

Solutions

Each answer shows the steps, then the **result**.

2.1

- $\tau = RC = (5.0 \times 10^3)(20 \times 10^{-6}) = 0.10 \text{ s}$

2.2

- zero (the capacitor is fully charged)

2.3

- $q(t) = Q e^{-t/\tau}$

3.1 B

3.2 B

3.3

(a)

- $\tau = RC = (2.0 \times 10^3)(50 \times 10^{-6}) = 0.10 \text{ s}$

(b)

- $I_0 = \frac{V}{R} = \frac{10}{2.0 \times 10^3} = 5.0 \times 10^{-3} \text{ A}$