

## SUMMER VACATION HOMEWORK( Class 10)

### Chemistry

1. Identify any ten chemical reactions taking place around you and try to write the corresponding balanced chemical equations yourself.
2. Make a table for the nature of the various samples like milk, Soap water mixture, common salt solution, lemon juice, tap water .baking soda solution etc by using natural indicators like red cabbage juice ,turmeric etc.  
( Note: Surf the internet to learn how to make natural indicators at home)
3. Make mind maps for ch 1 and ch 2 in your notebooks.
4. Why does an aqueous solution of alcohol fail to conduct electricity?
5. Which of these will have higher concentration of H<sup>+</sup> ions?

1M HCl. or 1M CH<sub>3</sub>COOH

6. How is chloride of lime different from Calcium Chloride?
7. Does Tartaric acid help in making cake or bread fluffy? Explain.
8. Dry ammonia gas has no action on litmus paper but a solution of ammonia in water turns red litmus paper blue. Why is it so?
9. A chemical compound having smell of chlorine is used to remove yellowishness of clothes in laundries. Name the compound and write down its preparation.
10. A knife which is used to cut a fruit was immediately dipped in water containing few drops of blue litmus solution. If the colour of the solution changes to red, what inference could be drawn about the nature of the fruit?
11. Why are some salts known as hydrated salts?
12. What is tooth enamel chemically? State the conditions when it starts corroding.
13. A dry pellet of a common base B when kept open absorbs moisture and turns sticky. The compound is also prepared by Chlor Alkali process. Identify B. What happens when B reacts with hydrochloric acid?
14. What happens when egg shell is placed in concentrated nitric acid in a beaker?
15. If at home your mother uses baking soda for making cake.

(a) how will it affect the taste of cake and why? what is the role of tartaric acid added to baking soda

(b) how can baking soda be converted into baking powder?

(c) what is the role of tartaric acid added to baking soda?

16. What is the colour of litmus in a solution of Ammonium hydroxide?

17. Two solutions A and B have p H values of 5 and 8 respectively. Which solution will be basic in nature?

18. What is observed when SO<sub>2</sub> is passed through (a) water(b) lime water

Also write chemical equations for the reactions that take place.

19. What is baking powder? How does it make the cake soft and spongy?

20. A calcium compound which is yellowish white powder is used as a disinfectant and also in textile industry. Name the compound. Which gas is released when this compound is left exposed to air?

21. Name the gas that is liberated when a dilute acid reacts with a metal .What happens when a burning candle is brought near the gas?

22. 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?

23. Why should water be never added dropwise to concentrated Sulphuric acid?
24. Name the products formed in each case-(a) hydrochloric acid reacts with caustic soda.
- (b) Granulated Zinc reacts with caustic soda.
- (c) carbon dioxide is passed into lime water.
25. Why does hydrogen chloride gas not show acidic behavior?
26. What is meant by water of crystallization? Describe an activity to show that blue COPPER Sulphate crystals contain water of crystallization.