10.2 Exercise 5 – formulae, equations and ionic equations

A: Deduce the formulae of the following compounds:

1.	Sodium chloride	2.	Aluminium chloride
3.	Ammonium sulphate	4.	Magnesium nitrate
5.	Magnesium oxide	6.	Copper (II) hydroxide
7.	Aluminium oxide	8.	Sodium carbonate
9.	Copper (I) oxide	10.	Copper (II) oxide
11.	Aluminium sulphate	12.	Lead (II) sulphide
13.	Lead (IV) oxide	14.	Calcium nitride

B: Write out the full stoichiometric and ionic equations for the following reactions:

1. When aqueous magnesium chloride is added to aqueous silver nitrate, a white precipitate is formed.

2. When aqueous sodium hydroxide is added to aqueous aluminium sulphate, a white precipitate is formed.

3. When aqueous barium chloride is treated with dilute sodium sulphate, a white precipitate is formed.

4. Dilute sulphuric acid is neutralised by sodium hydroxide solution.

5. A pale blue precipitate is formed on slow addition of potassium hydroxide solution to copper (II) sulphate solution.

6. A white precipitate is formed when dilute hydrochloric acid is added to a solution of lead (II) nitrate.

7. When dilute calcium chloride is mixed with sulphuric acid, a white precipitate is formed.

8. Calcium carbonate dissolves in dilute hydrochloric acid with the evolution of a colourless gas.

9. When dilute sulphuric acid is added to sodium carbonate solution, a gas is given off.

10. When aqueous calcium chloride is mixed with aqueous sodium carbonate, a white precipitate is formed.

11. Ammonia gas dissolves in dilute nitric acid.