

Name:

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COE 205, Term 991

Computer Organization & Assembly Programming
Quiz# 3

Date: Saturday, Nov. 6

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

AX=FB7FH BX=0E46H CX=1234H DX=AF29H

Show the content of the destination operand and the state of the flag bits (O, S, Z, A, P, and C) after the execution of each of the following instructions. Use the initial content of the registers for the execution of each instruction, and suppose that all the flag bits are initially set to 0.

1. NOT DX
2. AND AL, F7h
3. OR BX, CX
4. XOR AX, CX
5. SAR DX, CL
6. SAL DX, CL
7. SHR DX, 1
8. ROR DX, 1
9. RCR DX, 1
10. ROL DX, 1

Q2. Write 8086 code to multiply the signed content of register AL by 44 using the smallest number of instructions possible:

- (i) Without using the multiplication instruction.
- (ii) Without using the multiplication and shift instructions.

Which of the two implementations is better and why?