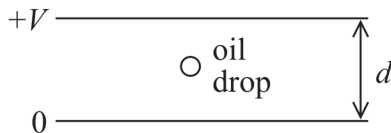**6** An oil drop with charge $q$ and mass $m$ remains stationary between two metal plates with a potential difference $V$ across them. The plates are separated by distance $d$.



What is the charge on the oil drop?

☒ **A** $\dfrac{md}{V}$

☒ **B** $\dfrac{mV}{d}$

☒ **C** $\dfrac{mgd}{V}$

☒ **D** $\dfrac{mgV}{d}$

**(Total for Question 6 = 1 mark)**