

HALL TICKET NUMBER

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PACE INSTITUTE OF TECHNOLOGY & SCIENCES::ONGOLE
(AUTONOMOUS)

I B.TECH I SEMESTER END REGULAR EXAMINATIONS, FEB - 2023

C - PROGRAMMING FOR PROBLEM SOLVING

(Common to EEE,ME,ECE,CSE,CSIT,IT,CSE(IOTCSBT),AIDS,AIML Branches)

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) Define algorithm. Write an algorithm for finding whether the given number is a palindrome or not.	[7M]	1	2
	b) Discuss in detail the symbols that are used to draw flowcharts. Draw a flowchart to find whether the given number is prime or not.	[7M]	1	2
OR				
2.	a) Explain in detail the phases in Software design life cycle.	[7M]	1	2
	b) Write an algorithm and draw a flowchart that displays the roots of a quadratic equation.	[7M]	1	2
UNIT-II				
3.	a) Discuss the logical operators in C. Perform all the logical operations on a=4 and b=3.	[7M]	2	3
	b) Differentiate between while and do-while with suitable programs as examples.	[7M]	2	2
OR				
4.	a) Discuss the data types available in C with proper syntax and examples.	[7M]	2	2
	b) Write a C program to find all the roots of the quadratic equations using a switch case.	[7M]	2	3
UNIT-III				
5.	a) What is an array? Write a C program that displays the largest and smallest numbers in a given array of numbers.	[7M]	3	3
	b) Define recursion. Write a C program to calculate the factorial of a given number using recursion.	[7M]	3	3
OR				
6.	a) Design a program in C to obtain the transpose of the given matrix of order m*n	[7M]	3	3
	b) Explain in detail about types of function calls in detail	[7M]	3	2
UNIT-IV				
7.	a) Discuss in detail the following a) Pointer to array b) Array of pointers	[7M]	4	2
	b) Define string and string manipulation. Explain in detail string manipulation functions.	[7M]	4	2
OR				
8.	a) Write a C program that uses dynamic memory allocation functions to add n integers.	[7M]	4	3
	b) Write a program in C to compare two strings without using string library functions.	[7M]	4	2

UNIT-V					
9.	a)	Write short notes on Unions.	[7M]	5	2
	b)	What is a file? Explain different operations of a file.	[7M]	5	3
OR					
10.	a)	Define a Structure. Write a C program that uses structures to perform the addition of two complex numbers.	[7M]	5	3
	b)	Write a C program to copy the contents of one file to the other file using the command line arguments.	[7M]	5	2
