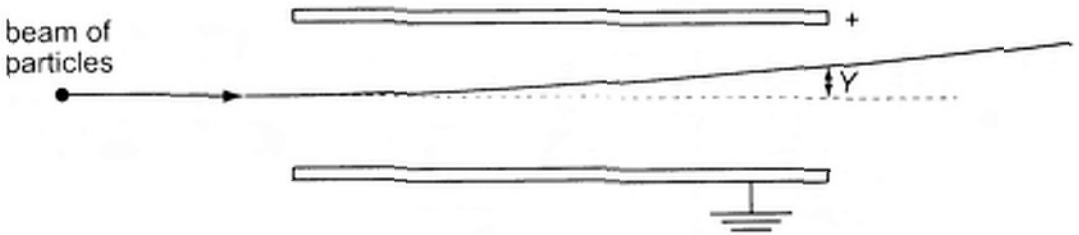
4 Two horizontal metal plates are situated in a vacuum. A potential difference is maintained between the plates as shown.




A beam of negatively-charged particles is horizontal when it enters the region between the plates. It is deflected as shown in the diagram.

The potential difference is then increased.

How does this affect the time $T$ that a particle in the beam spends between the plates and the vertical deflection $Y$ as shown on the diagram?

| | *effect on T* | *effect on Y* |
|---|---|---|
| **A** | *decreases* | *decreases* |
| **B** | no change | increases |
| **C** | no change | decreases |
| **D** | increases | increases |