

Question number	Answer	Notes	Marks
5 (a) (i)	voltage = current $\times$ resistance;	allow in standard symbols and rearrangements e.g. $V = I \times R$ reject C, A for current	1
(ii)	substitution; rearrangement; evaluation; unit;  e.g. $4.80 = 0.42 \times R$ (R =) $4.8 / 0.42$ (R =) 11 ohms / $\Omega$	-1 if rounding error e.g. 11.42  allow 11.4, 11.43, 11.42857...	4
(b) (i)	charge = current $\times$ time;	allow in standard symbols and rearrangements e.g. $Q = I \times t$ reject C for current and charge	1
(ii)	dimensionally correct substitution; evaluation;  e.g. (Q =) $0.42 \times 45 (\times 60)$ (Q =) 1100 (C)	can be scored even if time not converted to seconds  allow 1130, 1134 (C) 18.9, 19 (C) gets 1 mark only	2
(iii)	time (to charge fully) increases; current reduces; (because) resistance of cable has increased;	allow longer {wire / lead} has greater resistance	3

**Total for question 5 = 11 marks**