Oxford Cambridge and RSA

GCSE Physics B (Twenty First Century Science)

J259/01 Breadth in Physics (Foundation Tier)

Question Set 17

Multiple Choice Questions

1 Mia researches different models of the atom.

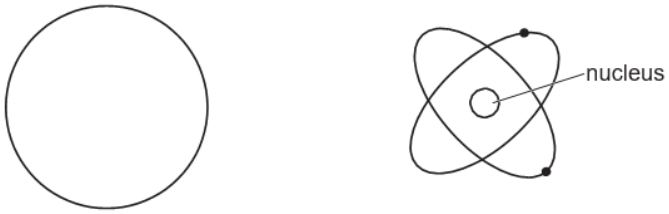
(a) What is the typical size of an atom?

Put a ring around the correct answer.

10^{-3} m 10^{-6} m 10^{-10} m 10^{-20} m

[1]

(b) Mia finds out about the models of atoms suggested by Dalton and Rutherford. She draws these diagrams.

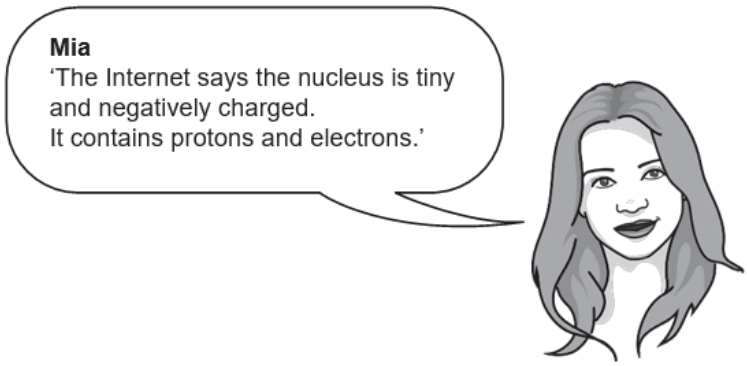


Dalton model **Rutherford model**

Describe some of the **evidence** that led scientists to believe the Rutherford model instead of the Dalton model.

[2]

(c) Mia finds out more information about the nucleus of the atom on the Internet.



There are some mistakes in this information.

Write down **two incorrect** parts of the information. **[2]**

(d) The nuclei of two atoms, carbon and neon, are represented below.

$^{12}_{6}C$ $^{20}_{10}Ne$

(i) What is the total **mass** of these two nuclei?

Put a ring around the correct answer.

12 – 6 10 + 6 20 + 10 20 + 12

[1]

(ii) What is the difference between the **charges** of these two nuclei?

Put a (ring) around the correct answer.

10 – 6 **12 – 6** **20 – 12** **20 – 10**

[1]

Total Marks for Question Set 17: 7