



**NATURAL SCIENCES GRADE 9
TERM 2 TOPIC TEST NO. 1**

Topic: Compounds

Marks: 20

Time: 20 minutes

Question 1

Various options are provided as possible answers to the following questions. Choose the correct answer and write only the letter (A – D) next to the question number (1.1 – 1.5), e.g., 1.6 D.

1.1 Which element has the atomic number 1?

- A. Helium
- B. Lithium
- C. Hydrogen
- D. Oxygen

(1)

1.2 What is the name of the chemical compound CaCO_3 ?

- A. Calcium carbonate
- B. Calcium oxide
- C. Calcium bicarbonate
- D. Calcium chloride

(1)

1.3 Given the chemical reaction: $\text{N}_2 + 3\text{H}_2 \rightarrow 2\text{NH}_3$

Which of the following is/ are the reactant(s)?

- A. NH_3 only
- B. N_2 and H_2
- C. N_2 and NH_3
- D. H_2 and NH_3

(1)

[3]

Question 2

The diagram below illustrates a part of the periodic table of elements. Some of the elements have been labelled as indicated.

B							L		G
	R								
			Q				W		
	A								Z

2.1 Refer to the diagram above to answer questions 2.1.1 to 2.1.3.

2.1.1 Which element in the diagram has the smallest atomic number?

(1)

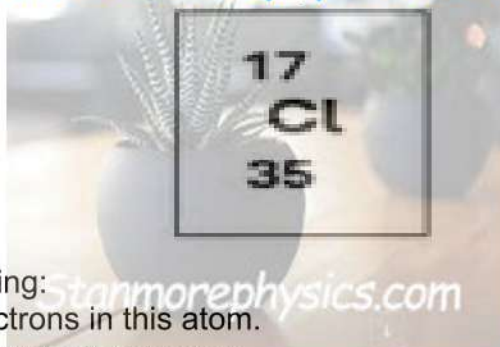
2.1.2 Which two metals in the diagram have similar chemical properties?

(1)

2.1.3 Which two non-metals in the diagram are found in the same period?

(1)

2.2 The symbol below represents an electrically neutral atom of element G.



Write down the following:

2.2.1 Number of electrons in this atom.

(1)

2.2.2 Number of neutrons in this atom.

(2)

2.2.3 The NAME of the compound that is formed when element G reacts with element B. (use the periodic table provided)

(1)

2.3 Consider: CO_2 and O_2

(2)

Explain why CO_2 is a compound but O_2 is not.

[9]

Question 3

Give names of the following compounds

3.1 SO_3

(2)

3.2 BaSO_4

(2)

3.3 Write the chemical formula for the following compounds:

3.3.1 Calcium chloride

(2)

3.3.2 Potassium Sulphate

(2)

[8]

Total Marks: 20



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**NATURAL SCIENCES GRADE 9
TERM 2 TOPIC TEST NO. 1 MEMORANDUM**

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Question 1

- 1.1 C✓
- 1.2 A✓
- 1.3 B✓

[3]

Question 2

- 2.1.1 Element B✓ (accept: Sodium/Na) (1)
- 2.1.2 R and A ✓ (accept: Calcium and Barium/Ca and Ba) (1)
- 2.1.3 L and G ✓ (accept: Phosphorus and Chlorine / P and Cl) (1)
- 2.2.1 17✓ (1)
- 2.2.2 Number of neutrons = $35 - 17$ ✓ = 18 ✓ (2)
- 2.2.3 Sodium chloride ✓ (1)
- 2.3 CO₂ is the compound because it consists of atoms from different elements. ✓ O₂ is an element because it consists of two atoms of the same element. ✓ (2)

[9]

Question 3

- 3.1 Sulfur trioxide✓✓ (2)
- 3.2 Barium Sulphate✓✓ (2)
- 3.3.1 CaCl₂✓✓ (2)
- 3.3.2 K₂SO₄✓✓ (2)

[8]

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