Name: KEY Id#

COE 205, Term 082

Computer Organization & Assembly Programming

Quiz# 4

Date: Saturday, May 23, 2009

# **Q1.** Given that **TABLE1** and **TABLE2** are defined as:

## **TABLE1 BYTE ‘COE 205’**

**TABLE2 BYTE ‘SWE 205’**

## Determine the content of register **AX** after executing the following code:

## 

MOV ECX, lengthof TABLE1

MOV EBX, -1

XOR AX, AX

AGAIN: JECXZ DONE

INC EBX

MOV DL, TABLE1[EBX]

CMP DL, TABLE2[EBX]

LOOPNE AGAIN

JNE DONE

INC AX

JMP AGAIN

DONE:

**The content of register AX will be 5 as the program counts the number of match characters between the two tables.**

## **Q2.** Determine the content of register **EAX** after executing the following code:

.686

.MODEL FLAT, STDCALL

.STACK

INCLUDE Irvine32.inc

.DATA

TABLE DWORD 10, 5, 200, -20, 30, 400, -60, 9, -1

.CODE

main PROC

PUSH offset TABLE ; pushed as 32-bit

PUSH lengthof TABLE ; pushed as 32-bit

CALL MYPROC

exit

main ENDP

MYPROC:

MOV EBP, ESP

PUSH EBX

PUSH ECX

MOV ECX, [EBP+4]

MOV EBX, [EBP+8]

MOV EAX, [EBX]

DEC ECX

ADD EBX, 4

NEXT:

CMP EAX, [EBX]

JG SKIP

MOV EAX, [EBX]

SKIP:

ADD EBX, 4

LOOP NEXT

POP ECX

POP EBX

RET 8

END main

**The content of register EAX will be 00000190h=400d as the program computes the maximum of the elements of TABLE.**