

Question			Expected response	Max mark	Additional guidance
13.	(a)	(i)	$C = \frac{Q}{V} \quad (1)$ $C = \frac{136.8 \times 10^{-3}}{5.7} \quad (1)$ $C = 24 \times 10^{-3} \text{ F} \quad (1)$	3	Accept: 20, 24.0, 24.00
		(ii)	$\% \Delta V = \left(\frac{0.1}{5.7} \times 100 \right) = 1.8(\%) \quad (1)$ $\Delta C = \frac{1.8}{100} \times 24 \times 10^{-3} \quad (1)$ $\Delta C = 4 \times 10^{-4} \text{ F} \quad (1)$	3	Or consistent with (a)(i) Suspend significant figures rule in this question. Anywhere Accept rounding at an intermediate stage in this question. Alternative method: $\Delta V = \left(\frac{0.1}{5.7} \right) = 0.018 \text{ anywhere} \quad (1)$ $\Delta C = \frac{0.1}{5.7} \times 24 \times 10^{-3} \quad (1)$ $\Delta C = 4 \times 10^{-4} \text{ F} \quad (1)$
	(b)		$(t = 5RC)$ $t = 5 \times 15 \times 10^3 \times 24 \times 10^{-3} \quad (1)$ $t = 1800 \text{ s} \quad (1)$	2	Or consistent with (a)(i) Accept: 2000