Capital University of Science and Technology

Department of Computer Science

CS 2523 – Computer Organization and Assembly Language

QUIZ NO. 5: Assembly Language, Addressing Modes

CLO: 2. Describe how the basic units of the Intel 8088 architecture work together to represent Integer Numbers, Floating Numbers and register representation inside the microprocessor.

[C2- Understanding]

Semester: Summer 22 **Max Marks:** 10

Instructor: Ms. Tayyaba Zaheer **Date:** September 05, 2022 **Max Time:** 15 Minutes

Name: **Reg. No.**

Question No.1 [02 Marks]

Please choose the correct option:

i. PC stands for:
   a) Points Counter
   b) Paragraph Counter
   c) Program Counter
   d) Paint Counter

Solution: c

ii. In microprocessor, one of the operands holds a special register called:
   a) Calculator
   b) Accumulator
   c) Dedicated
   d) None of the mentioned

Solution: b

Question No.2 [02 Marks]

Identify the problem in the following instruction and correct it by replacing with one or two instruction having the same effect.

mov bx, al

Solution:

; Size mismatch i.e. bx is 16-bit register and al is 8-bit register. The correct statement could be

```
mov bx, ax      ; OR
mov bl, al
```

Question No.3 [02 Marks]

Identify the problem in the following instruction and correct it by replacing with one or two instruction having the same effect.

mov [05], [24]

Solution:

; Memory to memory move is illegal in Intel architecture. The correct instructions for this operation could be

mov ax, [24]

mov [05],ax

Question No. 4 [04 Marks]

Write an assembly program that adds the numbers 5, 10, 15, and 20. You have to declare an array of type word to store the given numbers in the memory. You are free to choose any addressing mode to access the stored data from memory.

Solution: