

CMSC 313 Spring 2024

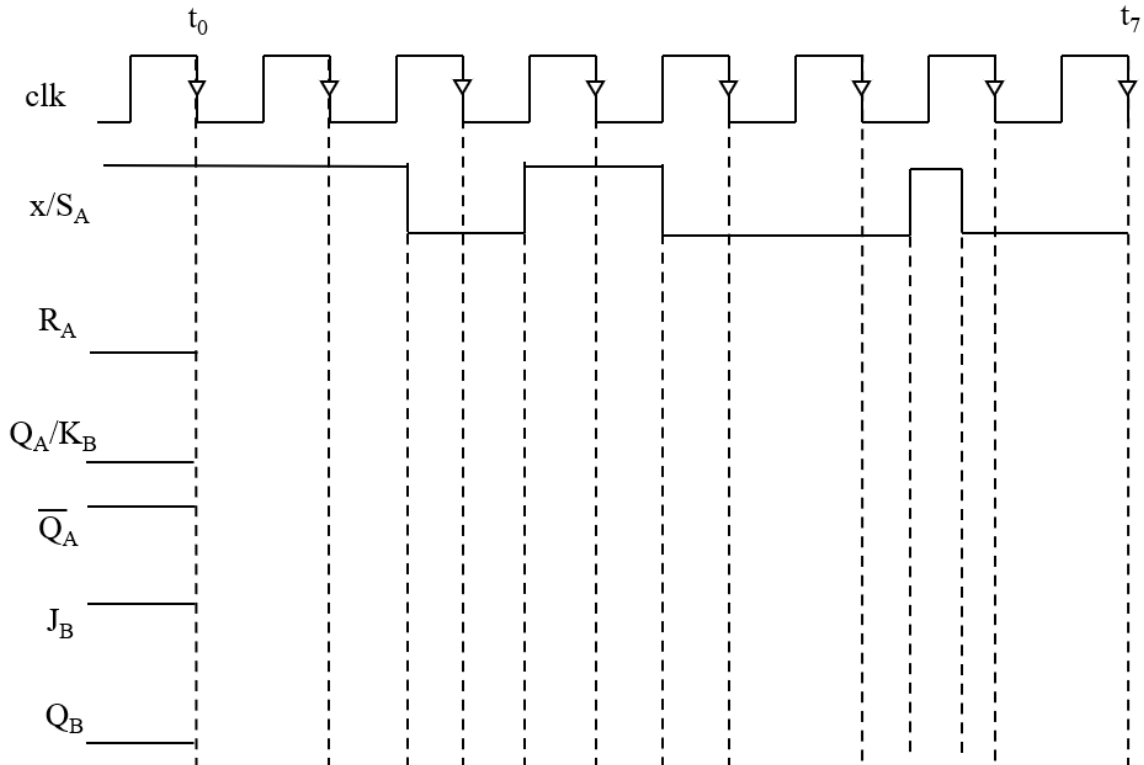
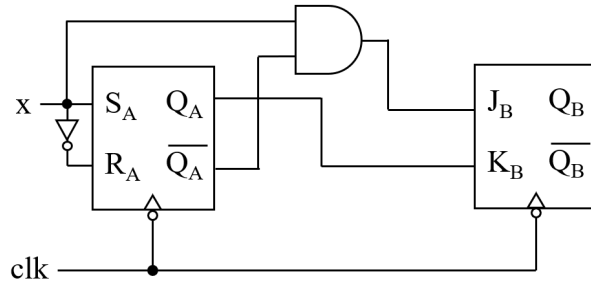
Quiz 3

Full Name _____ Student ID _____

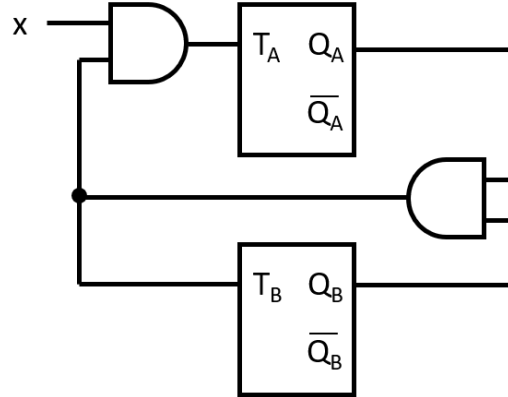
For every exercise, show your work. Not showing complete work may result in penalties.

Exercise 1. (10 pts) Draw the traces for the following circuit. Before t_0 ,

$$x = 1, Q_A = 0, J_B = 1, Q_B = 0$$



Exercise 2. Given the circuit:



a. (10 pts) Find the state equations $Q_A(t+1)$ and $Q_B(t+1)$ in terms of x , $Q_A(t)$, $Q_B(t)$. Box your final answer.

b. Complete the state table (10 pts) and complete the state diagram (10 pts).

X	Q_A	Q_B	Q_{A+}	Q_{B+}
0	0	0		
0	0	1		00
0	1	0		01
0	1	1		
1	0	0		
1	0	1		
1	1	0		11
1	1	1		10