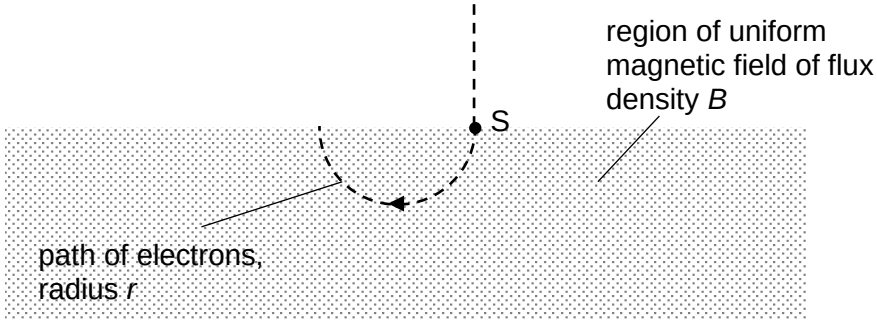
24 Electrons, each of mass m and charge q, are accelerated from rest in a vacuum through a potential difference V.

The accelerated electrons are then projected at point S into a region of uniform magnetic field of flux density B, as shown. The electrons move in a circular path of radius r.



Which of the following expressions represents the specific charge $\frac{q}{m}$ of the electrons?

A $\frac{V}{2B^2r}$ **B** $\frac{2V}{B^2r}$ **C** $\frac{V}{2B^2r^2}$ **D** $\frac{2V}{B^2r^2}$