16.317: Microprocessor Systems Design I

Fall 2013

Lecture 10: Key Questions
September 25, 2013

1. Explain the general operation of the AND, OR, XOR, and NOT instructions.

2. **Example:** Show the state of AL after each instruction in the following sequence:

    MOV AL, 55H
    AND AL, 1FH
    OR AL, C0H
    XOR AL, 0FH
    NOT AL

3. Explain the operation of shift instructions. What is the difference between SHR and SAR?

4. **<u>Example:</u>** Given AL = 15H, CL = 03H, and CF = 0, show the state of AL and CF after each instruction in the sequence below:

    SHL AL, 1
    SHR AL, CL
    SAL AL, 5
    SAR AL, 2