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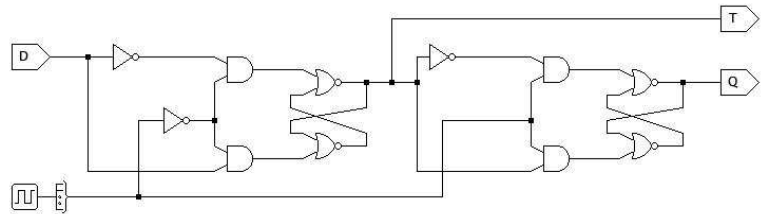
CIS 351 Sample SL2 Problem

06 September 2025

SL2: Flip-Flops

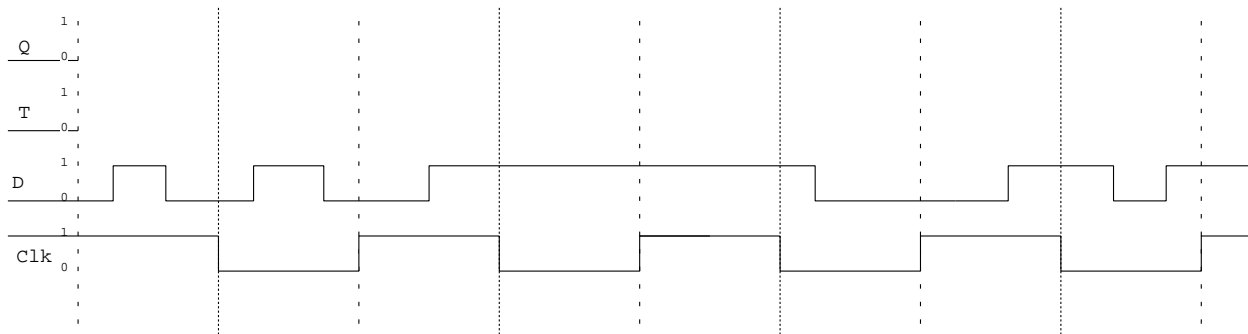
Consider the master-slave flip-flop shown to the right:

(a) Is this a rising-edge, or falling-edge flip-flop? How can you tell?



(b) Explain what gives this circuit its “instant trigger point.”

(c) Complete the timing diagram below that shows the *internal* operation of the master-slave flip-flop.



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(d) Complete the timing diagram below that shows the *external* behavior of the master-slave flip-flop.

