

Question number			Answer	Notes	Marks
11	(a)		Electrical; Chemical / potential;		2
	(b)	(i)	Charge = current x time;	Accept rearrangements and standard symbols e.g. current = $\frac{\text{charge}}{\text{time}}$ $Q = I \times t$ $I = Q/t$ ignore units	1
		(ii)	Substitution; Calculation; Matching correct unit i.e. coulomb/C; e.g. $Q = \frac{400 \times 3.5 \times 3600}{1000}$ 5000 C	Allow mC Allow 5040 MAX 2 if time not converted into s (1.4, 1400, 60, 60 000, seen) POT error seen	3
	(c)		Longer (charging) time needed; Any one of $P = IV$; Lower current OR charge (supplied at a) lower rate; rate of charging lower/ less energy available;		2

Total 8 marks