

Name:

Id#

**COE 205, Term 091**  
**Computer Organization & Assembly Programming**  
**Quiz# 3**

Date: Saturday, Dec. 12, 2009

**Q1.** Fill the blank in each of the following:

1. Assume that the instruction `JMP NEXT` is at offset address `0000005EH` in the code segment, its size is 2 bytes, and the label `NEXT` is at offset `00000020H`. Then, the address stored in the assembled instruction for the label `NEXT` (assuming pc-relative addressing), is \_\_\_\_\_.
  
2. Assuming that `EBX=0000000C` and `ESI=00000004`, the address of the source operand in this instruction `MOV AL, [EBX+ESI*4-1]` is \_\_\_\_\_ and its addressing mode is \_\_\_\_\_.
  
3. Executing the two instructions `{NEG EBX; ADD EAX, EBX}` produces the same result in `EAX` as the instruction \_\_\_\_\_.
  
4. The addressing mode of the source operand in the instruction `MOV EAX, offset ARRAY-1` is \_\_\_\_\_.

5. The addressing mode of the source operand in the instruction `MOV EAX, ARRAY+1` is \_\_\_\_\_.
6. The addressing mode of the source operand in the instruction `MOV EAX, [EBX]` is \_\_\_\_\_.
7. After executing the code shown below, the content of register EAX will be \_\_\_\_\_.

```
        MOV ECX, 5
        MOV EAX, 0
NEXT:   ADD EAX, ECX
        LOOP NEXT
```

8. Considering the code below, the content of the following registers after executing the code will be EAX=\_\_\_\_\_ and EBX=\_\_\_\_\_.

```
.DATA
ARRAY    DWORD 1, 2, 3, 4, 5
          DWORD 6, 7, 8, 9, 10
          DWORD 11, 12, 13, 14, 15
          DWORD 16, 17, 18, 19, 20
RSIZE EQU  SIZEOF ARRAY
.CODE
MOV ESI, 2*RSIZE
MOV EDI, 3
MOV EAX, ARRAY[ESI+EDI*TYPE ARRAY]
MOV EBX, ARRAY[ESI-4]
```