

**38** Which conclusion can be drawn from the results of the experiment showing the scattering of  $\alpha$ -particles by gold foil?

- A** Electrons orbit the atomic nucleus in well-defined paths.
- B** Nuclei of different isotopes contain different numbers of neutrons.
- C** The atomic nucleus contains protons and neutrons.
- D** The nucleus is very small compared with the size of the atom.

**39** A nucleus  $\text{Q}$  has the notation  ${}^{\text{X}}\text{Q}$