



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

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

24MPHPC11003 - 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. Write down the syntax of switch case. | CO1 | K1 |
| b. What is the difference between strcmp() and strncmp() functions ? | CO2 | K1 |
| c. Elaborate the use of format specifiers. | CO3 | K2 |
| d. Differentiate between while loop and do..while loop. | CO3 | K1 |
| e. Explain, how to declare an integer pointer and store an integer memory address in it? | CO4 | K1 |

PART – B

(10 x 5 = 50 Marks)

Answer **ALL** the questions

- | | Marks | CO # | Blooms Level |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|--------------|
| 2. a. Write a C program to input 10 numbers into a one-dimensional integer array, then find the largest and smallest elements present in it. | 10 | CO1 | K1 |
| (OR) | | | |
| b. Explain in brief about datatypes, Format Specifiers, Escape Sequence Characters, and type casting. | 5 | CO1 | K1 |
| 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 program to find the factorial of a given number. | 5 | CO2 | K2 |
| b. Explain the terms used in programming: getchar(), sqrt(), #define, sizeof, unsigned int. | 5 | CO2 | K1 |
| (OR) | | | |
| c. Write a program to accept 10 integers in to an array and find largest and smallest integers present in them. | 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 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 | K2 |
| c. Write a program to find the greatest among 3 unequal numbers using conditional operators. | 5 | CO3 | K1 |
| 5.a. 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 |

(OR)

- | | | | | |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|-----|----|
| 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. | 10 | 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. | 5 | CO5 | K1 |
| (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 | K1 |

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