PYTHON LAB INTERNAL EXAM QUESTIONS TO PRACTICE

SET A

1. Write a Python program to read a list of numbers and sort the list in a non-decreasing order without using any built-in functions. A separate function should be written to sort the list wherein the name of the list is passed as the parameter.
2. Write a Python code to create a function called list_of_frequency that takes a string and prints the letters in non-increasing order of the frequency of their occurrences. Use dictionaries.

SET B

1. Write a Python code to determine whether the given string is a palindrome or not using slicing. Do not use any string function.
2. Write a Python program to find the value for Sine (x) up to n terms using the series:

$$\sin(x) = x - \frac{x^3}{3!} + \frac{x^5}{5!} - \frac{x^7}{7!} + \dots$$

SET C

1. Write a function in file Armstrong.py to check whether a number is an Armstrong number. Import the module to generate Armstrong numbers between two limits.
2. Write a function that rotates a list to the right by a given number of steps.

SET D

1. Write a program that takes a year as input and determines whether it is a leap year using if-else.
2. Write a program to maintain student records using a dictionary where:
   - Keys are student names.
   - Values are lists of marks in 3 subjects. Write functions to calculate the total marks, average marks, and display all students scoring above a certain average.