

A resistor and an initially uncharged capacitor are connected in series. At $t = 0$ a battery is connected across the combination. After the battery is connected, the current in the circuit

- (a) is constant because the emf supplied by the battery is constant.
- (b) is always zero because electrons cannot flow through the gap in the capacitor.
- (c) increases exponentially with time.
- (d) decreases exponentially with time.