MAKE-UP EXAM

USN ☐☐☐☐☐☐☐☐☐☐

BPOPS103/203

First/Second Semester B.E./B.Tech. Degree Examination, Nov./Dec. 2023
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.

			M	L	C
Module – 1					
Q.1	a.	Compare the generation of computers.	10	L2	CO1
	b.	Describe any two input devices.	05	L2	CO1
	c.	Design an algorithm and program to find area of a circle.	05	L3	CO2
OR					
Q.2	a.	Explain the various rules for forming identifier names. Give an example for valid and invalid identifier.	08	L2	CO2
	b.	Compare between primary memory and secondary memory along with examples.	06	L3	CO2
	c.	Design a flowchart to calculate the sum of first 10 natural numbers.	06	L3	CO2
Module – 2					
Q.3	a.	Develop a C program that takes 3 coefficients (a, b and c) of a quadratic equation $ax^2 + bx + c$ as I/P and compute all the possible roots and print then with appropriate messages.	08	L3	CO5
	b.	Distinguish between the break and continue statement.	06	L2	CO2
	c.	Describe any 4 types of operators in C with example.	06	L2	CO2
OR					
Q.4	a.	Develop a simple calculator program in C language to do simple operations like addition, subtraction, multiplication and division. Use switch statements in your program.	08	L3	CO2
	b.	Comparison between typecasting and type conversion with an example.	06	L2	CO2
	c.	Explain while loop along with syntax and example program.	06	L2	CO2
Module – 3					
Q.5	a.	Implement matrix multiplication and validate the rules of multiplication.	10	L3	CO3
	b.	Summarize the recursive function concept with suitable example.	05	L2	CO3
	c.	Explain declaration and initialization of 1D and 2D Array with an example for each.	05	L2	CO3
OR					
Q.6	a.	Explain the syntax of function declaration, function call and function definition with an example C program.	06	L2	CO4
	b.	Describe the different types of storage classes with an example.	08	L2	CO3
	c.	Write a C program to sort the array elements in ascending order.	06	L2	CO3
Module – 4					
Q.7	a.	Develop a C program to compare 2 strings without using built in function.	06	L2	CO4
	b.	Comparison between print( ) and puts( ) functions.	04	L2	CO4
	c.	Define String. Explain any 4 string manipulation function with an example.	10	L2	CO4
OR					
Q.8	a.	Define a pointer. Summarize the arithmetic operations performed on pointers.	06	L2	CO3
	b.	Develop a C program using pointer to compute the sum, mean and standard deviation of all elements stored in any array of N real numbers.	08	L3	CO3
	c.	Differentiate between NULL pointer and void pointer with suitable example.	06	L2	CO3

Module – 5

Q.9	a.	What is a structure? Explain C syntax of structure declaration with an example.	06	L2	CO3
	b.	Implement structures to read, write and compute average marks of the students, list the students scoring above and below the average marks for a class of N students.	08	L3	CO5
	c.	Differentiate structures and unions with syntax and example.	06	L2	CO3
OR					
Q.10	a.	Discuss the different modes of operations on files with suitable example.	08	L3	CO4
	b.	Write a C program to copy a text file to another, read both the input file name and target file name.	06	L3	CO4
	c.	Differentiate between putc( ) and fputc( ) function.	06	L2	CO4

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