 **SRM INSTITUTE OF SCIENCE AND TECHNOLOGY**

**Ramapuram, Chennai**

**FACULTY OF ENGINEERING AND TECHNOLOGY**

**Department of Computer Science and Engineering**

Academic Year 2020-2021, Even Semester

Model Practical Examination

Set of Questions

**Subject Code & Name**: 18CSE101J-Programming for Problem Solving **Date :** 23.7.21

**Semester & Section** : II & AIML B Section

1. a. The Caesar Cipher technique is one of the earliest and simplest methods of encryption technique. It’s simply a type of substitution cipher, i.e., each letter of a given text is replaced by a letter some fixed number of positions down the alphabet. For example with a shift of 1, A would be replaced by B, B would become C, and so on. Write a C program to get a character as input and print its corresponding cipher (use 3 as shift key).

b. Write a C program to find out the second largest among three given numbers

1. a. Write a program in C which is a Menu-Driven Program to compute the area of the various geometrical shape.
2. a. Write a C program to check the identity of the matrix

b. Write a C program to Percentage of a Student using structure

1. a. Write a C program to implement Calculator for arithmetic operation using functions
2. a. Write a C Program to check the given number is Amstrong number or not using functions

b. Write a C program to find a power of a number using recursion

1. a. Write a program to read name and marks of n number of students and store them in a file.    
   b. Program to illustrate the use of indirection operator.
2. a. Write a C program to display the College and student detail using Nested Structure

b. Write a C program to find the roots of quadratic equations.

1. Write a C program to for matrix multiplication
2. a. To write a program to find the transpose of the matrix.

b. Write a C program to swap two numbers using functions.

1. a. Write a C program to Reverse a sentence using Recursion

b. Program to illustrate the concept of pointers.

1. a. Write a C program to accept a character as input and print its 3 consecutive characters as output.

b. Write a C program to know the differentiation between the size of the union and structure

1. a. Write a C program to copy one array elements to another array using pointers.
2. a. Write a C program for Passing string to a function t.

b. Program to illustrate the use of indirection operator

1. a. Write a C program to find the eligibility of admission for a professional course based on the following criteria:

Eligibility Criteria : Marks in Maths >=65 and Marks in Phy >=55 and Marks in Chem>=50 and Total in all three subject >=190 or Total in Maths and Physics >=140 ------------------------------------- Input the marks obtained in Physics :65 Input the marks obtained in Chemistry :51 Input the marks obtained in Mathematics :72 Total marks of Maths, Physics and Chemistry : 188 Total marks of Maths and Physics : 137 The candidate is not eligible..

1. a. Write a C Program to Swap Strings.

b. Program to read string from keyboard and display it using character pointer.

1. a. To write a C Program to check matrix equality
2. a. Write a C program for reading a from a file containing a list of names and write the text to another file.
3. Write a program in C to calculate and print the Electricity bill of a given customer. The customer id., name and unit consumed by the user should be taken from the keyboard and display the total amount to pay to the customer. The charge are as follow

|  |  |
| --- | --- |
| Unit | Charge/Unit |
| upto 199 | @1.20 |
| 200 and above but less than 400 | @1.50 |
| 400 and above but less than 600 | @1.80 |
| 600 and above | @2.00 |

If bill exceeds Rs. 400 then a surcharge of 15% will be charged and the minimum bill should be of Rs. 100/-

1. a. To check the given number is Amstrong number or not using functions.

b. Accept two integers as input. Perform division operation on those numbers and print the answer with / without float type conversion.

1. a. To write a C Program to Check symmetric matrix