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**Grade – X**

**1) A Solution of a substance ‘X’ is used for white washing**

**(i) Name the substance ‘X’ and write its formula.**

**(ii) Write the reaction of substance ‘X’ named in (i) above with water.**

**2) A Shiny brown coloured element ‘X’ on heating in air becomes black in colour. Name the element ‘X’ and the black coloured compound formed.**

**3) A Substance of X, which is an oxide of a group 2 element, is used intensively in the cement industry. This element is present in bones also. On treatment with water it forms a solution which turns red litmus blue. Identify X and also write the chemical reactions involved.**

**4) A magnesium ribbon is burnt on oxygen to give a white compound X accompanied by emission of light. If the burning ribbon is now placed in an atmosphere of nitrogen, it continues to burnt and forms a compound Y.**

**(a) Write the chemical formulae of X and Y.**

**(b) Write a balanced chemical equation, when X is dissolved in water.**

**5) On heating blue coloured powder of copper (II) nitrate in a boiling tube, copper oxide (black), Oxygen gas and a brown gas X is formed**

**(a) Write a balanced chemical equation of the reaction.**

**(b) Identify the brown gas X evolved.**

**(c) Identify the type of reaction.**

**(d) What could be the pH range of aqueous solution of the gas X?**

**6) What happens when a piece of**

**i) zinc metal is added to copper sulphate solution?**

**ii) aluminium metal is added to dilute hydrochloric acid?**

**iii)silver metal is added to copper sulphate solution?**

**7)What happens when zinc granules are treated with dilute solution of sulphuric acid, hydrochloric acid, nitric acid, sodium chloride, and sodium hydroxide, also write the chemical equations if reaction occurs.**

**8) On adding a drop of barium chloride solution to an aqueous solution of sodium sulphite, white precipitate is obtained.**

**i) Write a balanced chemical equation of the reaction involved**

**ii) What other name can be given to this precipitation reaction?**

**iii) On adding dilute hydrochloric acid to the reaction mixture, white precipitate disappears. Why?**

**9) Write a balanced chemical equation for each of the following reaction and also classify them.**

**i) Iron oxide on heating with carbon monoxide gas reacts to form solid iron and liberates carbon-di-oxide gas.**

**ii) Hydrogen sulphide gas reacts with oxygen gas gas to form solid sulphur and liquid water.**