

**38** What is a correct order of magnitude estimate for the diameter of a typical atomic nucleus?

A  $10^{-14}$  m

B  $10^{-18}$  m

C  $10^{-22}$  m

D  $10^{-26}$  m

**39** The decay of a nucleus of neptunium is accompanied by the emission of a  $\beta$ -particle and