

Task 4 - Baseline assessment (periodic table on last page)

Name: _____ Form: _____

Tick how you completed the questions:

- Completed under exam conditions
- Completed 'open book'

Targets for improvement

- Writing formulae
- Naming compounds
- Atomic structure
- Electron configuration
- Word equations
- Balancing equations
- Definition of bonds

| Question | Marks |
|----------|-------|
| 1 | /4 |
| 2 | /5 |
| 3 | /3 |
| 4 | /4 |
| 5 | /5 |
| 6 | /15 |
| 7 | /6 |
| 8 | /6 |
| 9 | /4 |
| Total | /52 |
| % | |
| Grade | |

1 Give the formulae of the following compounds.

Copper(II) sulfate

Lithium chloride

Sodium hydroxide

Potassium nitrate

Strontium nitrate

Calcium hydroxide

Sodium carbonate

Aluminium fluoride

(4 marks)

2 Name the following compounds.

NH₄Cl _____

HNO₃ _____

C₂H₄ _____

C₃H₈ _____

CO₂ _____

C₂H₅OH _____

Fe₂O₃ _____

SO₂ _____

HBr _____

NH₃ _____

(5 marks)

3 Complete the table below.

| Particle | Where it is found | Charge | Mass |
|----------|-------------------|--------|------|
| | | 0 | |
| Proton | | | |
| | | | 0 |

(3 marks)

4 Deduce the relative formula mass of the following.

SO₂ _____

KBr _____

C₂H₆ _____

Ca(OH)₂ _____

C₂H₅OH _____

NaNO₃ _____

NH₄Cl _____

FeCl₃ _____

(4 marks)

5 State what is meant by the following terms.

a the mass number of an atom

(1 mark)

b relative atomic mass

(2 marks)

c isotopes

(2 marks)

6 For the following reactions, write:

a the word equation

(1 mark)

b the chemical equation complete with state symbols.

(2 marks)

Calcium carbonate and hydrochloric acid

Magnesium and sulfuric acid

Complete combustion of butane

Thermal decomposition of calcium carbonate

Sodium and water

(12 marks)

7 State what is meant by the following terms.

Ionic bonding

Covalent bonding

Metallic bonding

(3 marks)

8 Complete the table below. You may use the following words to help you.

ionic

covalent

giant

simple

metallic

| Substance | Formula | Type of bonding | Type of structure |
|--------------------|---------|-----------------|-------------------|
| Hydrogen sulfide | | | |
| Graphite | | | |
| Silicon dioxide | | | |
| Methane | | | |
| Calcium | | | |
| Magnesium chloride | | | |

(6 marks)

9 Explain why graphite can be used as a solid lubricant and also as electrodes.

(4 marks)

-End of assessment-

