Meghnad Saha Institute of Technology

Department of Mechanical Engineering

Project – II ~ PW-ME681

Problem sheet ~ 01 # Basic Python Programming

1. Write a Python program to find out **roots of a quadratic equation**. Accept coefficients from user.

2. Write a Python program to find **whether a given number** (accept from the user) is a **prime no or not**, print out an appropriate message to the user.

3. Write a Python program to get the **least common multiple (LCM) & the greatest common divisor (GCD)** of two positive integers (accept from the user).

4. Find the **factorial** of a given number.

5. Write a Python program to find **Fibonacci series** upto a given no.

6. Write a Python program to **reverse the digits of a given number** and add it to the original. If the sum is not a **palindrome** repeat this procedure.

7. Write a Python program to print the **number of prime numbers** which are less than or equal to a given integer.

8. Write a Python program that accepts six numbers as input and **sorts them in descending order**.

9. Write a Python program which reads a text (only alphabetical characters and spaces.) and prints two words. The first one is the word which arises most frequently in the text. The second one is the word which has the maximum number of letters.

10. There is a JAR full of candies for sale at a mall counter. JAR has the capacity N, that is JAR can contain maximum N candies when JAR is full. At any point of time. JAR can have M number of Candies where M<=N. Candies are served to the customers. JAR never remains empty as when last k candies are left. JAR if refilled with new candies in such a way that JAR get full. Write a code to implement above scenario. Display JAR at the counter with available number of candies. Input should be the number of candies one customer can order at a point of time. Update the JAR after each purchase and display JAR at Counter. Output should give the number of Candies sold and updated number of Candies in JAR. If Input is more than candies in JAR, return: “INVALID INPUT” Given, N=10, where N is NUMBER OF CANDIES AVAILABLE, K =< 5, where k is number of minimum candies that must be inside JAR ever.