1. Describe each of the x86 internal registers.

2. What is the major difference between the x86 and the x386DX registers?

3. Describe how real mode addresses are generated on the x86, including the components of the address.

4. What is the difference between logical and physical addresses?

5. If SS and SP are D005H and FF05H, respectively, what is the TOS address?

6. Based on the previous question (#5), how many words of data are held in the stack at this point?
7. Describe addressing modes available on the x86.

8. Given the register contents below:

CS = 0B00H
DS = 0C00H
ESI = 00000200H
EDI = 00000300H
EBX = 00000400H
EDX = 00000150H

What is the physical address for the specified operand ***italicized*** in each instruction?

a. MOV ***[DI]***, DX
b. MOV DI, ***[SI]***
c. MOV ***[DX+0250H]***, CX
d. MOV AH, ***[SI+0110H]***
e. MOV ***[BX+DI+0380H]***, DL

9. What is the result of the execution of the instruction below:

MOVSX EDX, AL

If EAX = 98765432H, what would the result be?

If EAX = 10ABCDEFH, what would the result be?

10. Compare the operation of a MOV SI, NUM instruction with LEA SI, NUM instruction. Which of the instruction is more efficient?