Year 10 Chemistry Revision.

Reactions between acidic and basic substances – Neutralization.

You will be given the following summary but will need to recognise and substitute the formulae and balance the equation.

*1) Acid + Metal hydroxide produces Salt + Water.*

eg Nitric acid + sodium hydroxide produces sodium nitrate + water.

HNO3 + NaOH ----- NaNO3 +H2O

This is already balanced.

The sodium and the nitrate have combined to form the salt while the hydrogen from the acid and the hydroxide have formed the water

2) *Acid + metal oxide produces salt and water*.

e.g. hydrochloric acid + sodium oxide produces sodium chloride + water.

HCl + Na2O ------------ NaCl + H2O

This needs balancing so we put the coefficients that are necessary in front.

**2**HCl + Na2O ------------ **2**NaCl + H2O

3) *Acid and Carbonate produces salt + water + carbon dioxide*

eg Hydrochloric acid + calcium carbonate produces calcium chloride+ water+carbon dioxide.

HCl + CaCO3 ------------CaCl2 + H2O + CO2

This needs balancing

**2**HCl + CaCO3 ------------CaCl2 + H2O + CO2

4) *Acid and Hydrogen carbonate produces salt + water + carbon dioxide.*

sulphuric acid and potassium hydrogen carbonate form potassium sulphate + water + carbon dioxide.

H2SO4 + KHCO3 -------------- K2SO4 + H2O + CO2

Balance it

H2SO4 + **2**KHCO3 -------------- K2SO4 + **2**H2O + **2**CO2

*5) An acid and a metal produce a salt and hydrogen gas*

hydrochloric acid + calcium produce calcium chloride + hydrogen gas

HCl + Ca ------------ CaCl2 + H2

This needs balancing

**2**HCl + Ca ------------ CaCl2 + H2

Try these.

a. Nitric acid and magnesium hydroxide produce magnesium nitrate and water.

b. sulphuric acid and zinc oxide produce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. hydrochloric acid and calcium carbonate produce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d. phosphoric acid and sodium hydrogen carbonate produce\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e. Nitric acid and calcium produce\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Distinguish between covalent, ionic and metallic bonds.

Be able to draw diagrams to show covalent and ionic bonds.

Write formulae.

Write the name of compounds when given formulae.

Draw a diagram showing electron configuration.

Explain what is meant by a precipitate.

Given a solubilty table could you work out what chemicals would produce a precipitate?

Basically this test is covering the same stuff as the last one except for writing and balancing equations.