

1. Define the terms...

- a. Acid
- b. Base
- c. Salt

2. Explain what is meant by...

- a. Neutralisation
- b. pH
- c. Strong acid
- d. Weak acid

3. Complete the following reactions:

- a. Nitric acid + copper oxide →
- b. Sulfuric acid + sodium hydroxide →
- c. Hydrochloric acid + magnesium carbonate →

d. Nitric acid + magnesium →

4. Work out the formula of...

- a. Copper sulfate
- b. Sodium nitrate
- c. Calcium chloride

5. Write balanced symbol equations for the reaction between...

- a. Sulfuric acid and magnesium carbonate
- b. Nitric acid and sodium oxide
- c. Calcium and nitric acid
- d. Potassium carbonate and hydrochloric acid.

6. Describe in detail how a sample of magnesium sulfate could be made from magnesium carbonate. Include...

- a. The point of filtration

b. The reason for the temperature

- c. An explanation of what it means for something to be in excess
- d. How larger and smaller crystals could be obtained.

7. What is being oxidised, and what is being reduced in these reactions?

- a. $\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$
- b. $\text{Ca} + \text{H}_2\text{SO}_4 \rightarrow \text{CaSO}_4 + \text{H}_2$
- c. $\text{Zn} + 2\text{HNO}_3 \rightarrow \text{Zn}(\text{NO}_3)_2 + \text{H}_2$

8. Explain how pH is changed by increasing the concentration of H^+ ions.

9. Explain why concentrated weak ethanoic acid has a lower pH than very dilute strong hydrochloric acid.

The formulae of acids, bases & salts

The key reactions of acids and bases

Acids

How to name salts

Concentrated vs Dilute

pH scale

Neutralisation

Strong vs Weak