



# Brain International School

Vikas Puri, New Delhi

## ASSIGNMENT NO. 3

**SUBJECT: CHEMISTRY**

**CLASS-X**

**JULY'2025**

### Chapter-2:Acids,Bases and Salts .

1. Why does not an acid show any acidic behavior in the absence of water?
2. While diluting an acid, why is it recommended that the acid should be added to water and not water to the acid?
3. A first aid manual suggests that vinegar should be used to treat wasp sting and baking soda for bee stings.
  - (i) What does this information tell you about the chemical nature of the wasp stings?
  - (ii) If there were no baking soda in the house, what other household substance could you use to treat bee stings?
4. A compound 'X' on electrolysis in an aqueous solution produces a strong base. 'Y' along with two gases 'A' and 'B'. 'B' is used in the manufacture of bleaching powder. Identify X, Y, A, and B. Write chemical equations.
5. What will you observe when:
  - (i) Red litmus is introduced into a solution of sodium sulphate.
  - (ii) Methyl orange is added to dil HCl.
  - (iii) Blue litmus is introduced into a solution of ferric chloride.
6. A road tanker carrying acid was involved in an accident and its contents spilled on the road, iron drain covers began melting and fizzing as the acid ran over them. A specialist was called to see if the acid actually leaked into the nearby river.
  - (i) Explain how the specialist could carry out a simple test to see if the river water contains some acid or not.
  - (ii) The word melting is incorrectly used in the report. Suggest a better name that should have been used.
  - (iii) Explain why drain covers began fizzing as the acid rain over them.
7. A substance 'X' is used in the kitchen for making tasty crispy pakoras and is also an Ingredient of antacid. Name the substance 'X'.
  - (i) How does 'X' help to make cakes and bread soft and spongy?

(ii) Is the pH value of the solution of 'X' is lesser than or greater than 7.0 ?

8. A student heated a few crystals of copper sulphate in a dry boiling tube.

- a. What will be the colour of the copper sulphate after heating?
- b. Will you notice water droplets in the boiling tube?
- c. Where have these come from?

9. Write word equations and then balanced equations for the reaction taking place when:

- a. Dilute Sulphuric acid reacts with zinc granules.
- b. Dilute hydrochloric acid reacts with magnesium ribbon.
- c. Dilute Sulphuric acid reacts with aluminium powder
- d. Dilute hydrochloric acid reacts with iron filings.

10. Why does dry HCl gas not change the color of the dry litmus paper?