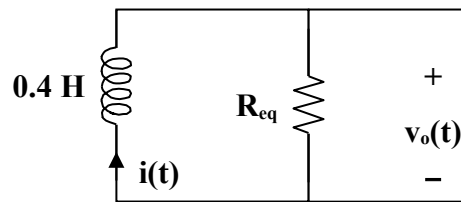


### Chapter 7, Solution 18.

If  $v(t) = 0$ , the circuit can be redrawn as shown below.



$$R_{eq} = 2 \parallel 3 = \frac{6}{5}, \quad \tau = \frac{L}{R} = \frac{2}{5} \times \frac{5}{6} = \frac{1}{3}$$

$$i(t) = i(0)e^{-t/\tau} = 5e^{-3t}$$

$$v_o(t) = -L \frac{di}{dt} = \frac{-2}{5}(-3)5e^{-3t} = 6e^{-3t} \text{ V}$$