

Group 0

Question paper

Level	GCSE
Subject	Chemistry
Exam Board	CCEA
Topic	The Periodic Table
Sub-Topic	Group 0
Booklet	Question paper

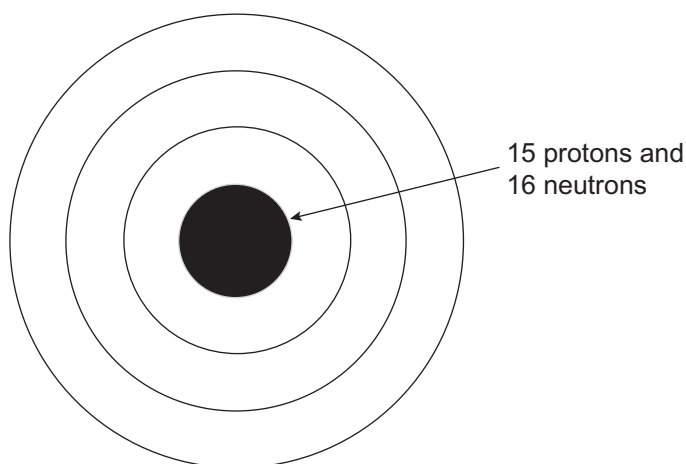
Time Allowed: 21 minutes

Score: /17

Percentage: /100

FOUNDATION TIER

- 1 The diagram below represents an atom of an element. The electrons are missing from the diagram.



- (a) (i) State the atomic number of this element.

_____ [1]

- (ii) State the mass number of this element.

_____ [1]

- (iii) Name the part of the atom in which the protons and neutrons are found.

_____ [1]

- (iv) Complete the diagram above to show the electronic configuration of the atom, using \times to represent an electron. [1]

(b) The atoms of the Group 8 elements have a full outer shell of electrons.

(i) What name is given to Group 8 of the Periodic Table?

_____ [1]

(ii) Complete the table below for some Group 8 elements.

Name of element	Electronic configuration of an atom of the element
	2, 8
	2
argon	

[3]

(c) The box below contains examples of chemical symbols and formulae.

CO ₂	NO ₃ ⁻	S ²⁻
SO ₄ ²⁻	Br ₂	Ne
O ²⁻	S	O ₂

From the box above select the formula or symbol for:

(i) a diatomic molecule _____ [1]

(ii) a molecular ion _____ [1]

(iii) the sulfide ion _____ [1]

- (d) Substances have different types of bonding and structure. A variety of substances is shown in the table below.

aluminium	carbon dioxide	diamond
graphite	iron	lithium oxide
potassium sulfide	iodine	water

Using **ONLY** the substances in the table, answer the following questions.

- (i) Name one substance in which the bonding is ionic.

_____ [1]

- (ii) Name one substance in which the structure is described as giant covalent.

_____ [1]

- (iii) Which substance has the lowest melting point?

_____ [1]

- (iv) Name one substance which will conduct electricity at room temperature.

_____ [1]

- (e) Diamond is an allotrope of which element?

_____ [1]