

MINISTRY OF EDUCATION, HERITAGE AND ARTS
YEAR 12 CHEMISTRY
REVISION WORKSHEET 2

Write the answers to the following questions in your exercise/activity books.

Strand 2: Investigating Matter

1. State an example of a/an: **(3 marks)**
 - (i) non-polar covalent bond
 - (ii) polar covalent bond
 - (iii) ionic bond

2. Explain why copper metal can conduct electricity but solid sodium chloride cannot. **(2 marks)**

3. Using an illustration, describe the hydration of potassium chloride (KCl) salt in water. **(2 marks)**

Strand 3: Reactions

1. Determine the molar mass of the following compounds:
 - (i) Potassium chloride (KCl) **(2 marks)**
 - (ii) Sodium carbonate (Na_2CO_3) **(2 marks)**

2. Determine the mass of 0.01 mol of sodium carbonate. **(1 mark)**

3. Determine the mass of carbon dioxide produced when 25.0 g of methane gas is burnt. **(3 marks)**

4. Calculate the empirical formula of a substance with the following percentage compositions: 1.6% hydrogen, 22.2% nitrogen, 76.2 % oxygen. **(3 marks)**

5. Define **Water of Crystallisation**. **(1 mark)**

6. Strong heating of 6.72 g of hydrated magnesium sulphate ($\text{MgSO}_4 \cdot \text{XH}_2\text{O}$) produced 4.12 g of anhydrous magnesium sulphate.
 - (i) Calculate the value of **X** . **(3 marks)**

 - (ii) Write the formula of the hydrated salt. **(1 mark)**

The End