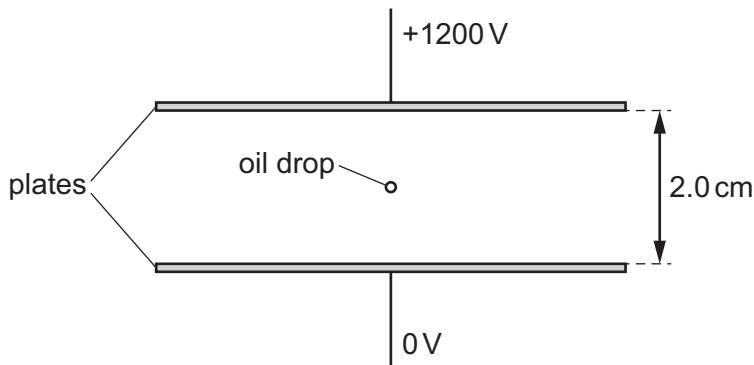


- 31** An oil drop of mass $2.6 \times 10^{-15} \text{ kg}$ and with a charge of $-4.8 \times 10^{-19} \text{ C}$ is in a vacuum between two horizontal plates. The plates have a separation of 2.0 cm and a potential difference (p.d.) between them of 1200 V , as shown.



Which statement describes the motion of the oil drop?

- A** It is stationary.
- B** It has a downward acceleration of 9.7 m s^{-2} .
- C** It has an upward acceleration of 1.3 m s^{-2} .
- D** It has an upward acceleration of 11 m s^{-2} .