

Name:

Id#

COE 205, Term 992

Computer Organization & Assembly Programming
Quiz# 2

Date: Monday, Feb. 21

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

AX=FFF2H	BX=FFFFH	CX=0010H	DX=0210H
SI =0004H	DI =0002H	BP=0200H	SP =0300H
DS =53FFH	ES =EF00H	CS=5000H	SS =4000H
IP =1220H			

- (1) Suppose that the following data segment is allocated in the segment given in the DS register with an offset of 0. Show the content of the allocated memory, and determine the physical addresses of variables I and J.

```
I    DB    -88
      DW    5432H, '12'
L    EQU   61
J    DB    L+3
      DW    offset J
K    DB    `Q#1`, `$`
```

- (2) Show the content of the registers and memory locations modified after the execution of each of the following instructions. Use the initial content of the registers and memory locations as initial values for the subsequent instructions. Furthermore, specify the addressing modes of the source and destination operands in each instruction.

a. SUB AX, WORD PTR I+1

b. MOV WORD PTR I, offset J

c. ADD AX, [DI-1]

d. MOV BYTE PTR [BX+SI-1], L-1

(3) Give on a separate line the string displayed on the screen by each of the following code fragments.

a. MOV DX, offset K
 MOV AH, 09H
 INT 21H

b. MOV DX, offset K+2
 MOV AH, 09H
 INT 21H

c. MOV DL, K
 MOV AH, 02H
 INT 21H