Exercise-I

A. Very Short Answer Type Questions

Q.1 Is an aqueous solution of sodium carbonate acidic or basic?

Q.2 Name the compound used for softening of hard water.

Q.3 Name of the substance which on being treated with chlorine yields bleaching powder.

Q.4 Mention the property of sodium carbonate that makes it useful for dry soap powder.

Q.5 What is the chemical name of bleaching powder.

Q.6 Name one compound which shows efflorescence.

Q.7 Which gas will be evolved if sodium hydrogencarbonate is heated with tartaric acid?

Q.8 Name the constituents of baking powder.

Q.9 What is the commercial name of calcium sulphate hemi-hydrate?

Q.10 Name the real bleaching agent present in bleaching powder.

Q.11 Which compound of calcium is used for disinfecting drinking water.

B. Short Answer Type Questions

Q.12 What happens when sodium carbonate is reacted with dilute HCl?

Q.13 What happens when bleaching powder is exposed to CO_2?

Q.14 What happen when bleaching powder is treated with excess dilute sulphuric acid?

Q.15 What is the action of bleaching powder on ammonia?

Q.16 List three important use of bleaching powder.

C. Long Answer Type Questions

Q.17 How is Plaster of Paris obtained ? What reaction is involved in the setting of Plaster of Paris?

D. Fill in the Blanks

Q.18 Chemical formula of washing soda is .....

Q.19 ..... acid is present in baking powder.

Q.20 Bleaching powder is prepared by passing .....gas through slaked lime.

E. True /False Type Questions

Q.21 Detergents are derivatives of long chain fatty acids.

Q.22 Miscelles are precipitates formed with soap and hard water.

Q.23 Bleaching by chlorine is due to reduction

Q.24 Chlorine is a good bleaching agent.

Exercise-II

Q.1 You have two solutions, A and B. The pH of solution A is 6 and pH of solution B is 8. Which solution has more hydrogen ion concentration ? Which of this is acidic and which one is basic ?

Q.2 Name the substance which on treatment with chlorine yields bleaching powder.

Q.3 Name the sodium compound which is used for softening hard water.

Q.4 What will happen if a solution of sodium hydrocarbonate is heated ? Give the equation of the reaction involved.

Q.5 Write an equation to show the reaction between Plaster of Paris and water.

Q.6 Compounds such as alcohols and glucose also contain hydrogen but are not categorized such as acids. Describe an activity to prove it.

Q.7 Plaster of Paris should be stored in a moisture-proof container. Explain why ?

Q.8 Give two important used of washing soda and baking soda.

Q.9 Answer the following :

(i) Why is Plaster of Paris written as $CaSO_4$. 1/2 H_2O ? How is it possible to have half a water molecule attached to $CaSO_4$?

(ii) Why is sodium Hydrogen carbonate an essential ingredient in antacids ?

(iii) When electricity is passed through an aqueous solution of sodium chloride, three products are obtained. Why is the process called chlor-alkali ?

Q.10 Baking soda is used in small amount in making bread and cake. It helps to make these soft and spongy. An aqueous solution of baking soda turns red litmus blue. It is also used in soda acid fire extinguisher.

Use this information to answer the following questions :

(i) How does Baking soda help to make cakes and bread soft and spongy ?

(ii) How does it help in extinguishing fire ?

(iii) Is the pH value of baking soda solution lesser than or greater than 7 ?

Q.11 How sodium carbonate can be obtained ?

Q.12 What is soda ash ?

Q.13 Which is more soluble, baking soda or washing soda ?

Q.14 Name two compounds produced by Solvay process or ammonia-soda process.

Q.15 **(i)** Name the products formed when sodium hydrogen carbonate is heated.

(ii) Write the chemical equation for the reaction involved in the above.

Q.16 What is chlor-alkali process ? Why is it called so ?

Q.17 Name the four chemicals which can be obtained from common salt.

Q.18 How is bleaching powder prepared ?

Q.19 Write the chemical formula for washing soda. How can it be obtained from baking soda ? Describe a household application of washing soda.

Q.20 Beside baking soda, what other ingredient does baking powder contain ? What is the role of baking powder in making of bread and cakes ?

Q.21 A yellowish-white powder which smells of chlorine readily loses chlorine on exposure to air, it is also used for bleaching cotton and for disinfecting water.

(i) Identify the yellowish white powder compound.

(ii) Write balanced chemical equation representing the reaction involved in its manufacture.

Q.22 How is Plaster of Paris prepared ? Why is Plaster of Paris stored in an air-tight container ?

Q.23 Write the name and chemical formula of the calcium compound used for disinfecting drinking water. How is this compound manufactured ?

Q.24 A compound which is prepared from gypsum has the property of hardening when mixed with a proper quantity of water. Identify the compound. Write the chemical equation for its preparation. For what purpose is it used in hospitals ?

Q.25 A housewife found that the cake prepared by her is hard and small in size. Which ingredient has show forgotten to add that would have made the cake fluffy ? Give reason.