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 :
$$s = 1 + 1/2^2 + 1/3^3 \ldots\ldots + 1/n^n.$$
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	

NATIONAL UNIVERSITY

B.Sc. (Hons.) in Computer Science and Engineering

First Year, First Semester Final Examination, 2021

Course Code: 510204

Course Title: Electrical & Electronics Circuit Lab

Time: 3 Hours   Full Marks: 40

Answer any one (01) of the following questions:

1) To verify Ohm's Law.

2) To verify Kirchhoff's Voltage Law (KVL).

3) To verify Kirchhoff's Current Law (KCL).

4) To verify Superposition Theorem.

5) To study the characteristics of R-C circuit and to find out the time constant.

6) To determine the V-I characteristics of a P-N junction diode.

7) To determine the V-I characteristics of a Zener diode.

8) To verify the input and output characteristics of BJT in Common Base (CB) configuration.

9) To verify input and output Common Emitter (CE) configuration.

10) To study the characteristics of an op-amp as inverting amplifier

11) To study the characteristics of an op-amp as a differentiator.

12) To study the characteristics of an op-amp as an integrator.

Marks Distribution:

1. Circuit Design   : 10
2. Circuit Implementation   : 10
3. Results   : 05
4. Viva   : 15

Total Marks: 40