

Homework 6 Handout

1. What single 80x86 instruction is equivalent to the following 80x86 instruction sequence?
Assume the direction flag is reset.

```
MOV AL, [SI]
INC SI
```

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

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

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.

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

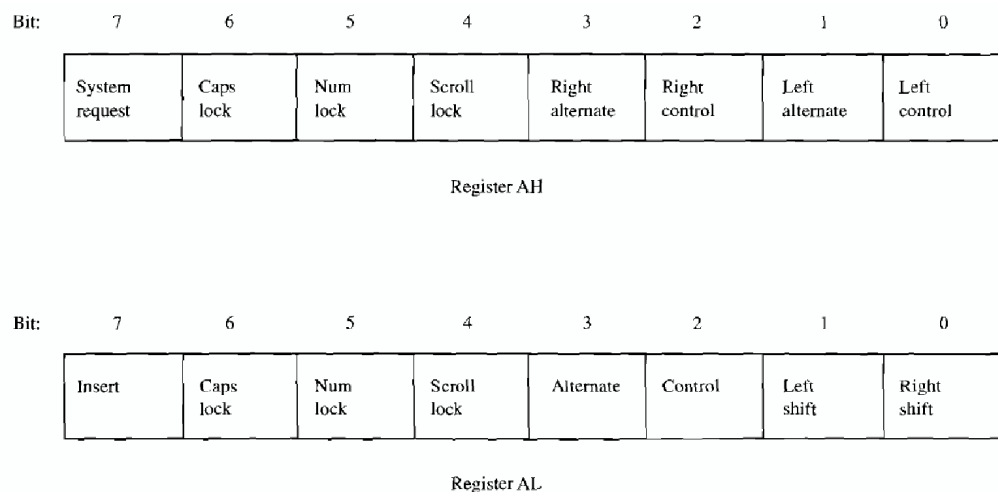


Figure 5-15.
BIOS INT 16H, service 12H returns the extended shift key status in registers AL and AH.

Answers to Questions

1. LODSB

2. (a) port address > 255,
(b) destination must be accumulator,
(d) immediate data not allowed

3. i15

4.
in a1,57 ; Read data
or al , c0; Set bits 6 and 7
out 57, a1 ;output data

5. Insert