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Gandhi Institute of Engineering and Technology University, Odisha, Gunupur
(GIET UNIVERSITY)

M.Sc. (First Semester - Regular) Examinations, January – 2026

24MPCMA11005 – Programming in 'C'

Time: 3 hrs | Maximum: 60 Marks

Answer ALL questions

(The figures in the right hand margin indicate marks)

PART – A **(2 x 5 = 10 Marks)**

Q.1. Answer ***ALL*** questions	CO #	Blooms Level
a. Differentiate between while loop and do..while loop.	CO2	K1
b. Explain, how to declare an integer pointer and store an integer memory address in it?	CO4	K1
c. Explain relational operator and logical operator.	CO1	K2
d. Write down the syntax and example for an array in 2-d.	CO3	K1
e. Elaborate the use of format specifiers.	CO1	K2

PART – B **(10 x 5 = 50 Marks)**

Answer ***ALL*** the questions	Marks	CO #	Blooms Level
2. a. Write down the basic structure of 'C' program and explain each type of using a suitable example.	5	CO1	K2
b. Briefly elaborate on the operators of 'C' programming listed here: arithmetic, relational, logical, conditional, increment, and decrement.	5	CO1	K2
(OR)			
c. Explain in brief about datatypes, Format Specifiers, Escape Sequence Characters, and type casting.	5	CO1	K2
d. Briefly elaborate on the operators of 'C' programming listed here: arithmetic, relational, logical, conditional, increment, and decrement.	5	CO1	K2
3.a. Write a program to create an user defined function which accepts a number and test it for prime or not. [The number which is divisible by 1 and itself only and not by other numbers is prime number. Ex: prime number 17]	10	CO2	K1
(OR)			
b. Write a program to find the factorial of a given number.	5	CO2	K2
c. Explain the terms used in programming: getchar( ), sqrt( ), #define, sizeof, unsigned int.	5	CO2	K1
4.a. Write a program to accept 10 integers in to an array and find largest and smallest integers present in them.	5	CO3	K2
b. Explain in brief about datatypes, Format Specifiers, Escape Sequence Characters, and type casting.	5	CO3	K2
(OR)			
c. Write a program create a structure PRODUCT having members Product no, Name and Price. Input 5 product details into a structure array and then display those products whose price is >1000 rupees.	5	CO3	K3
d. Write a program to find the greatest among 3 unequal numbers using conditional operators.	5	CO3	K3

5.a.	The scores of three participants in a sports event were given as input, write a C program using the else if ladder concept and show who achieved the highest score.	5	CO4	K2
b.	Write a program to input a 3 digit positive number and test whether it is Armstrong or not. (ex: 153 is Armstrong number as: $1^3+5^3+3^3=153$)	5	CO4	K3
	(OR)			
c.	Write a C program to search for a character in a given string and display the number of times the character is present in the string. [Example: character 'I' is present for two times in string "UNIVERSITY"]	10	CO4	K2
6.a.	Write a program to create a structure EMPLOYEE having members employee no, name, salary. Store 10 employee details using structure array. Display only those employee names whose salary>=50000.	10	CO5	K3
	(OR)			
c.	Write a recursive function to display a series of N Fibonacci numbers. [Example: Fibonacci series is 0, 1, 1, 2, 3, 5, 8, 13… Here each number is an addition of the previous two numbers]	10	CO5	K3

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