

D 93398

(Pages : 2)

Name.....

Reg. No.....

**FIRST SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)
EXAMINATION, NOVEMBER 2020**

(CBCSS)

Computer Science

CSS 1C 04—THE ART OF PROGRAMMING METHODOLOGY

(2019 Admissions)

Time : Three Hours

Maximum : 30 Weightage

General Instructions

1. *In cases where choices are provided, students can attend all questions in each section.*
2. *The minimum number of questions to be attended from the Section / Part shall remain the same.*
3. *There will be an overall ceiling for each Section / Part that is equivalent to the maximum weightage of the Section / Part.*

Section AI. Short Answer Type Questions. Answer any *four* questions :

- 1 Write a program to read n integers into an array. Find the largest and smallest number.
- 2 Write a program to print product of digits of any number
(input : 235, output: $5 * 3 * 2 = 30$).
- 3 What are actual and formal arguments ? Explain with example.
- 4 Differentiate between Structure and Union.
- 5 What is Recursion ? Explain its advantages.
- 6 What is a linked list ?
- 7 Distinguish between static and external variables.

(4 × 2 = 8 weightage)

Section BII. Short Essays or Problem Solving Type. Answer any *four* questions :

- 8 List any *five* library functions and illustrate them with suitable examples.
- 9 Write a program to concatenate two strings without the use of library functions.

Turn over

- 10 Illustrate the steps in creating a data file.
- 11 Give the syntax of while and for constructs. Illustrate the use of break and continue statements.
- 12 Write a program to read a five digit number and square each digits and form a new number as illustrated below:
Input : 45252, Output : 16254254).
- 13 Demonstrate with suitable example, how a loop is constructed in flow chart.
- 14 Write a program to read any three characters and print all possible combinations of the characters.

(4 × 3 = 12 weightage)

Section C

III. Long Essay Type Questions. Answer any *two* questions :

- 15 What do you mean by command line arguments ? Write a program to find the sum and average of n numbers using command line arguments.
- 16 Write a program to sort n strings in ascending order using pointers.
- 17 Write a program to insert a new number into a sorted integer array.
- 18 Demonstrate the following: pointer-to-pointer, array of pointers, constant pointer, array of pointers, pointer arithmetic.

(2 × 5 = 10 weightage)