

**ASH 207 (CSE): Programming for Problem Solving Lab/ SOTCF 15 (CSE): Computer Systems and Programming Lab(03/08/2021)**

**Instructions:**

- The question paper contains two sets. Set A having 5 questions carrying 5 marks each. And Set B having 4 questions carrying 15 marks each.
- You are to attempt any 2 questions from Set A and any 2 question from Set B. The time allocated for this is 2 hours.
- You are advised to be in a well-lighted spot in your place of residence where you can have good internet connectivity. Also, you are advised to be presentable at the time of viva-voce as you might be asked to open your camera during the same. Your device must have an active mic.
- The programs must be carried out on one's laptop/desktop and may be asked to run at the time of viva-voce(You can choose any C Compiler of your liking).
- Your performance shall be evaluated based on your writing the C programs and viva –voce. The lab copy that you have submitted carries 10 marks.
- You might be asked to explain your programs during the viva-voce, also other practical related questions may be asked during the same.
- The entire exam carries 70 marks(40 performance+10 Lab copy+20 Viva-voce)

**Set A(Attempt any two from the following)**

1. Write a C Program to check triangle is equilateral, isosceles or scalene. Here's a simple Program to check triangle is an equilateral, isosceles or scalene in C Programming Language.
2. Write a C program to find the sum of Series:  $1+2+3+4+...+N$ . Here's a simple program to find the sum of Series:  $1+2+3+4+...+N$  by creating Recursive and Iterative Functions in C Programming Language.
3. Write a C program to count the frequency of each element in an array.
4. Write a C program to find the power of a number ( $x^n$ ) using pow function
5. Write a C Program To find the biggest and smallest number and positions in the given array

**Set B(Attempt any two from the following)**

1. Write a C Program to find the sum of main diagonal elements in a matrix by passing the matrix to a function.
2. Write a C program to Swap diagonals elements of a matrix using functions.
3. C Program to find the largest number in the array and its position using Recursion.
4. Write a C Program for Addition of Two Numbers Using Pointer to Pointers.