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Quiz 2 **Microprocessor and Microcontroller** **3+4+8**

1.A smart door uses an 8-bit register **AUTH** to store user access rights.

AUTH = 11010110b

System events occur:

1. The system **shifts left** once to enable a high-security temporary mode.
2. It **toggles** visitor access bits using:
   `XOR AUTH, 29h`
3. If the emergency flag is active (CF=1), it performs:
   `RCR AUTH, 1`
   Determine the **final AUTH register** (binary) and the final **CF**.

2.AL = 01101100b

1. Determine if **L3** is locked
2. Toggle **L5**
3. Rotate AL **right by 3** to simulate passing control to other lockers.
4. Show the final AL.

3.find the flag bits for the following instructions:

1.mov si,0B9F6h

sub si,9874h

2.mov dx,0

dec dx

3.mov cx,-4097

add cx,1001h

4.mov ax,0FFFFh

inc ax

5.AL = 10110110b

AND AL, 11001100b