

- 21** A beam of beta particles constitutes a current of  $10.0 \mu\text{A}$ . Given that these beta particles travel at a speed of  $2.5 \times 10^7 \text{ m s}^{-1}$ , what is the average number of beta particles found in one centimetre length of this beam?

**A**  $2.5 \times 10^4$

**B**  $4.0 \times 10^4$

**C**  $2.5 \times 10^6$

**D**  $4.0 \times 10^6$