**PART 1**

**CHLORINE AND ITS COMPOUNDS**

1. Using examples, briefly explain how chlorine can act as an oxidizing agent.
2. State two applications of sodium chloride to man
3. State what is observed when concentrated sulphuric acid is added to sodium chloride dropwise until in excess.
4. At room temperature, a few drops of concentrated sulphuric acid was added to sodium chloride crystals. Write equation of reaction to represent the reaction between concentrated sulhuric acid and sodium chloride.
5. Briefly explain what can be observed when a dry litmus paper is added to
6. Mixture of hydrogen chloride and water
7. Mixture of hydrogen chloride and water
8. Dry hydrogen chloride
9. Liquid hydrogen chloride
10. Writing equation of reaction, state your observation when hydrogen chloride gas is
11. Mixed with ammonia
12. Passed through a mixture of silver nitrate and dilute nitric acid solution.
13. Briefly explain an experiment that can be used to prepare hydrochloric acid in a laboratory.
14. Write an ionic equation to represent oxidation of chloride ion by manganese (IV) oxide.
15. Briefly explain the reaction of sodium carbonate with
16. Hydrogen chloride gas when dissolved in water
17. Hydrogen chloride gas when dissolved in carbondisulphide
18. Hydrochloric acid on large scale is made by dissolving hydrogen chloride gas in water. The hydrogen chloride gas is formed by burning hydrogen in chlorine. State the major sources of hydrogen and chlorine for the production of hydrogen chloride gas.
19. Briefly explain what is observed when to aqueous solution of sodium chloride the following is added.
20. Silver nitrate solution followed by dilute nitric acid solution dropwise until in excess.
21. Silver nitrate solution followed by dilute ammonia solution dropwise until in excess.
22. Concentrated sulphuric acid solution and warm
23. Briefly explain what is observed when to the mixture of magnesium chloride and manganese dioxide a few drops of centrated sulohuric acid is added and then warmed gently.
24. Briefly explain what is observed when chlorine is dissolved in water.
25. In presence of sunlight
26. In absence of sunlight
27. Briefly explain how chlorine gas can be prepared from the laboratory using;

a)Potassium manganate(VII)

b) Manganese (IV) oxide

c) Lead(IV) oxide

d) calcium chlorite

e) sodium chloride

1. Briefly explain how chorine can work as a bleaching agent.
2. Briefly explain how chlorine reacts with;
3. Ammonia
4. Hydrogen sulphide
5. Magnesium
6. Hydrogen gas
7. Iron
8. Phosphorus
9. Sulphurous acid
10. Sodium sulphite
11. Potassium iodide solution
12. Sodium hydroxide solution
13. Ethene
14. Calcium hydroxide solution
15. Briefly describe how iron(II) chloride can be prepared.
16. State five applications of chlorine gas
17. Briefly explain how chlorine gas can be made from;
18. Molten sodium chloride
19. Brine

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