PCET LIBRARY BANGALORE-49

CBCS SCHEME

USN | | | | | | | | | | |

BPOPS103/203

First/Second Semester B.E./B.Tech. Degree Examination, June/July 2026
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.	Explain with a neat diagram, the computer model.	12	L1	CO2
	b.	Explain input and output devices in C.	8	L1	CO2
		OR			
Q.2	a.	Explain the structure of a C program.	12	L1	CO2
	b.	Explain the basic datatypes in C with examples.	8	L1	CO2
		Module – 2			
Q.3	a.	List and explain conditional branching statements in C.	10	L1	CO2
	b.	Write a C program to find if the given number is palindrome or not.	10	L3	CO2
		OR			
Q.4	a.	Explain type casting with examples.	10	L1	CO2
	b.	Write a C program to simulate a simple calculator.	10	L3	CO2
		Module – 3			
Q.5	a.	What is an array? Illustrate the definition and initialization of a 2 – dimensional array.	10	L2	CO3
	b.	What are the advantages of using functions? Illustrate the passing of parameters.	10	L2	CO3
		OR			
Q.6	a.	Explain recursive functions with example.	8	L1	CO3
	b.	Write a C program to perform addition of 2-dimensional matrix A and B, each of order 3×3.	12	L3	CO3
		Module – 4			
Q.7	a.	Illustrate the concept of array of strings with an example program.	8	L2	CO4
	b.	Write a C program to find the length of a given string without using any built-in functions.	12	L3	CO3

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		OR			
Q.8	**a.**	Illustrate passing arguments to functions using pointers.	**10**	**L2**	**CO4**
	b.	Write a C program using pointers to compute the sum, mean and standard deviation of all elements stored in an array of 'n' real numbers.	**10**	**L3**	**CO4**
		Module – 5			
Q.9	**a.**	Compare and contrast structures and unions. Illustrate the usage of structure and union with one example.	**10**	**L2**	**CO4**
	b.	Write a C program to illustrate the usage of type def with structures. Also list the output clearly.	**10**	**L2**	**CO4**
		OR			
Q.10	**a.**	What are files? List and explain any 4 file operations in C.	**8**	**L2**	**CO2**
	b.	Write a C program to print the name, USN, Subject and marks of n students using structure.	**12**	**L3**	**CO4**

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