

BHS YEAR 11 CHEMISTRY Assessable Topic Test

The Chemical Earth

Name _____

1. Which of the following groups contains pure substances only?

- A) plastic, rubber, glass
- B) cement, paper, brass
- C) sugar, steam, salt
- D) coal, butter, milk

1m

2. Which of the following is true for compounds and not true for elements?

- A) Compounds can chemically combine with other substances
- B) Compounds can be decomposed
- C) Compounds are not very reactive
- D) Compounds are pure substances

1m

3. Name: (a) a metal which is a liquid at 25°C

(b) a non-metal which is a solid at 25°C

(c) an element which does not form compounds

(d) an active metal which reacts with water

(e) the most abundant element in the Earth's crust

5m

4. Define: (a) atomic number _____

(b) atomic mass _____

(c) molecule _____

(d) ion _____

4m

5. Complete the table below giving differences between metals and non-metals.

Metals	Non-metals
	Do not conduct heat and electricity
Usually have high melting and boiling points	
	Are usually dull in appearance.

3m

6. Write the formulae, clearly showing the valencies for the following ions:

potassium _____

sulfate _____

barium _____

ammonium _____

fluoride _____

carbonate _____

6m

7. Draw the following to show protons, neutrons and electrons in:

An atom of magnesium

An ion of magnesium

An atom of chlorine

An ion of chlorine

8m

8. Name the type of, and describe the forces involved in, bonding in the following:

(a) solid copper _____ Description _____

3m

(b) sodium chloride crystals _____ Description _____

3m

(c) oxygen gas _____ Description _____

3m

(d) diamond (pure carbon) _____ Description _____

3m

9. Draw the electron dot structure of ammonia gas, NH_3 .

4m

10. Complete the word equations and give fully balanced symbol reactions for the following:

(a) magnesium + hydrochloric acid \rightarrow _____ + _____

(b) sodium hydroxide + sulfuric acid \rightarrow _____ + _____

(c) copper carbonate heated \rightarrow _____ + _____

(d) magnesium + oxygen \rightarrow _____

(e) sodium metal + water \rightarrow _____ + _____

(f) calcium carbonate + sulfuric acid \rightarrow _____ + _____
+ _____

24m

11. What two elements are in hydrocarbons? _____

Name the following: C_3H_8 _____

C_6H_{14} _____

Draw a diagram of ethyne:

5m