Chemical Reaction and equation

1. A compound 'X' is used for drinking, has pH = 7.Its acidified solution undergoes decomposition in presence of electricity to produce gases 'Y' and 'Z' The volume of Y is double than Z. Y is highly combustible whereas Z is supporter of combustion .Identify X, Y & Z and write the chemical reactions involved.

2. An aqueous solution of metal nitrate P reacts with sodium bromide solution to form yellow ppt of compound Q which is used in photography. Q on exposure to sunlight undergoes decomposition reaction to form metal present in P along with reddish brown gas. Identify P & Q. Write the chemical reaction & type of chemical reaction.

3. Bhawana took a pale green substance A in a test tube and heated it over the flame of a burner. A brown colored residue B was formed along with evolution of two gases with burning smell of sulphur. Identify A & B. Write the chemical reaction involved.

4. A student took 2-3 g of a substance X in a glass beaker & poured water over it slowly. He observed bubbles along with hissing noise. The beaker becomes quite hot. Identify X. What type of reaction is it?

5. A reddish brown vessel developed a green colored solid X when left open in air for a long time. When reacted with dil H_2SO_4 , it forms a blue colored solution along with brisk effervescence due to colourless and odourless gas Z. X decomposes to form black colored oxide Y of a reddish brown metal along with gas Z, Identify X, Y, & Z.

6. A substance X used for coating iron articles is added to a blue solution of a reddish brown metal Y, the color of the solution gets discharged Identify X and Y & also the type of reaction.

7. A student has mixed the solutions of lead (II) nitrate and potassium iodide.

(i) What was the colour of the precipitate formed? Can you name the compound precipitated?

(ii) Write the balanced chemical equation for this reaction. (iii) What type of reaction is it?

8. Observe the following activity & answer the questions

9. A reddish brown metal X when heated in presence of oxygen forms a black compound Y which is basic in nature when heated with hydrogen gas gives back X. Identify X & Y. Write the chemical reaction between Y & H_2. Identify the substance being oxidized & reduced.

10. Name the type of reaction seen in the diagram below. Write the reaction for the same.

11. A student burnt a metal A found in the form of ribbon. The ribbon burnt with a dazzling flame & a white powder B is formed which is basic in nature. Identify A and B. Write the balanced chemical equation.

12. A student dropped few pieces of marble in dilute HCl contained in a test tube. The gas evolved was passed through lime water. What change would be observed in lime water? Write chemical reactions for both the changes observed.

13. Astha has been collecting silver coins and copper coins. One day she observed a black coating on silver coins and a green coating on copper coins. Which chemical phenomenon is responsible. For these coatings? Write the chemical name of black and green coatings

14. When happen when concentrated sulphuric acid is added to sugar?

15. What happen when a small piece (pea size) of sodium is placed in cold water?

16. Why magnesium ribbon cleaned before burning?

17. During electrolysis of water gas collected in one test tube is double than other why?