

Question Number	Answer	Mark
11	<p>Use of $I = nqvA$ (using dimensionally-correct A) (1)</p> <p>$v = 7.5 \times 10^{-4} \text{ m s}^{-1}$ (1)</p> <p><u>Example of calculation</u></p> $A = \pi r^2 = \pi (0.40 \times 10^{-3} \text{ m})^2 = 5.0 \times 10^{-7} \text{ m}^2$ $v = \frac{I}{nqA} = \frac{5.1 \text{ A}}{(8.5 \times 10^{28} \text{ m}^{-3})(1.6 \times 10^{-19} \text{ C})(5.0 \times 10^{-7} \text{ m}^2)}$ <p>$v = 7.5 \times 10^{-4} \text{ m s}^{-1}$</p>	2
	Total for Question 11	2