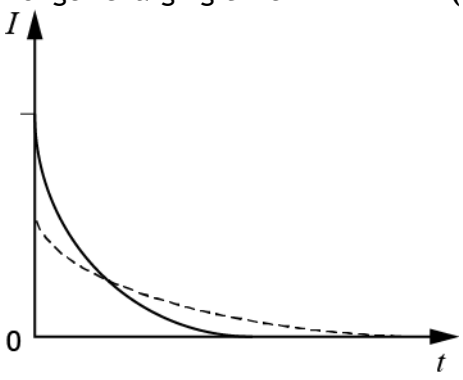
Question			Expected response	Max mark	Additional guidance
13.	(a)		$C=\frac{Q}{V}$ **(1)** $47\times10^{-6}=\frac{Q}{6\times0}$ **(1)** $Q=2\cdot8\times10^{-4}\ C$ **(1)**	**3**	Accept: $3, 2\cdot82, 2\cdot820$
	(b)		Lower initial current **(1)** Longer charging time **(1)** 	**2**	**Independent marks** Line crossing x-axis – maximum **(1)** Line crossing y-axis - maximum **(1)** Line must be a curve to award the second mark. Line must tend towards the time axis to gain the second mark. Do not accept: increasing curve – **0 marks** straight line – **0 marks**
	(c)		Increase the supply voltage	**1**	Must clearly indicate the supply voltage is increased/greater. 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.

Question			Expected response	Max mark	Additional guidance
13.	(d)		**Award 3 marks** where the candidate has demonstrated a good understanding of the physics involved. They show a good comprehension of the physics of the situation and provide a logically correct answer to the question posed. This type of response might include a statement of the principles involved, a relationship or an equation, and the application of these to respond to the problem. The answer does not need to be 'excellent' or 'complete' for the candidate to gain full marks. **Award 2 marks** where the candidate has demonstrated a reasonable understanding of the physics involved. They make some statement(s) that are relevant to the situation, showing that they have understood the problem. **Award 1 mark** where the candidate has demonstrated a limited understanding of the physics involved. They make some statement(s) that are relevant to the situation, showing that they have understood at least a little of the physics within the problem. **Award 0 marks** where the candidate has not demonstrated an understanding of the physics involved. There is no evidence that they have recognised the area of physics involved, or they have not given any statement of a relevant physics principle. Award this mark also if the candidate merely restates the physics given in the question	**3**	Candidates may use a variety of physics arguments to answer this question. Award marks based on candidates demonstrating, overall, good, reasonable, limited or no understanding.