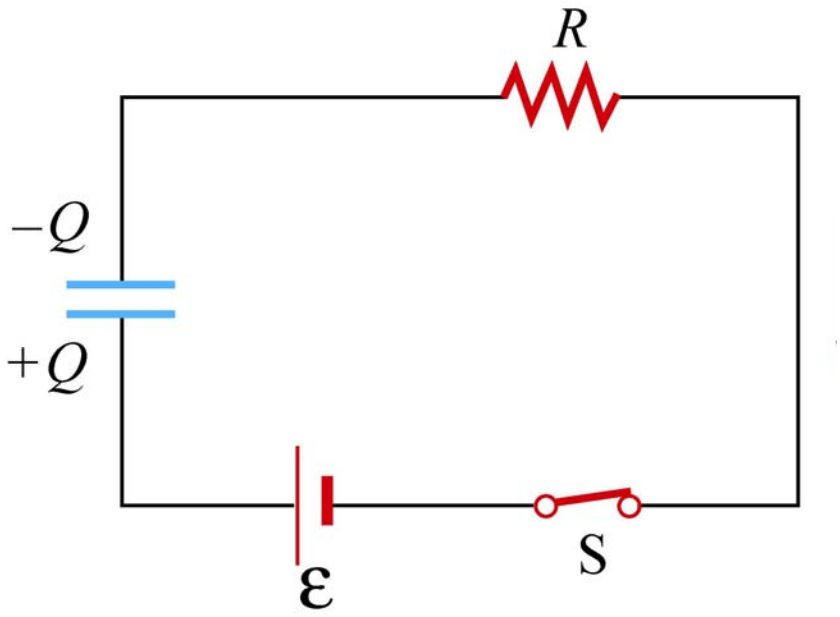
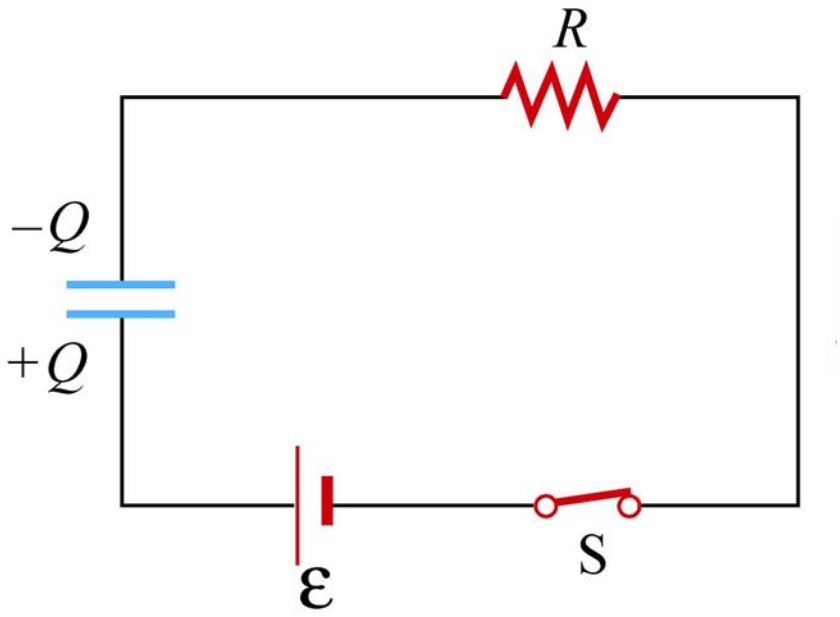
RC Circuit



An uncharged capacitor is connected to a dc voltage source via a switch. A resistor is placed in series with the capacitor. The switch is initially open. At $t = 0$, the switch is closed. A very long time after the switch is closed, the current in the circuit is

1. nearly zero
2. at a maximum and decreasing
3. nearly constant but non-zero

RC Circuit

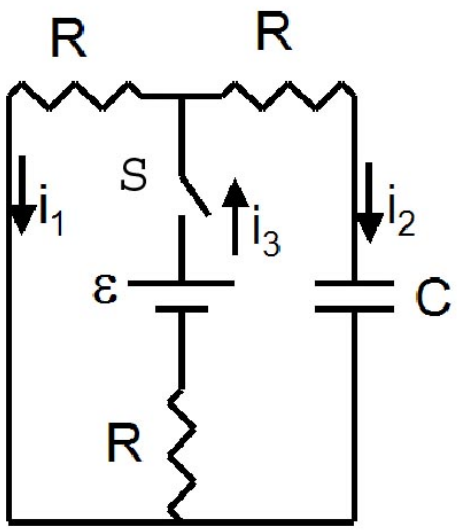


An uncharged capacitor is connected to a dc voltage source via a switch. A resistor is placed in series with the capacitor. The switch is initially open. At $t = 0$, the switch is closed. Just after the switch is closed, the current in the circuit is

1. zero and increasing
2. at a maximum and decreasing
3. constant but non-zero

MULTILOOP CIRCUIT WITH CAPACITOR

An uncharged capacitor is connected to a dc voltage source in the circuit shown. The switch is initially open. At $t = 0$, the switch is closed. A ***long time after*** the switch S is closed, the current i_3 is



1) $\varepsilon / 3R$
2) $\varepsilon / 2R$
3) $3\varepsilon / 2R$
4) $2\varepsilon / 3R$
5) Don't Know