**Computer Science Programming and Principles 1**

**Mid Exam – 2**

Date: 11/08/2017 Total marks: 25

Time: 4 hours

**Note:** Don’t use any in-built methods except len and range.

**Section 1: (Each question carries 3 marks)**

1. Write a python program to rotate the list left by n times.
2. Write a python program to find the mean and mode for the given list of elements.
3. Write a python program to remove duplicates from a list.

**Section 2: (Each question carries 4 marks)**

1. Write a python program that returns True if the given elements in two lists are same. (The elements can be in any order, You should not sort the lists using in-built methods).
2. Write a python program to calculate the first 26 Fibonacci numbers and assign each Fibonacci number a letter in English as a value by using **Dictionaries**. Given a string as input and calculate the sum of all the characters that are associated with the values from the given string. Write a recursive function for finding the Fibonacci numbers.
3. Write a python program to find the second largest and second smallest numbers from the given list of numbers. (You should not use in-built method).
4. Write a recursive python program to compute the sum of all numbers in the nested lists. Elements of the list could be a number or list of numbers.