

**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