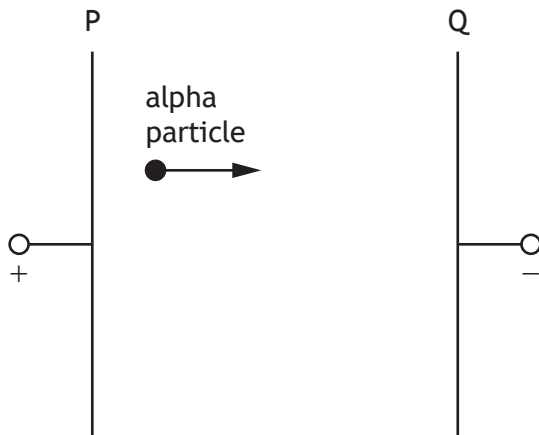


11. An alpha particle is accelerated in an electric field between metal plates P and Q.



The charge on the alpha particle is $3.2 \times 10^{-19} \text{ C}$.

The kinetic energy gained by the alpha particle while travelling from plate P to plate Q is $8.0 \times 10^{-16} \text{ J}$.

The potential difference across plates P and Q is

- A $2.6 \times 10^{-34} \text{ V}$
- B $2.0 \times 10^{-4} \text{ V}$
- C $4.0 \times 10^{-4} \text{ V}$
- D $2.5 \times 10^3 \text{ V}$
- E $5.0 \times 10^3 \text{ V}$.