D 93226 (Pages : 2) Name.....

Reg. No.....

FIRST SEMESTER M.Sc. DEGREE (SUPPLEMENTARY) EXAMINATION NOVEMBER 2020

(CUCSS)

Computer Science

CSS 1C 04—THE ART OF PROGRAMMING METHODOLOGY

(2014 Admissions)

Time : Three Hours Maximum : 36 Weightage

Section A

Answer **all** *questions.*
Each question carries 1 *weightage.*

1. What is a flow chart ?
2. What is top-down design ?
3. Differentiate between syntax error and run-time errors in a program.
4. What are the fundamental data types in C ?
5. What are conditional operators ?
6. Explain the syntax and function in of **if.else** construct in C.
7. Explain the use of *switch* statement it in C.
8. How will you by pass certain statements in a loop construct in C ?
9. What are the different types of functions in C ?
10. Explain Array of Structure,
11. What is the use of **realloc( )** functions in C ?
12. What are command line arguments.

(12 × 1 = 12 weightage)

Section B

Answer any **six** *questions.*
Each question carries 2 *weightage.*

13. Explain the different characteristics of an algorithm.
14. Explain any *four* I/O functions in C ?

Turn over

15. Explain any *four* string handling functions in C.
16. Give an account on storage classes in C.
17. Explain how you will declare a pointer to a function with suitable example.
18. Write a C program to find the trace (sum of all diagonal elements) of a matrix.
19. Illustrate the memory allocation of structure and union in C with example.
20. What is FILE data structure ? Explain the different file access modes supported in C.
21. Write a short note on pre-processor directives.

(6 × 2 = 12 weightage)

Section C

Answer any **three** *questions.*
Each question carries 4 *weightage.*

22. Explain the syntax and functions of standard I/O functions in C with examples.
23. Explain the different loop construct available in C with suitable examples.
24. Explain the differences between call-by-value and call-by-reference with suitable examples.
25. Write a C program to multiply two suitable matrices.
26. Explain Array of Structure with suitable examples.
27. Define a macro with one parameter to compute the volume of a sphere. Write program using this macro to compute the volume for spheres of radius 5, 10 and 15 meters.

(3 × 4 = 12 weightage)