Code No: P21EST03

HALL TICKET NUMBER

PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)
I B.TECH I SEMESTER END REGULAR EXAMINATIONS, FEB - 2023
C - PROGRAMMING FOR PROBLEM SOLVING
(CSE(RL) Branch)

Time: 3 hours   Max. Marks: 70

Answer all the questions from each UNIT (5X14=70M)

Q.No.		Questions	Marks	CO	KL
		UNIT-I			
1.	a)		[7M]	1	2
		Define algorithm. Write an algorithm for finding whether the given number is a palindrome or not.			
	b)		[7M]	1	2
		Discuss in detail the symbols that are used to draw flowcharts. Draw a flowchart to find whether the given number is prime or not.			
		OR			
2.	a)		[7M]	1	2
		Explain in detail the phases in Software design life cycle.			
	b)		[7M]	1	2
		Write an algorithm and draw a flowchart that displays the roots of a quadratic equation.			
		UNIT-II			
3.	a)		[7M]	2	3
		Discuss the logical operators in C. Perform all the logical operations on a=4 and b=3.			
	b)		[7M]	2	2
		Differentiate between while and do-while with suitable programs as examples.			
		OR			
4.	a)		[7M]	2	2
		Discuss the data types available in C with proper syntax and examples.			
	b)		[7M]	2	3
		Write a C program to find all the roots of the quadratic equations using a switch case.			
		UNIT-III			
5.	a)		[7M]	3	3
		What is an array? Write a C program that displays the largest and smallest numbers in a given array of numbers.			
	b)		[7M]	3	3
		Define recursion. Write a C program to calculate the factorial of a given number using recursion.			

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OR					
6.	a)		[7M]	3	3
		Design a program in C to obtain the transpose of the given matrix of order m*n			
	b)		[7M]	3	2
		Explain in detail about types of function calls in detail			
UNIT-IV					
7.	a)		[7M]	4	2

		Discuss in detail the following
		   a) Pointer to array
		   b) Array of pointers			

	b)		[7M]	4	2
		Define string and string manipulation. Explain in detail string manipulation functions.			
OR					
8.	a)		[7M]	4	3
		Write a C program that uses dynamic memory allocation functions to add n integers.			
	b)		[7M]	4	2
		Discuss the standard library string handling functions in C with an example program.			
UNIT-V					
9.	a)		[7M]	5	2
		Write short notes on Unions.			
	b)		[7M]	5	3
		Write a C program to copy the contents of one file to the other file using the command line arguments.			
OR					
10.	a)		[7M]	5	3
		Define a Structure. Write a C program that uses structures to perform the addition of two complex numbers.			
	b)		[7M]	5	2
		What is a file? Explain different operations of a file.			

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