



INDIAN SCHOOL AL WADI AL KABIR



CLASS: VII	DEPARTMENT: SCIENCE 2021 - 22	DATE: 14.11.2021
WORKSHEET NO: 10 WITH ANSWERS	TOPIC: ACIDS, BASES AND SALTS	NOTE: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO.

I. VERY SHORT ANSWER TYPE QUESTIONS (1M):

- Name the following:
 - Name the acid present in tamarind. [Hint: Tartaric acid]
 - The acid which digests food in our stomach. [Hint: Hydrochloric acid]
 - The products obtained when an acid reacts with a base. [Hint: Salt and water]
- What is the chemical name of vitamin C? [Hint: Ascorbic acid]
- Name the source from which litmus is obtained.
[Hint: It is extracted from lichens. They are available as red and blue litmus paper and also as solution.]
- You have been given three test tubes A, B and C with some liquid in each. How will you identify their nature – whether acidic, basic or neutral with the help of china rose indicator?
[Hint: Acidic solution turns dark pink but basic solution turns green]
- Write the name of two indicators which occur naturally.
[Hint: Turmeric, China rose]
- Name the reaction when an acid is mixed with base.
[Hint: Neutralisation reaction.]
- Name the gases which cause acid rain.
[Hint: Carbon dioxide, nitrogen dioxide and sulphur dioxide in the atmosphere cause acid rain.]
- Why acids and bases should be handled with care?
[Hint: Great care should be taken while handling laboratory acids and bases because these are corrosive in nature, irritating and harmful to skin.]

9. Which acid is injected into our body by an ant sting that causes pain?

[Hint: The acid is formic acid which is injected into the skin of a person when an ant bites.]

10. What does calamine solution contain? [Hint: Zinc Carbonate]

For question numbers 11 to 13, two statements are given- one labelled Assertion (A) and the other labelled Reason (R).

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below -

i) Both A and R are true and R is correct explanation of the assertion.

ii) Both A and R are true but R is not the correct explanation of the assertion.

iii) A is true but R is false.

iv) A is false but R is true

11. **Assertion (A):** Calamine lotion is applied on the skin when an ant bites.

Reason (R): Ant bites are painful and cause burning sensations.

ii) Both A and R are true but R is not the correct explanation of the assertion.)

12. **Assertion (A):** In neutralisation reaction, heat is always produced, or evolved.

Reason (R): The evolved heat decreases the temperature of the reaction mixture.

iii) A is true but R is false.

13. **Assertion (A):** Blue litmus turns red in the presence of vinegar.

Reason (R): Vinegar is acidic in nature.

i) Both A and R are true and R is the correct explanation of the assertion.

II. PASSAGE BASED QUESTIONS:

Our stomach contains hydrochloric acid. It helps us to digest food. But too much of acid in the stomach causes indigestion. Sometimes indigestion is painful. To relieve indigestion, we take an antacid such as milk of magnesia, which contains magnesium hydroxide. It neutralises the effect of excessive acid.

1. The acid produced naturally in our stomach is -

a] Acetic acid

b] Citric acid

c] Hydrochloric acid

d] Sulphuric acid

2. Which of the following type of medicine is used for treating indigestion caused by overeating?

a] Antibiotic

b] analgesic

c] Antiseptic

d] Antacid

ii) **Molecule** - Molecules are the smallest units of matter, formed when two or more atoms of same kind or different kinds combine together Eg. Water, Oxygen.]

2. What are acids and bases? [Hint: Acids are sour to taste, they turn blue litmus red. Bases are bitter in taste, turns red litmus blue and are soapy to touch.]
3. What are the effects of acid rain? [Hint: Acid rain can cause damage to buildings, historical monuments, plants and animals.]
4. Explain how to prepare lime water.
[Hint: To prepare limewater, dissolve some lime (choona) in water in a bottle. Stir the solution and keep it for some time. Pour a little from the top.]
5. What do you mean by neutral solutions? Give two examples.
[Hint: Solutions which do not show any properties of acids or bases are called neutral solutions. Eg. sugar solution, distilled water.]
6. Give reasons -
 - a) Farmers mix quick lime to the soil.
[Hint: To neutralise the effect of acidic soil.]
 - b) Factory wastes are neutralised by adding basic substances.
[Hint: To neutralise the acidic wastes.]
7. Kainaz is trying to wash yellow stain on her cloth with soap, she noticed the stain colour changed to red.
 - i) Name the natural indicator present in the curry. [Hint: Turmeric]
 - ii) What is the nature of the soap? [Hint: Basic]
8. A first aid manual suggests that vinegar should be used to treat wasp sting and baking soda for bee stings. What does this information tell us about the nature of the sting?
[Hint: Wasp sting is basic and hence to neutralise this effect we apply vinegar. Bee sting is acidic and hence to neutralise this effect we apply a basic solution of baking soda.]
9. Zarin is suffering from acidity due to indigestion. Is it advisable to give her orange juice in this situation and why?
[Hint: Orange juice contains citric acid hence it should not be given. Instead milk of magnesia should be given to neutralise the effect of acidity.]
10. The use of diesel vehicles causes a lot of sulphur dioxide gas emissions. On a rainy day due to heavy traffic jams on the city roads, the emissions were higher than normal. The emission

dissolved in rain causing acid rain. What would be the nature of sulphur dioxide gas?

