

ET-540 – Introduction to Digital Computer Theory

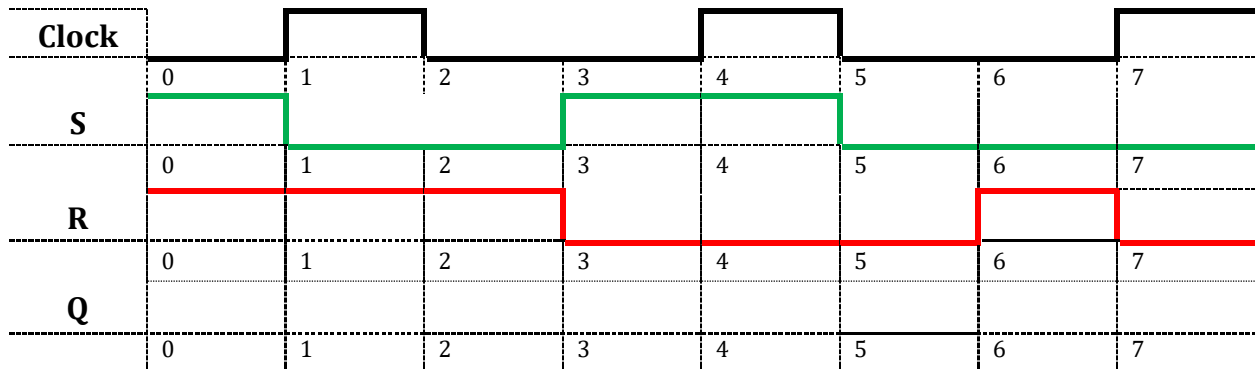
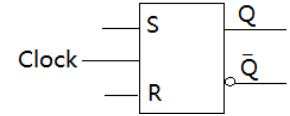
Homework 6 – SR, D, and JK flip flops

Student's Name _____

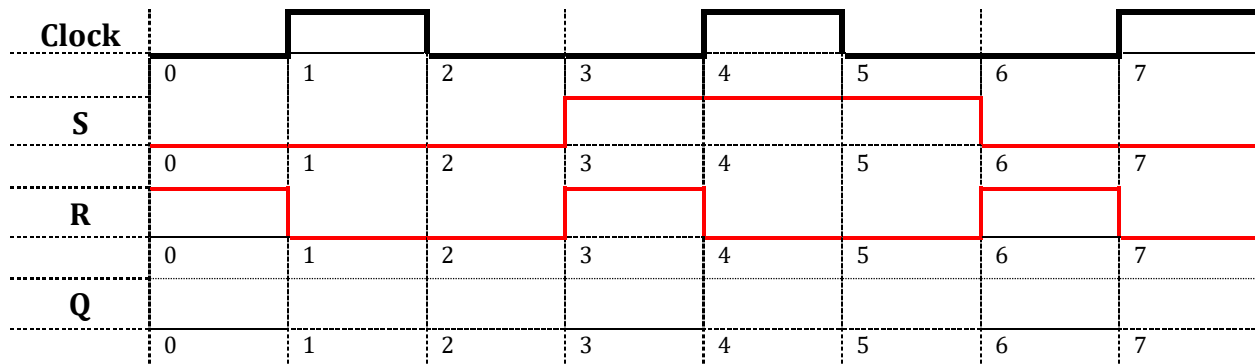
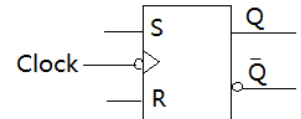
Instructions:

- Show all works to receive full credit

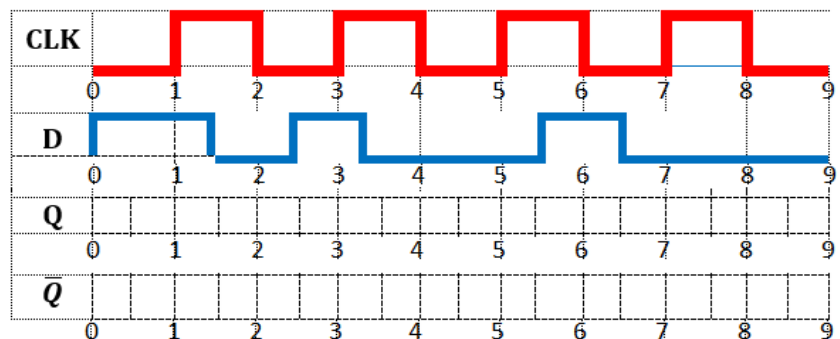
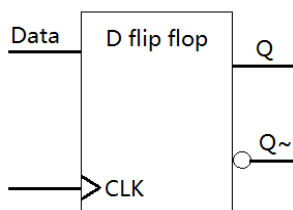
1. For a given (NAND) S-R FF, find the output Q assuming that $Q_{\text{initial}} = 1$



