Name: KEY Id#

COE 205, Term 101

Computer Organization & Assembly Programming

Quiz#3

Date: Wednesday, Nov. 10, 2010

# 

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

# Assume that the instruction JMP NEXT is at offset address 000000A1H 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 is FFFFFF7D.

EIP=000000A1+2=000000A3. Stored address is NEXT-EIP=00000020-000000A3=FFFFFF7D.

# Assuming that EBX=FFFFFFFE and ESI=00000010, the address of the source operand in this instruction MOV AL, [EBX+ESI\*2-5] is 00000019 and its addressing mode is Based-Indexed addressing mode.

# The value of EAX after executing the following instructions will be 21d=00000015.

**mov eax, 0**

**mov ecx, 6**

**L1:**

**add eax, ecx**

**loop L1**

# The following instructions **{mov eax, esi; add eax, eax; add eax, ebx; add eax, OFFSET Array}** have the following equivalent single instruction LEA EAX, Array[EBX,+ESI\*2].

# The content of register EAX after executing the instructions below will be 12d=0000000C.

# .DATA

# ARRAY DWORD 1, 2, 3, 4

# DWORD 5, 6, 7 , 8

# DWORD 9, 10, 11, 12

# RS EQU SIZEOF ARRAY

# .CODE

# MOV ESI, 2\*RS

# MOV EDI, 3

# MOV EAX, ARRAY[ESI+EDI\*TYPE ARRAY]

# The content of Intarray after executing the program below will be: 60000h, 50000h, 40000h, 30000h, 20000h, 10000h.

# .DATA

# Intarray DWORD 10000h, 20000h, 30000h, 40000h, 50000h, 60000h

# .CODE

# main PROC

# mov esi, 0

mov edi, LENGTHOF Intarray-1

mov ecx, LENGTHOF Intarray /2

# L1:

# mov eax, Intarray[esi\*4]

# xchg eax, Intarray[edi\*4]

mov Intarray[esi\*4], eax

# inc esi

# dec edi

# loop L1

# exit

# main ENDP

# END main