

7 The α -particle scattering experiment provided evidence for the existence of a nuclear atom.

(a) State what could be deduced from the fact that

(i) most α -particles were deviated through angles of less than 10° ,

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..... [2]

(ii) a very small proportion of the α -particles was deviated through angles greater than 90° .

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..... [2]

- (b) Fig. 7.1 shows the path AB of an α -particle as it approaches and passes by a stationary gold nucleus.

For
Examiner's
Use

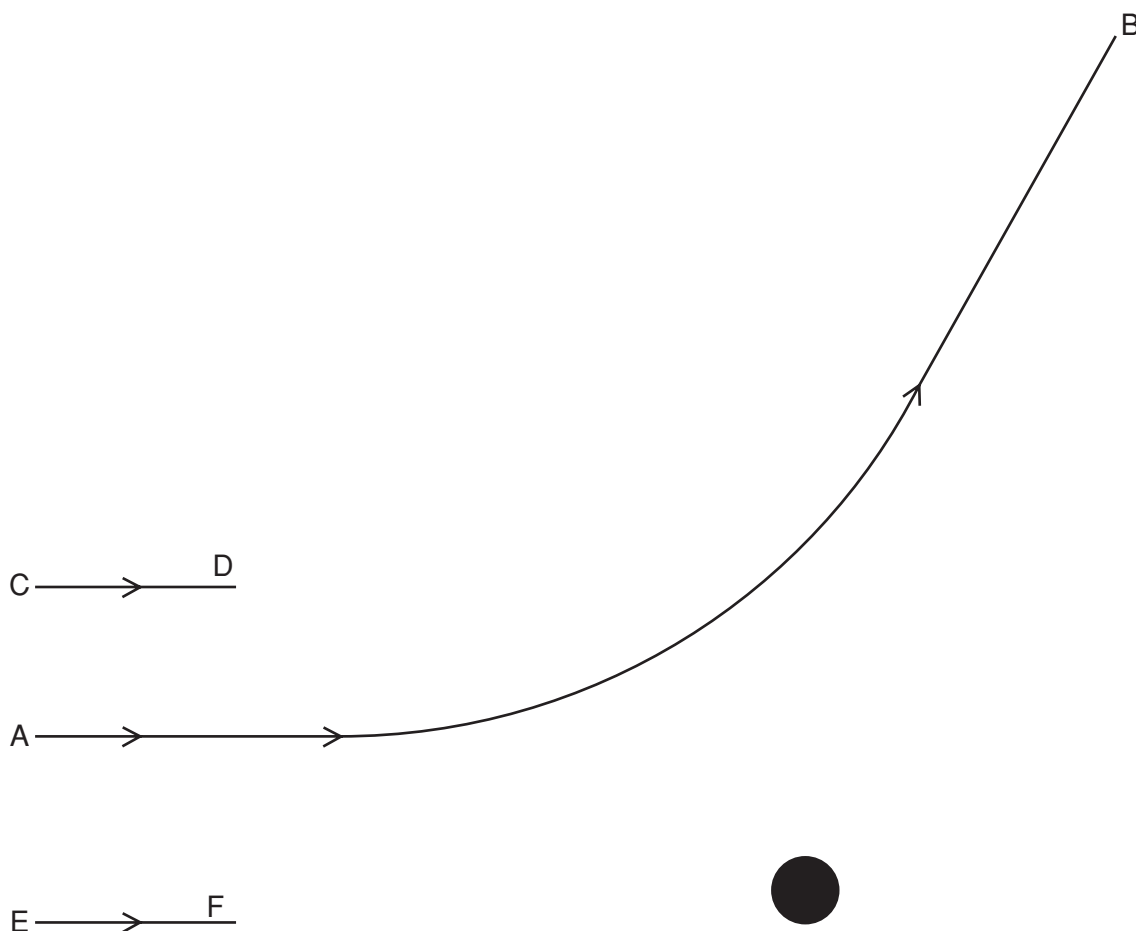


Fig. 7.1

On Fig. 7.1, draw lines (one in each case) to complete the paths of the α -particles passing by the gold nucleus when the initial direction of approach is

- (i) along line CD,
- (ii) along line EF.

[3]

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