National University of Computer and Emerging Sciences, Lahore Campus

Course:	**Computer Organization and Assembly Language**	**Course Code:**	**EE213**
Program:	**BS (Computer Science)**	**Semester:**	**Fall 21**
Duration:	**40 Minutes**	**Total Marks:**	**10**
Paper Date:	**10-Nov-2021**	**Weight**	**5%**
Section:	**ALL**	**Page(s):**	**2**
Exam:	**Quiz 1**	**Roll No:**	

Instruction/Notes:

- Write down your name and roll number.
- Properly comment your code.
- Write your answer in the space provided. You **can take extra sheets BUT they WONT BE ATTACHED WITH THE QUESTION PAPER NOT MARKED.**

Question 1: (1 + 1 + 1 marks)

Replace the following invalid instructions with a single instruction that has the same effect.

a. pop ip

ANSWER:
sub sp,2

b. sub sp, 2
mov [ss:sp], ax

ANSWER:
Push ax

c. mov ax, [ss:sp]
add sp, 2

ANSWER:
Pop ax

Question 2: (7marks)

Write a program that calculates the n term of Fibonacci series using loop. Store number of terms(n) to generate Fibonacci in **AX** register, save the value of series in memory, declare an array of **dw** size with name '**mySeries'** and store values in it. (Note: Don't rush at it, consider all potential conditions)

Hint:

The Fibonacci sequence is the series of numbers:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, ...

The next number is found by adding up the two numbers before it.

- The 2 is found by adding the two numbers before it (1+1)
- Similarly, the 3 is found by adding the two numbers before it (1+2),
- And the 5 is (2+3),
- and so on!

Then store your