National University

B.Sc.(Hons.) in CSE, 1st Year, 1st Semester,Examination-2021

CSE-510202 (Structured Programming Language Lab)

Time-3 hours **Full Marks-40**

[Solve any one experiment from the following each section]

Section - 1

(Simple Statements, Decisions Making and Looping) **(Answer any one)**

1. Write a C program to find area and perimeter of a triangle (three sides of triangle are given).
2. Write a C program to find area and circumference of a circle (Use π as a symbolic constant).
3. Write a C program to find area and perimeter of a rectangle.
4. Write a C program to convert the given temperature in Fahrenheit to Celsius.
5. Write a C program to determine whether a number is odd or even.
6. Write a C program to determine the largest element among three numbers.
7. Write a C program to find all possible roots of a quadratic equation.
8. Write a C program to find the factorial of an integer.
9. Write a C program to find the first n Fibonacci numbers.
10. Write a program in C to determine and print the sum of the following harmonic series for a given value of n :
    $s = 1 + 1/2^2 + 1/3^3 ..... + 1/n^n$.
11. Write a C program that takes an integer as input and display it in reverse order. Also compute the sum of the digits.
12. Write a C program to convert any integer to its binary equivalent.
13. Write a C program to find GCD of two numbers.

Section - 2

(Arrays, Strings, User-Defined, Functions, Structures and File) **(Answer any one)**

1. Write a C program to display all elements of an array and also display sum of elements of that array.
2. Write a C program to find out largest element from an array.
3. Write a C program to search an element from an array.
4. Write a C program to sort an array using function.
5. Write a C program to find sum of two matrices of size 3x3.
6. Write a C program to find multiplication of two matrices.
7. Write a C program to determine whether a string is palindrome or not.
8. Write a C program to perform all basic operations on string.
9. Write a C program to count total number of vowel or consonant in a string.
10. Write a C program using pointers to read an array of integers and print its elements in reverse order.
11. Write a C program to display records of some students using structure.
12. Write a C program to read data from keyboard write it to a file called INPUT, again read the same data from the INPUT file and display it on the screen.
13. Write a C program to copy/append one file into another.

Marks Distribution:

i) Algorithm	: 10
ii) Source Code	: 10
iii) Implementation and Result	: 10
iv) Viva	: 10
Total	: 40

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