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Date: \_\_ / \_\_ / \_\_\_\_

Name: \_\_\_\_\_

Max Marks: 25

**Section- A (One Marks Each)**

- 1 Equal volume of hydrochloric acid and sodium hydroxide solutions of the same concentration are mixed and the pH of the resulting solution is checked with a Ph paper. What would be the colour obtained?
- 2 How will the Ph of a solution of HCl in water be affected if we add distilled water to it?
- 3 What should be the range of Ph of saliva in a healthy mouth?
- 4 Which gas will be liberated if a piece of zinc is put in slaked lime?
- 5 What would be the effect of metallic oxides on litmus solution?

**Section-B (Two Marks Each)**

- 6 How is baking powder different from baking soda? What are the roles of the ingredients of baking powder?
- 7 What happens when nitric acid is added to egg shell?
- 8 How would you distinguish between baking powder and washing soda by heating?
- 9 When zinc metal is treated with a dilute solution of a strong acid, a gas is evolved, which is utilized in the hydrogenation of oil. Name the gas evolved. Write the chemical equation of the reaction involved and also write a test to detect the gas formed.

**Section-C (Three Marks Each)**

- 10 In one of the industrial processes used for manufacture of sodium hydroxide, a gas X is formed as by product, The gas X reacts with lime water to give a compound Y, which is used as a bleaching agent in chemical industry. Identify X and Y giving the chemical equation of the reactions involved.
- 11 A metal carbonate X on reacting with an acid gives a gas, which when passed through a solution Y gives the carbonate back. On the other hand, a gas G that is obtained at anode during electrolysis of brine is passed on dry Y it gives a compound Z, used for disinfecting drinking water. Identity X, Y, G and Z.
- 12 What is chlor alkali process? Discuss in detail with diagram.
- 13 A sulphate salt of group 2 element of the periodic table is a white, soft substance, which can be moulded into different shapes by making its dough. When this compound is left in open for sometime, it becomes a solid mass and cannot be used for moulding purposes. Identify the sulphate salt and why does it show such a behavior? Give the reaction involved.