

Name:

Id#

COE 205, Term 991

Computer Organization & Assembly Programming
Quiz# 2

Date: Saturday, Oct. 7

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

AX=0312H	BX=0001H	CX=0010H	DX=0210H
SI =0001H	DI =0002H	BP=0200H	SP =0300H
DS =2000H	ES =3000H	CS=1000H	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. For memory addresses starting from variable K, just show the number of bytes allocated without showing the content.

```
I    DB    8
      DW    1234H
J    DB    10, 11
      DW    offset J
K    DB    `Quiz#2`, `$`
```

- (2) Show the content of the registers and memory locations modified after the execution of each of the following instructions. Use the modified contents 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. ADD AX, word ptr I+1

- b. MOV DX, [offset J]

- c. ADD CX, [SI+1]

- d. MOV [BX+DI-1], BL

- e. MOV AX, word ptr I[BX]

- f. MOV J[BX][DI], CL

(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+4
 MOV AH, 09H
 INT 21H

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