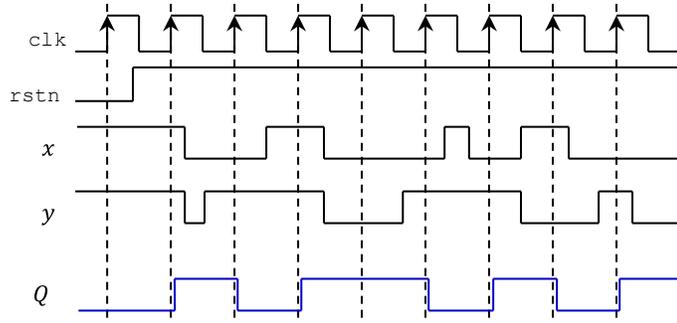
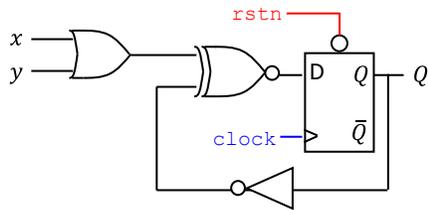


Solutions - Quiz 3

(November 5th @ 5:30 pm)

PROBLEM 1 (30 PTS)

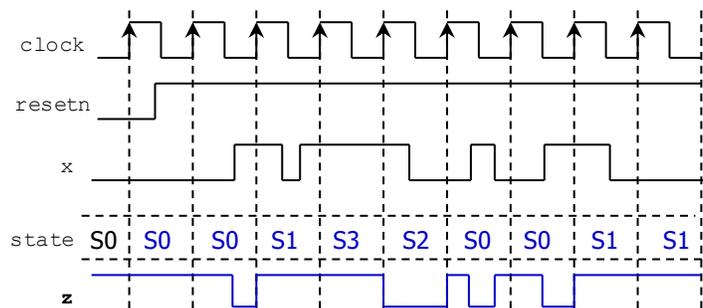
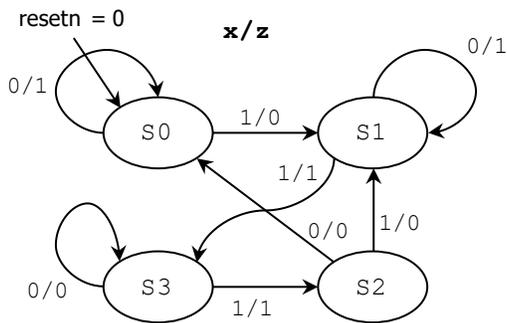
- Given the following circuit, complete the timing diagram and get the excitation equation for Q .



$$Q(t+1) \leftarrow (x+y) \oplus Q(t)$$

PROBLEM 2 (35 PTS)

- Complete the timing diagram of the following state machine (30 pts):



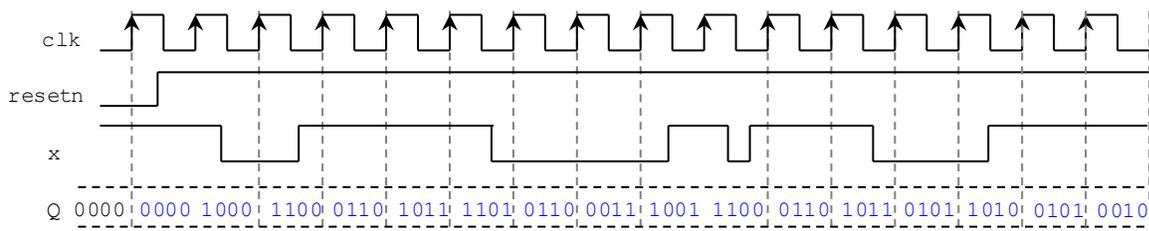
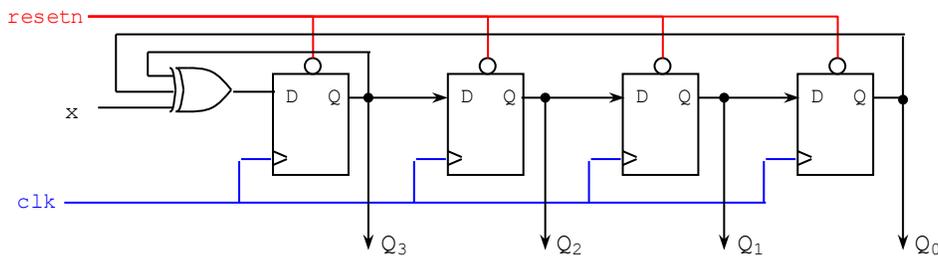
- For the given FSM diagram, circle or mark the correct FSM type:

~~(Mealy)~~

(Moore)

PROBLEM 3 (35 PTS)

- Complete the timing diagram of the following circuit. $Q = Q_3Q_2Q_1Q_0$.
- Get the excitation equation for Q_3 . (5 pts)



$$Q_3(t+1) \leftarrow Q_3(t) \oplus Q_0(t) \oplus x$$