

**FIRST SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2022
(Regular/Improvement/Supplementary)**

**COMPUTER SCIENCE
FCSS1C04 – THE ART OF PROGRAMMING METHODOLOGY**

Time: 3 Hours

Maximum Weightage: 30

Section A: Short answer questions. Answer any *four* questions. Each carries *two* weightage.

1. Write an algorithm to generate n prime numbers.
2. Give a short note on various string manipulation functions in C.
3. Compare structures and union in C.
4. Write short note on arrays in C.
5. Write a C program to implement command line arguments.
6. Give a short note on OOP concepts.
7. Write a C program to find transpose of a matrix.

(4 × 2= 8 weightage)

Section B: Short essay questions. Answer any *four* questions. Each carries *three* weightage.

8. Explain the structure of C Program.
9. Differentiate break and continue statement in C.
10. Discuss various storage class specifiers in C.
11. Elaborate on various preprocessor directives in C.
12. Write short note on friend function.
13. Give an account on Linked list.
14. Write C++ program to implement polymorphism.

(4 × 3= 12 weightage)

Section C: Essay questions. Answer any *two* questions. Each carries *five* weightage.

15. Explain operators in C and operator precedence.
16. Describe in detail, the control statements in C with suitable example.
17. Discuss functions in C with suitable examples. Write a C program to generate Fibonacci numbers using recursion.
18. Explain file handling mechanism in C. Write C program to copy file contents.

(2 × 5 = 10 weightage)