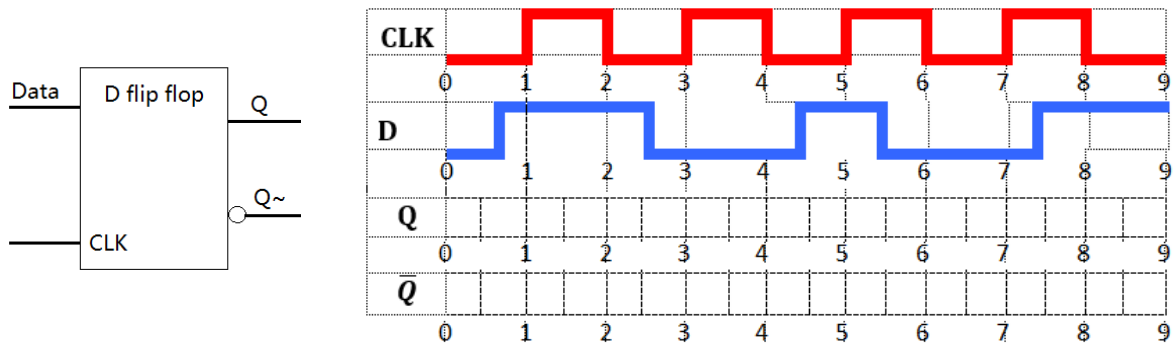
2. For a given (NOR) S-R FF, find the output Q and \bar{Q} assuming that $Q_{\text{initial}} = 0$



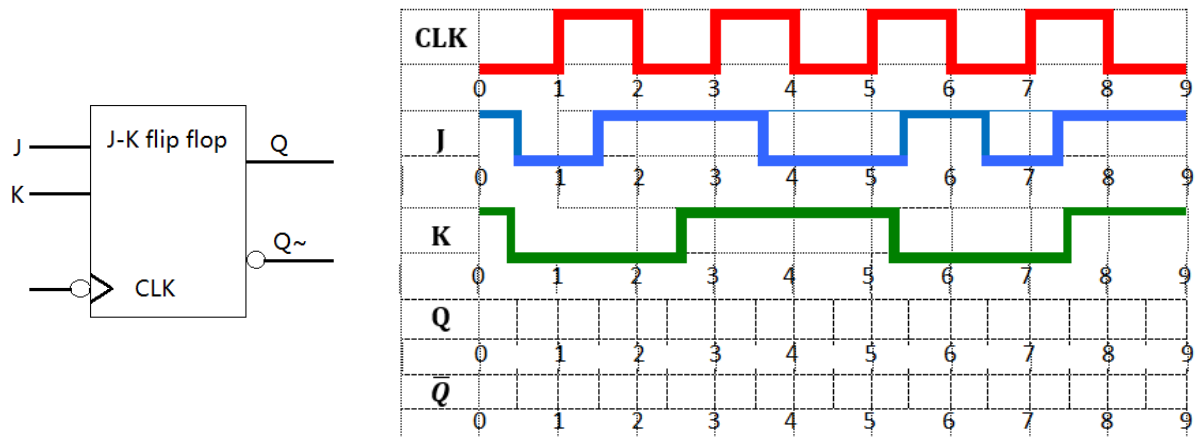
3. For the following D-flip flop circuit, sketch output Q and \bar{Q} if $Q_{\text{initial}} = 0$



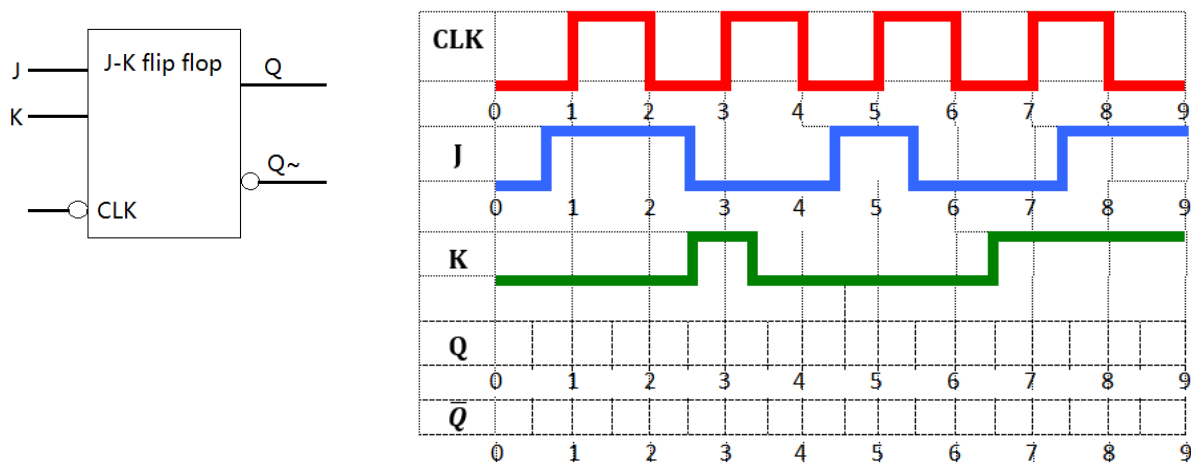
4. For the following D-flip flop circuit, sketch output Q and \bar{Q} if Q_{initial} is 1



5. For the following J-K flip flop circuit, sketch output Q and \bar{Q} if Q_{initial} is 1



6. For the following J-K flip flop circuit, sketch output Q and \bar{Q} if Q_{initial} is 0



----- End of Homework 6 -----