EE213 Computer Organization and Assembly Language
Quiz I (GR I) – Spring 2019
February 21st, 2019
Paper-B
Student Name: _____ Roll#_____

1. Draw the instruction execution cycle of following instruction. **[2 Points]**

```
RET
```

2. Using *direct-offset addressing* mode and LOOP only, replace only the NEGATIVE elements in **wArray** with their positive half without using MUL/DIV, write only the code part. **[4 Points]**

```
wArray      SWORD       -12, 14,-16, 18, -20, 22, -24, 26
```

```
.CODE
    MOV     ESI, OFFSET wArray
    MOV     AX, 6
    MOV     ECX, 4
    L1:     ADD     [ESI], AX
            NEG     WORD PTR[ESI]
            ADD     AX, 2
            ADD     ESI,4
    LOOP    L1
```

3. Assuming following data segment, answer the following questions: **[4 Points]**

```
.data
val64       LABEL       QWORD
var1        WORD        1100h, 2 DUP (0FD1h, 1F0Dh)
var2        DWORD       $, $
var3        BYTE        12h,13h, 'AB'
```

A. What value will be returned when Label **val64** is accessed?
0F D1 1F 0D 0F D1 11 00h

B. Assuming that data segment above starts at **1CE1 0092h.** Draw out the byte by byte memory look up with addresses for var3.

1CE1 0014h	12h
1CE1 0015h	13h
1CE1 0016h	'A'
1CE1 0017h	'B'

4. Elaborate the difference between LENGTHOF and SIZEOF operators with the help of some working example. **[2 Points]**