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CPE 185

Homework 6

1. What single 80x86 instruction is equivalent to the following 80x86 instruction sequence?

Assume the direction flag is reset.

MOV AL, [SI]

INC SI

LODSB

2. Which of the following I/O instructions are invalid?

(a) OUT 256,AL

(b) IN BL,AL

(c) IN AL,DX

(d) OUT DX,3CEO

(a) port address > 255,

(b) destination must be accumulator,

(d) immediate data not allowed

3. What is the DEBUG immediate mode command to input the byte from port 15H?

I15

4. Write an 80x86 instruction sequence that inputs data from port 57H, sets bits 6 and 7 without changing the other bits, and outputs this data back to the same port.

in a1,57 ; Read data

or al , c0; Set b i t s 6 and 7

out 57, a1 ;output data

5. BIOS INT 16H, service 12H returns AX = 0080H. Which key on the system keyboard is pressed?

Insert