

- 20** A metal wire of length 20 cm and uniform cross-sectional area contains 4.8×10^{22} free electrons.

When a potential difference is applied across the ends of the wire, the free electrons move with an average drift speed of $3.2 \times 10^{-5} \text{ m s}^{-1}$.

What is the current in the wire?

A 0.0098 A

B 0.050 A

C 1.2 A

D 6.1 A