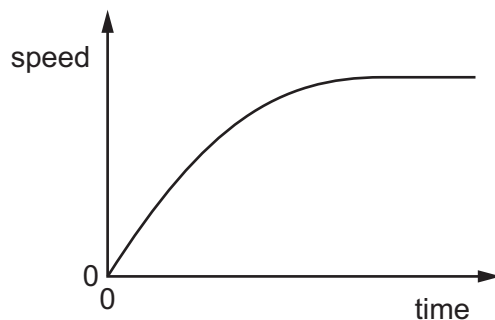
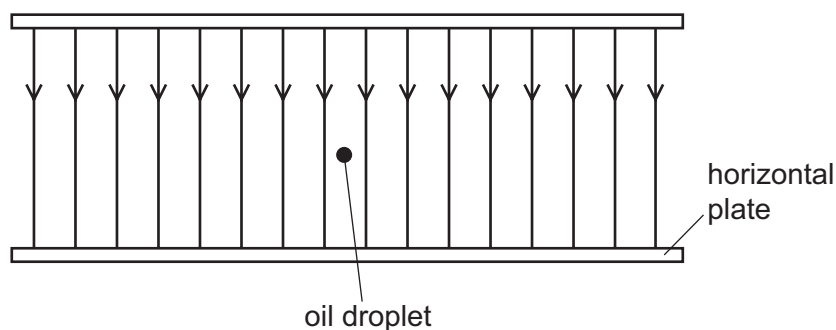


- 11 The graph shows the variation with time of the speed of a raindrop falling vertically through air.



Which statement is correct?

- A The acceleration decreases to produce a steady speed.
 - B The acceleration increases as the speed increases.
 - C The air resistance decreases as the speed increases.
 - D The resultant force increases as the speed increases.
- 12 A tiny oil droplet with mass $6.9 \times 10^{-13} \text{ kg}$ is at rest in an electric field of electric field strength $2.1 \times 10^7 \text{ NC}^{-1}$, as shown.



The weight of the droplet is exactly balanced by the electrical force on the droplet.

What is the charge on the droplet?

- A $3.3 \times 10^{-20} \text{ C}$
- B $-3.3 \times 10^{-20} \text{ C}$
- C $3.2 \times 10^{-19} \text{ C}$
- D $-3.2 \times 10^{-19} \text{ C}$

Space for working