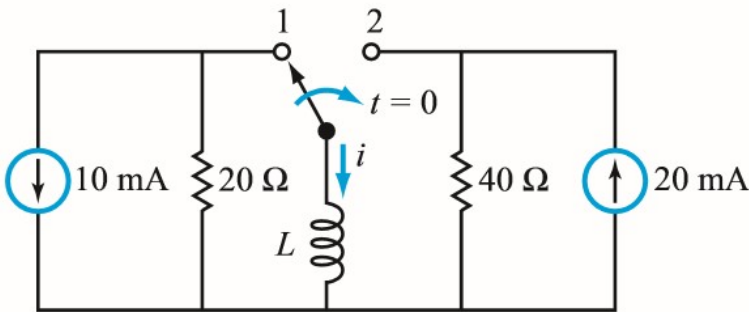


ECE101F19 Quiz 7, Nov. 14, 2019

Name _____ Student ID _____

For the RL circuit below, find $i(t)$ for $t > 0$ after the switch was positioned to terminal 2 at $t=0$. Assume $L = 10 \text{ mH}$. (Hint: Find the initial current $i(0^-)$, and also $i(\infty)$, and also the time constant. Be mindful of the sign, + or – for $i(0^-)$ and $i(\infty)$.)



(1)(2 points) Find $i(0^-)$ and $i(\infty)$.

(2)(3 points) Formulate the differential equation for $i(t)$ for $t > 0$.

(3)(5 points) Write down the solution $i(t)$ and check whether its values at $t = 0^-$ and $t = \infty$ (2)