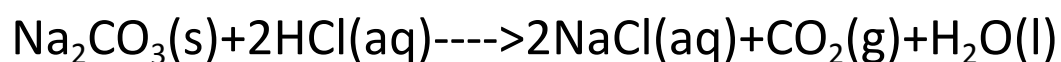


SHORT QUESTION ANSWER

Q1. Write a balanced chemical equation for the reaction between sodium carbonate and hydrochloric acid indicating the physical state of the reactants and product?

Ans:



Q2. During summer season a milkman usually adds a small amount of backing soda to fresh milk, give reason.

Ans: A milkman adds a very small amount of backing soda so as to prevent spoilage of milk. It leads to change in the pH which does not allow bacteria and enzymes to act and milk does not become sour due to fermentation.

Q3. Why is potassium iodide added into common salt to use it as table salt?

Ans: The iodide present in the salt prevent thyroid disorders.

Q4. Which bases are called alkalies ? Give an examples of an alkali?

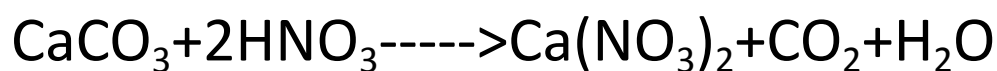
Ans: Soluble bases are called alkalies. Example:- Sodium hydroxide

Q5. How do H^+ ions exist in water?

Ans: H^+ ions in water combine with water H_2O molecules and exist as H_3O^+ ion, called hydronium ion.

Q6. What happens when nitric acid is added to egg shell?

Ans: Egg shell is made of calcium carbonate. When nitric acid is added to egg shell calcium nitrate, carbon di oxide and water are formed.



Q7. What is acid rain?

Ans: Rain water having pH less than 5.6, is called acid rain.

Q8. Acidic and basic solution in water conduct electricity, why?

Ans: Because they produce hydrogen and hydroxide ions respectively?

Q9. What would be the colour of litmus in a solution of sodium carbonate?

Ans: Red litmus will change to blue in sodium carbonate solution.

Q10. There are two jars 'A' and 'B' containing the food materials. Food in jars 'A' is pickled with acetic acid while 'B' is not. Food of which jar will state first? Explain . Name two synthetic indicators which are used to test acids and bases?

Ans: Food in jar 'B' will state first because it will undergo oxidation and will also be attacked by micro-organisms.

synthetic indicators: Phenolphthalein, methyl orange.

Q11. Name the acid present in the following;

1. Tomato: Oxalic acid
2. Vinegar: Acetic acid
3. Tamarind: Tartaric acid

Q12. Define the olfactory indicators? Name two substances which can be used as olfactory indicators?

Ans: Those substances whose smell (odour) changes in acidic or basic solution are called olfactory indicators. Ex. Onion and Vanilla

Q13. What is the chemical name and chemical formula of baking soda?

Ans:

Chemical name: sodium hydrogen carbonate or sodium bicarbonate

Chemical formula: NaHCO_3

Q14. What happens to the crystals of washing soda when exposed to air?

Ans: They undergo efflorescence. As a result, they change to washing powder ($\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$)

Q15. Which is a stronger acid? A solution with pH 5 and a solution with pH 2?

Ans: A solution with pH 2 is a stronger acid. In general, the lesser the pH, the more will be the acidic nature of the solution.

Q16. What is the nature of NaHCO_3 ?

Ans: It is an acidic salt since it has still one replaceable hydrogen atom.

Q17. Name the gas evolved when dilute HCl reacts with sodium hydrogen carbonates. How is it recognised?

Ans: The gas evolved is carbon di oxide. When the gas is bubbled through lime water, it becomes milky.

Q18. Name the natural sources of each of the following:

1. Oxalic acid--- Tomatoes
2. Lactic acid---- Milk
3. Tartaric acid---Tamarind
4. Citric acid----- Lemon and oranges

Q19. Why does an aqueous solutions of alcohol fail to conduct electric current?

Ans: An aqueous solution of alcohol fails to conduct electric current since it does not release H^+ ions in solution.

Q20. Why does dry HCl gas not change the colour of the dry litmus paper?

Ans: Since HCl gas gives H^+ ions only with H_2O molecules to behave as an acid. The dry HCl does not change the colour of dry litmus paper as it needs moisture or water for its acidic action.