficients.	10	L3	CO2
		OR			
Q.4	a.	Explain logical and assignment operators of C with an example.	10	L2	CO2
	b.	Write a C program to find the factorial of a given integer n. Explain the computation process.	10	L3	CO2
		Module – 3			
Q.5	a.	Write a C program to find the sum and average of n integers.	10	L3	CO3
	b.	Explain the concept of function declaration and function definition with an example.	10	L2	CO5
		OR			
Q.6	a.	Write a C program to add two m×n matrices.	10	L3	CO3
	b.	Explain the following with an example. i) Passing the entire array ii) Passing the individual elements of an ID array.	10	L2	CO5
		Module – 4			
Q.7	a.	Write a C program to find the length of a given string without using inbuilt function.	10	L2	CO3
	b.	What is a pointer? Show the use of two pointer operators & and *.	10	L2	CO3

		OR			
Q.8	a.	Write a C program to compare two given string S1 and S2 without using inbuilt function.	10	L3	CO3
	b.	How do you declare and initialize a pointer in C? Show with an example.	10	L2	CO3
		Module – 5			
Q.9	a.	What is recursion? Give one example.	10	L2	CO5
	b.	Differentiate between arrays and structures in C.	10	L3	CO4
		OR			
Q.10	a.	Explain the process of opening and closing a file in C.	10	L2	CO5
	b.	Differentiate between structure and unions in C with example programs.	10	L3	CO4

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