

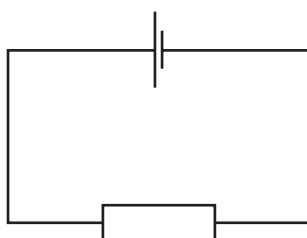
**28** The electric field at a certain distance from an isolated alpha particle is  $3.0 \times 10^7 \text{ N C}^{-1}$

What is the force on an electron when at that distance from the alpha particle?

- A**  $4.8 \times 10^{-12} \text{ N}$
- B**  $9.6 \times 10^{-12} \text{ N}$
- C**  $3.0 \times 10^7 \text{ N}$
- D**  $6.0 \times 10^7 \text{ N}$

**29** A cell is connected to a resistor.

At any given moment, the potential difference across the cell is less than its electromotive force.



Which statement explains this?

- A** The cell is continually discharging.
- B** The connecting wire has some resistance.
- C** Energy is needed to drive charge through the cell.
- D** Power is used when there is a current in the resistor.

**Space for working**