ECE 35, Spring 2020

Quiz 3

/ 10

Last name

First + middle name(s)

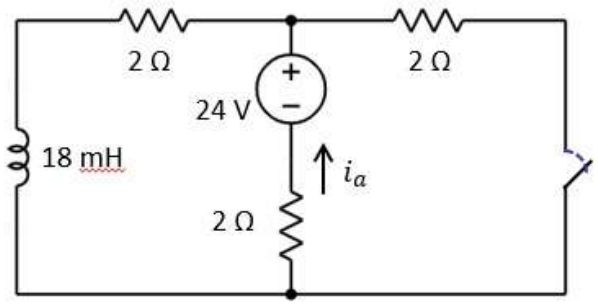
PID

(1) *(5 points)*

For $t < 5$ s, the switch is open, and you may assume the system has reached steady state. The switch closes at time $t = 5$ s.

(a) Find $i_a(5^-\ \text{s})$.

(b) Find $i_a(t)$ for $t > 5$ s. Write the equation.



(2) *(5 points)*

- For time $t < 0$s, switch S1 is open and current source I_s is zero. The voltmeter reading is 1V.
- At time $t = 0$s, switch S1 remains open and the current source I_s jumps to Y (an unknown DC value).
- The moment the voltmeter reading becomes 9V, which happens at time $t = 8$s, switch S1 closes and the current source I_s becomes zero again.

(a) Find the voltmeter reading X at time $t = 5$s.

(b) Find the voltmeter reading X at time $t = 11$s.