Year 12 Chemistry Ionic Equations Quiz

Write balanced ionic equations and give observations for the following reactions.

1.	A copper nitrate solution is added to a solution of sodium hydroxide
2.	Solid silver chloride is added to dilute nitric acid
3.	Zinc metal is added to dilute acetic acid solution.
4.	Aqueous lead II nitrate is added to aqueous sodium chloride.
5.	Dilute sulfuric acid is added to dilute lithium hydroxide.
6.	Solid sodium carbonate is added to hydrochloric acid

Tyson 2010 1

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Write balanced ionic equations and give observations for the following reactions.

1. A copper nitrate solution is added to a solution of sodium hydroxide

$$Cu^{2+}(aq) + 2OH^{-}(aq) \rightarrow Cu(OH)_2(s)$$

A pale blue solution is added to a colourless solution and a pale blue solid is formed. The blue solution fades in colour.

2. Solid silver chloride is added to dilute nitric acid

No reaction

3. Zinc metal is added to dilute acetic acid solution.

$$Zn(s) + 2CH_3COOH(aq) \rightarrow H_2(g) + Zn^{2+}(aq) + 2CH_3COO^{-}(aq)$$
 A silver/grey solid is added to a colourless solution and a colourless, odourless gas is formed in a colourless solution.

4. Aqueous lead II nitrate is added to aqueous sodium chloride.

$$Pb^{2+}(aq) + 2Cl^{-}(aq) \rightarrow PbCl_{2}(s)$$

Two colourless solutions mixed and a white solid formed.

5. Dilute sulfuric acid is added to dilute lithium hydroxide.

$$H^+(aq) + OH^-(aq) \rightarrow H_2O(l)$$

Two colourless solutions mixed and a colourless solution is formed.

6. Solid sodium carbonate is added to hydrochloric acid

$$Na_2CO_3(s) + 2H^+(aq) \rightarrow CO_2(g) + H_2O(g) + 2Na^+(aq)$$

A white solid is added to a colourless solution and a colourless, odourless gas is formed in a colourless solution.

Tyson 2010 2