[Sulphur dioxide gas dissolves in rain drops to form sulphuric acid which is acidic in nature.]

IV. b) SHORT ANSWER TYPE QUESTIONS: (3M)

1. Differentiate between - Compounds and Mixtures.

[Hint: **Compounds** - A compound is formed when two or more elements combine together chemically, and the properties are entirely different from its constituent elements.

Eg. Sodium chloride, Carbon dioxide.

Mixtures - Mixtures are formed when two or more substances are simply mixed together. Each substance can be separated. Eg. Salads, Air, Petroleum.]

2. Complete the table given:

FOUND IN	NAME OF ACID
Citrus fruits	Citric acid
Grapes	Tartaric acid
Curd	Lactic acid
Ant sting	Formic acid
Vinegar	Acetic acid
Spinach	Oxalic acid
Amla	Ascorbic acid

3. Explain acid rain. [Hint: The rain containing excess acids are called acid rains. The rain becomes acidic because carbon dioxide, sulphur dioxide and nitrogen dioxide gases which are released into air as pollutants dissolve in rain drops to produce carbonic acid, sulphuric acid and nitric acid respectively. It damages buildings and monuments. Eg. The Taj Mahal]

4. **ACID + BASE \longrightarrow SALT + WATER**

i) Name the above reaction. [Hint: Neutralisation reaction]

ii) Give an example for this type of reaction.

[Hint: Hydrochloric acid reacts with sodium hydroxide producing salt and water.]

iii) Write its word equation.

[Hint: Hydrochloric acid + Sodium hydroxide \longrightarrow Sodium chloride + Water]

5. Explain any two neutralisation reactions related to daily life situation.

[Hint: a) **Preventing tooth decay**: When you brush your teeth using a toothpaste, which contains bases, any kind of acid present in the mouth or teeth cavities is neutralised. This helps in preventing tooth decay.

b) **Ant bite:** When an ant bites it injects formic acid into the skin which causes a burning sensation and can be relieved by rubbing baking soda or calamine lotion on it to neutralise the effect.]

6. Is the distilled water acidic/ basic/ neutral? How would you verify it?

[Hint: Distilled water is neutral in nature. This can be verified by using red and blue litmus papers. Neither will show change in colour with distilled water. This proves that distilled water is neutral.]

V. LONG ANSWER TYPE QUESTIONS: (5M)

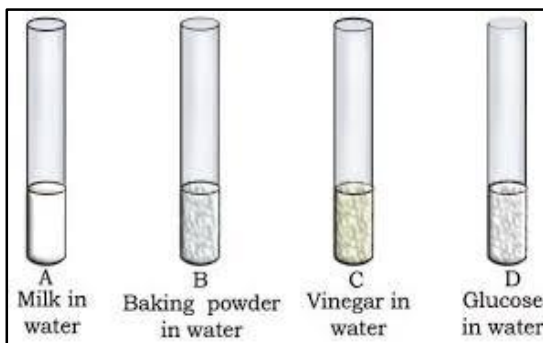
1. Rustam added dilute sulphuric acid to lime water. Will the reaction mixture become hot or cool?

[Hint: Sulphuric acid will react with calcium hydroxide (lime water.) to give calcium sulphate and water. Heat is generally released during neutralisation reactions and the temperature of solution rises. On touching the test tube, we can feel the heat produced by the reaction of dilute sulphuric acid and lime water.

Dil. Sulphuric acid + Calcium hydroxide (lime water) \longrightarrow Calcium sulphate + water.]

2. Observe the figure given below which shows solutions taken in test tubes A, B, C and D. What colour is expected when a piece of red litmus paper is dropped in each test tube?

Nature of the solutions is given in the table for your help.



Test Tube	Nature of solution	Change in colour of red litmus
A	Slightly acidic	No change
B	Basic	Turns blue
C	Acidic	No change
D	Neutral	No change

4. **SELF STUDY – ELEMENTS WITH THEIR SYMBOLS:**

NO	NAME OF THE ELEMENT	LATIN NAME	SYMBOL
1	HYDROGEN		H
2	HELIUM		He
3	LITHIUM		Li
4	BERYLLIUM		Be

5	BORON		B
6	CARBON		C
7	NITROGEN		N
8	OXYGEN		O
9	FLUORINE		F
10	NEON		Ne
11	SODIUM	NATRIUM	Na
12	MAGNESIUM		Mg
13	ALUMINIUM		Al
14	SILICON		Si
15	PHOSPHORUS		P
16	SULPHUR		S
17	CHLORINE		Cl
18	ARGON		Ar
19	POTASSIUM	KALIUM	K
20	CALCIUM		Ca
21	IRON		Fe
22	COPPER		Cu

- The symbols are either derived from their common names or Latin names.
- The first letter is always written in capitals and the second letter if any is written in small letters.
- Latin names are considered if the symbols from common names are already given.

PREPARED BY
MR. VIKRANT V. PURANDARE

CHECKED BY:
HOD - SCIENCE