2018 Ph H1 Q17

Section: Electricity

Topic: Capacitors

Question Summary

A 24·0 μF capacitor is charged until the potential difference across it is 125 V. Calculate the charge stored.

Worked Solution

Use $Q = CV$.

Convert: $C = 24{\cdot}0\ \mu F = 24 \times 10^{-6}\ F = 2.40 \times 10^{-5}\ F$.
$Q = CV = (2.40 \times 10^{-5}) \times 125 = 3.00 \times 10^{-3}\ C$.

Final Answer: D

Revision Tips

- $Q = CV$ is the key equation for capacitor charge.
- Always convert μF to farads.
- Charge is measured in coulombs (C).