

FIRST SEMESTER M.Sc. DEGREE EXAMINATION, NOVEMBER 2024
(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. Differentiate between *break* and *continue* with examples.
2. What are the various steps in *algorithm design*?
3. Write a note on the storage class specifiers in C.
4. Which are the de-referencing operators in C? Give examples.
5. What is a flowchart? Which are the various symbols used in flowchart?
6. What are preprocessor directives in C?
7. What is a friend function in C++? Give an example.

(4 × 2 = 8 weightage)

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

8. Briefly explain various operators in C.
9. Write any *four string manipulation functions* in C with examples.
10. How to represent *two dimensional arrays* in memory? Explain.
11. Briefly describe *constructors* and *destructors* in C++ with examples.
12. Differentiate between *call by value* and *call by reference* with examples.
13. Write a note on user defined data types in C. Compare *structure* and *union* with examples.
14. What is *dynamic memory allocation*? Write on various functions used for dynamic memory allocation in C.

(4 × 3 = 12 weightage)

(P.T.O.)

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

15. Explain *control statements* in C with examples.
16. Write a program in C which includes any *five mathematical functions*. Draw the corresponding flowchart.
17. Write a program to *write, read* and *append* a file using *command line argument*.
18. Explain *object oriented programming* concepts in C++ with examples.

(2 × 5 = 10 weightage)