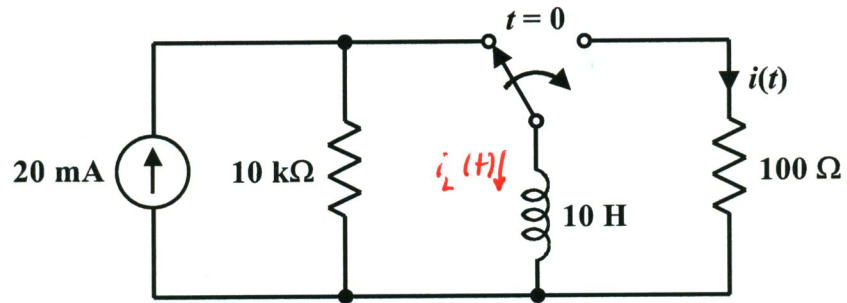


EE 2240  
Problem #03

The circuit has reached the DC steady state prior to  $t = 0$ . Find  $i(t)$  for  $t \geq 0$ .



$$i_L(0) = 20 \text{ mA}$$

$$i(0) = -i_L(0) = -20 \text{ mA}$$

$$\tau = \frac{10 \text{ H}}{100 \Omega} = \frac{1}{10} \text{ s}$$

$$i(t) = i(0) e^{-t/\tau}$$
$$= -20 e^{-10t} \text{ mA}$$