



**GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, ODISHA,
GUNUPUR
(GIET UNIVERSITY)**

M.Sc. (First Semester - Regular) Examinations, February - 2025

24MPCMA11005 - Programming in "C"

(Mathematics)

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. Define Key wards. Give one example.	CO1	K1
b. State the difference between formal parameters and actual parameters.	CO2	K1
c. Explain relational operator and logical operator.	CO3	K2
d. Write down the syntax and example for an array in 2-d.	CO3	K1
e. Differentiate between while loop and do..while loop.	CO4	K1

PART – B

(10 x 5 = 50 Marks)

Answer **ALL** the questions

	Marks	CO #	Blooms Level
2. a. The result in marks of three candidates who appeared in an examination were given as input. Write a 'C' program by implementing the switch case to check and display who is having the highest marks.	10	CO1	K1
(OR)			
b. Write down the basic structure of 'C' program and explain each type of using a suitable example.	5	CO1	K2
c. Briefly elaborate on the operators of 'C' programming listed here: arithmetic, relational, logical, conditional, increment, and decrement.	5	CO1	K1
3.a. Write a C program to input two 4x4 matrices and perform matrix multiplication.	5	CO2	K2
b. Write a program to accept 10 integers in to an array and find largest and smallest integers present in them.	5	CO2	K1
(OR)			
c. 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
4.a. Write a program that accepts a positive integer as input, and tests whether the given input is prime or not.	10	CO3	K2
(OR)			
b. Write a program to accept 10 integers in to an array and find largest and smallest integers present in them.	5	CO3	K2
c. Explain in brief about datatypes, Format Specifiers, Escape Sequence Characters, and type casting.	5	CO3	K1
5.a. Explain the syntax of while loop? Write a program to generate a series of odd numbers from 1 to 101 using while loop.	10	CO4	K2
(OR)			

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|------|---|----|-----|----|
| b. | 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 |
| c. | 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 | K2 |
| 6.a. | Write a C program to find the area of a triangle when 3 sides are given input.
Apply formula $\text{Area} = \sqrt{s} * (s-a) * (s-b) * (s-c)$ | 5 | CO5 | K2 |
| b. | Write a C program of swap between two numbers without using third variable.
(OR) | 5 | CO5 | K1 |
| c. | 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 | K1 |

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