



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

M.Sc. (First Semester – Regular/Supplementary) Examinations, January – 2026
24MPHPC11002– Programming in C
(Physics)

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. What is the difference between a compiler and an interpreter? | CO1 | K3 |
| b. Mention any two applications of arrays. | CO2 | K2 |
| c. Write the purpose of strlen () and strcat () function. | CO3 | K1 |
| d. How is a structure different from an array? | CO4 | K2 |
| e. What does * operator indicate in pointers? | CO5 | K1 |

PART – B**(10 x 5 = 50 Marks)**Answer ALL the questions

- | | Marks | CO # | Blooms Level |
|--|-------|------|--------------|
| 2. a. Briefly elaborate on operators of C programming listed here: Arithmetic, relational, logical and conditional. | 5 | CO1 | K1 |
| b. Write a C program to check whether a given number is prime or not.
(OR) | 5 | CO1 | K1 |
| c. Write a C program to find the factorial of a given number. | 5 | CO1 | K1 |
| d. Explain the local, global, static variable in C programming. | 5 | CO1 | K1 |
| 3.a. Explain different looping statements in C. Write a program to generate Fibonacci series using a loop.
(OR) | 10 | CO2 | K1 |
| c. Describe declaration, initialization, and operations on 2-D arrays. | 6 | CO2 | K1 |
| d. Write a program to find the sum and average of elements in an array. | 4 | CO2 | K1 |
| 4.a. What is a user defined function? Explain different categories of user defined functions. | 5 | CO3 | K1 |
| b. Write a C program to find the length of a string without using strlen().
(OR) | 5 | CO3 | K1 |
| c. Write a program to count vowels and consonants in a string. | 5 | CO3 | K1 |
| d. Write a C program to reverse a string. | 5 | CO3 | K1 |
| 5.a. Differentiate between structures and arrays. Also write advantage of using structures. Mention one application of structures.
(OR) | 10 | CO4 | K1 |
| c. Describe accessing structure members with examples. | 5 | CO4 | K1 |
| d. Write a program to find the average marks of students using structures. | 5 | CO4 | K1 |
| 6.a. Write a C program to find largest of two numbers using pointers. | 5 | CO5 | K3 |
| b. Write a C program to swap two numbers using call by address.
(OR) | 5 | CO5 | K1 |
| c. Define a pointer. Differentiate between call by value and call by address. | 7 | CO5 | K1 |
| d. Write a short note on advantages of pointers. | 3 | CO5 | K2 |

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