

Name: KEY

Id#

COE 205, Term 051
Computer Organization & Assembly Programming
Quiz# 5

Date: Monday, Nov. 28, 2005

Q1. Suppose that you have the following initial content of 8086 registers:

AX=F504H BX=7010H CX=02F2H DX=1234H

(i) Determine the content of the **destination** operand and the value of the **carry flag** after the execution of each of the following instructions. Use the **initial content** of the registers for the execution of each instruction.

1. SHR AX, CL

Only the least significant 5 bits of CL will determine the amount of shift i.e. the amount of shift = 17 => AX=0000 and CF=0.

2. SAR AX, 2

AX=FD41 CF=0.

3. ROL AX, 129

This is equivalent to ROL AX, 1 => AX=EA09 and CF=1.

4. SHLD AX, BX, 4

AX=5047 CF=1. Note that BX does not change.

(ii) Write an 8086 assembly program using **conditional loop** instructions to count the number of **non-blank** characters in a Table of 80 characters.

```
MOV CX, 80
XOR AL, AL; AL will hold the number of non-blank char.
MOV SI, -1
```

Next:

```
JCXZ Done
INC SI
CMP Table[SI], ' '
LOOPE Next
JE Done
INC AL
JMP Next
```

Done: