

Question			Expected response	Max mark	Additional guidance
13.	(a)		(Close the switch and) take readings on voltmeter at (regular) time intervals (1) Plot a graph of voltage against time (1)	2	
	(b)	(i)	$E = \frac{1}{2} CV^2$ (1) $E = \frac{1}{2} \times 47 \times 10^{-6} \times 12^2$ (1) $E = 3.4 \times 10^{-3} \text{ J}$ (1)	3	Accept: 3, 3.38, 3.384 Alternative methods: Both relationships (1) Both substitutions (1) Final answer (1)
		(ii)	Increase the supply voltage	1	Must clearly indicate the supply voltage is increased/greater. If a value is given for the supply voltage then it must be greater than 12 V and less than or equal to 15 V. Accept: 'increase the voltage supplied to the circuit'. 'increase the voltage supplied to the capacitor'. Do not accept: 'increase the voltage across the capacitor' on its own. Do not accept: any implication of power supply being replaced by another power supply.