

Easy

Deputy Executive Engineer (Electricity) 2026

Uttar Pradesh Power Corporation Limited / Assistant Engineer (Electrical) 2026

()

- A

1, 2, 3

Correct
- B

1, 4
- C

2, 3
- D

Correct Answer: A

Full Detailed Explanation

When a switch is closed, the voltage across the capacitor is zero. The voltage across the capacitor is given by:

$$V_C(t) = V(1 - e^{-t/RC})$$

At $t = 0$, $V_C(0) = 0$. At $t = \infty$, $V_C(\infty) = V$. The voltage across the capacitor is 63.2% of the supply voltage V at $t = RC$.

∴ The correct answer is A.