

**FIRST SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2023
(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. Define flow chart. Mention various flow chart symbols and plot its uses.
2. What is recursion?
3. How Dynamic memory allocation is done in C?
4. What is the use of Friend function?
5. Write a C program to check whether a number is palindrome or not.
6. Differentiate break and continue statement in C with suitable examples.
7. Write a C program to implement the use of Union.

(4 × 2 = 8 weightage)

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

8. Write a short note on Operators in C.
9. Compare various storage classes in C.
10. Write note on Preprocessor directives.
11. Compare constructors and destructors in C++.
12. Explain structure of C Program.
13. Give a short note on loops in C with example.
14. Write an account on various OOP features.

(4 × 3 = 12 weightage)

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

15. Explain various I/O functions in C. Write C program to use any four mathematical functions in C.
16. Write C program to implement String functions using C.
17. Give a detailed account on the functions in C with suitable example.
18. Describe dynamic memory allocation in C. Implement its application by creating a linked list.

(2 × 5 = 10 weightage)