2018 Ph H1 Q19

Section: Electricity

Topic: Capacitors

Question Summary

A capacitor is charged then discharged through a resistor. Which graphs show the potential difference across the capacitor versus time?

Worked Solution

During charging, V rises exponentially towards supply voltage.
During discharging, V falls exponentially towards 0.

The correct pair of graphs shows an exponential increase (charging) and exponential decay (discharging).

Final Answer: C

Revision Tips

- Capacitor charging: exponential rise to supply voltage.
- Capacitor discharging: exponential fall to zero.
- Remember shape, not straight-line.