

**28** A radiation detector is placed close to a radioactive source.

It is found that radiation from the source is detected only if the distance between the source and the detector is less than about 6 cm when in air.

Which types of radiation are being emitted by the source?

**A**  $\alpha$ -radiation and  $\beta$ -radiation

**B**  $\alpha$ -radiation only

**C**  $\beta$ -radiation only

**D**  $\gamma$ -radiation only

**29** In this question, use the following values for the masses of the proton, the neutron and the