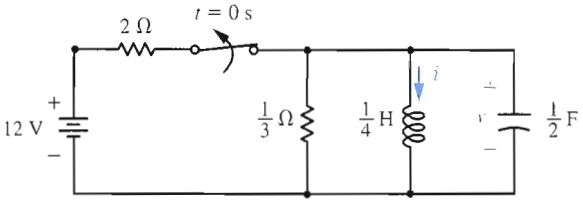

Fig. P3.60

3.63 For the series *RLC* circuit shown in Fig. P3.63, suppose that $R = 7\ \Omega$, $L = 1$ H, $C = 0.1$ F, $v_s(t) = 12$ V for $t < 0$ s and $v_s(t) = 0$ V for $t \geq 0$ s. Find $v(t)$ and $i(t)$ for all time.

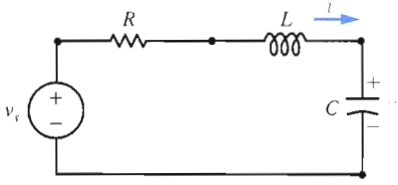

Fig. P3.63

3.64 For the series *RLC* circuit shown in Fig. P3.63, suppose that $R = 2\ \Omega$, $L = 0.25$ H, $C = 0.2$ F, $v_s(t) = 10$ V for $t < 0$ s and $v_s(t) = 0$ V for $t \geq 0$ s. Find $v(t)$ and $i(t)$ for all time.

3.65 For the series *RLC* circuit shown in Fig. P3.63, suppose that $R = 2\ \Omega$, L = 1 H, $C = 1$ F, $v_s(t) = 6$ V for $t < 0$ s and $v_s(t) = 0$ V for $t \geq 0$ s. Find $v(t)$ and $i(t)$ for all time.

3.66 For the circuit shown in Fig. P3.66, suppose that $v_s(t) = 6$ V for $t < 0$ s and $v_s(t) = 0$ V for $t \geq 0$ s. Find $v_2(t)$ and $v_1(t)$ for all time.

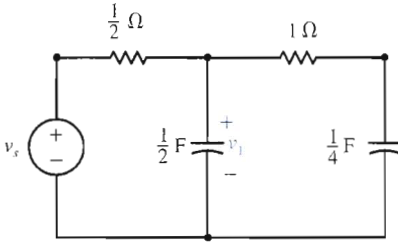

Fig. P3.66

3.67 For the circuit shown in Fig. P3.67, suppose that $v_s(t) = 6$ V for $t < 0$ s and $v_s(t) = 0$ V for $t \geq 0$ s. Find $i(t)$ and $v(t)$ for all time.

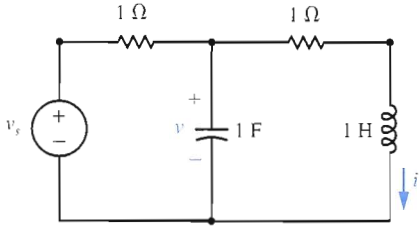

Fig. P3.67

3.68 For the circuit shown in Fig. P3.67, interchange the inductor and the capacitor. Suppose that $v_s(t) = 6$ V for $t < 0$ s and $v_s(t) = 0$ V for $t \geq 0$ s. Find the capacitor voltage $v(t)$ and the inductor current $i(t)$ for all time.

3.69 For the parallel RLC circuit shown in Fig. P3.69, suppose that $R = 0.5\ \Omega$, $L = 0.2$ H, $C = 0.25$ F, and $i_s(t) = 2u(t)$ A. Find the step responses $i(t)$ and $v(t)$.

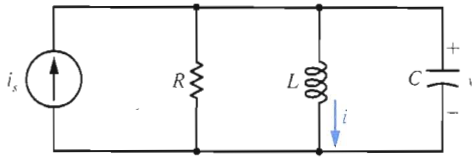

Fig. P3.69

3.70 For the parallel *RLC* circuit shown in Fig. P3.69, suppose that $R = 3\ \Omega$, L = 3 H, $C = \frac{1}{12}$ F, and $i_s(t) = 4u(t)$ A. Find the step responses $i(t)$ and $v(t)$.

3.71 For the series *RLC* circuit shown in Fig. P3.63, suppose that $R = 7\ \Omega$, $L = 1$ H, $C = 0.1$ F, and $v_s(t) = 12u(t)$ V. Find the step responses $v(t)$ and $i(t)$.

3.72 For the series *RLC* circuit shown in Fig. P3.63, suppose that $R = 2\ \Omega$, $L = 1$ H, $C = 1$ F,