**Decide whether each of these statements is True (T) or False (F).**

**When a capacitor of 8μF, which has been charged to 12 V, is connected across a 1 MΩ resistor:**

**1**



**(i) The circuit current is proportional to the rate of change of voltage across the capacitor.**

**(ii) 8 s after the connection, the circuit current has dropped to half its initial value.**

(A) (i) T (ii) T

(B) (i) T (ii) F

(C) (i) F (ii) T

(D) (i) F (ii) F

**Answer:**
(B) (i) T (ii) F

**Decide whether each of these statements is True (T) or False (F).**

**A 24 V supply is connected to a series arrangement of a 100 Ω resistor and a 50 mH inductor.**

**2**

**(i) The initial circuit current is 0.24 A.**

**(ii) After a time equal to the time constant, the circuit current has decreased to 36.8% of its initial value.**

(A) (i) T (ii) T

(B) (i) T (ii) F

(C) (i) F (ii) T

(D) (i) F (ii) F

**Answer:**
(A) (i) T (ii) T