 **COMSATS University Islamabad, Lahore** **Campus**

**Lab Assignment 2– SPRING 2020**

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| Course Title: | | Microprocessor and Assembly Language | | | | | | | Course Code: | | CSC321 | Credit Hours: | | 3 (2,1) |
| Course Instructor/s: | | Sheeza Zaheer | | | | | | | Programme Name: | | BCS | | | |
| Semester: | | 6 | | Batch: | | FA17 | | Section: | A, B | | Date: |  | | |
|  | |  | | | | | | | **Maximum Marks:** | | | **25** | | |
| Student’s Name: | |  | | | | | | | Reg. No. |  | | | | |
| **Important Instructions / Guidelines:**.   * **Cheating will result in negative marking**. | | | | | | | | | | | | | | |
| **Q1** | **Q2** | | **Q3** | | **Total** | |  | | | | | |
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**Question 1: [5 Marks]**

AX contains a number between 0-15. Write code to complement the corresponding bit in BX. For example, if AX contains 6; complement the 6th bit of BX. (Note: First bit in BX is at 0th position and last bit is at 15th position)

**Question 2: [7 Marks]**

Write a code to calculate the Fibonacci series up to 10 values.

Series: 0 1 1 2 3 5 8 13 21 34 …..

Hint: You can use 0 and 1 as start of series.

**Question 3 [13 Marks]**

Write a program to find the greatest common divisor (GCD) of two integers *M* and *N,* according to the following algorithm:

1. Divide *M* by *N,* getting quotient Qand remainder *R.*

2. If *R* = 0, stop. *N* is the GCD of *M* and *N.*

3. If *R* <> 0, · replace *M* by *N, N* by *R,* and repeat step 1.

Use INDEC to enter M and N and OUTDEC to print the GCD.