



INDIAN SCHOOL AL WADI AL KABIR

Class: VII	Department: SCIENCE 2020 -2021	Date of completion: 24.5.2020
Worksheet No.: 3 WITH ANSWERS	Topic: Acids, Bases and Salts	NOTE: A4 FILE FORMAT
NAME OF THE STUDENT:	CLASS & SEC:	ROLL NO.

I: OBJECTIVE TYPE QUESTIONS:

- The effect of ant sting can be neutralised by rubbing with
 - Calcium carbonate
 - Sodium carbonate
 - Sodium hydrogencarbonate**
 - Calcium chloride
- Give the chemical name of milk of magnesia
 - Calcium hydroxide
 - Magnesium hydroxide**
 - Sodium hydroxide
 - Ammonium hydroxide
- In case of indigestion we use
 - Antacids**
 - Antibiotics
 - Alcohols
 - None of the above
- Which of the following colours are given by phenolphthalein in acidic and basic solutions.
 - Red and Blue
 - Blue and Red
 - Pink and colourless
 - Colourless and Pink**
- Which of the following set of substances contain acids?
 - Grapes, Lime water
 - Vinegar, Soap
 - Curd, milk of magnesia
 - Curd, vinegar**
- Red litmus turns blue in the presence of:
 - An acid
 - A base**
 - A salt
 - Distilled water
- What do farmers add to reduce the acidity of the soil?
 - Sodium hydroxide
 - Calcium hydroxide
 - Sodium chloride
 - Calcium oxide**

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

8. Assertion- Blue litmus turns red in the presence of vinegar

Reason- Vinegar is acidic in nature

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

9. Assertion- Calamine lotion is applied on the skin when an ant bites.

Reason- 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.)

10. Assertion- Milk of magnesia is used as an antacid.

Reason- It has a sour taste.

(iii) A is true but R is false.)

II. BASIC CONCEPTS LEVEL:

1.Name the following:

i) Name the acid present in tamarind. (Tartaric acid)

ii) The acid which digests food in our stomach. (Hydrochloric acid)

iii)The product obtained when an acid reacts with a base. (Salt and water)

2. Define the terms: i) Atom ii) Molecule

(An atom is the smallest particle that exhibits all the properties of that particular element. Eg. Aluminum, Hydrogen (ii) Molecules are the smallest units of matter, formed when two or more atoms of same kind or different kinds combine together. eg. Water, Oxygen.)

3.Differentiate between: Compounds and Mixtures

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

4. What are acids and bases?

(Acids are sour to taste, they turn blue litmus red. Bases are bitter in taste, turns red litmus blue and are soapy to touch.

5. Give two examples of natural indicators. (Turmeric, china rose)

6. Name the source from which litmus is obtained.

(It is extracted from lichens. They are available as red and blue litmus paper.)

7. Explain how to prepare lime water.

(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.)

8. 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)

9. 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

III. INTERMEDIATE LEVEL

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

(a) Indigestion: Our stomach produces hydrochloric acid which helps in digestion of food.

But too much of acid causes indigestion. To get relief we take antacids like milk of magnesia.

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.)

2. Explain acid rain.

(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)

3. Give reasons-

a. Farmers mix quick lime to the soil. (To neutralise the effect of acidic soil)

b. Factory wastes are neutralised by adding basic substances.

(To neutralise the acidic wastes)

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

i) Name the above reaction. (Neutralisation reaction)

ii) Give an example for this type of reaction.

(Hydrochloric acid reacts with sodium hydroxide producing salt and water)

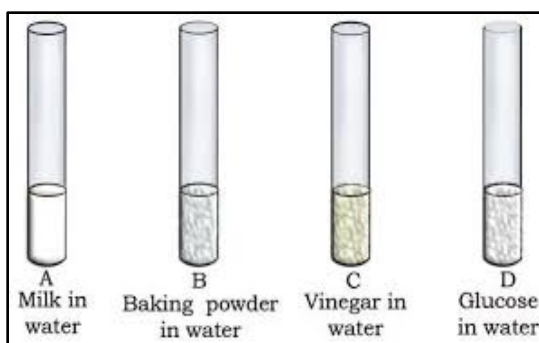
iii) Write its word equation.

(Hydrochloric acid + Sodium hydroxide \longrightarrow Sodium chloride + Water)

5. 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	Neutral	No change
B	Basic	Turns blue
C	Acidic	No change
D	Neutral	No change

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

(Sulphuric acid will react with calcium hydroxide (lime water.) to give calcium sulphate and water. Heat is generally released during neutralization 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.



IV- ADVANCED LEVEL:

1) Reena 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. (Turmeric)

ii) What is the nature of the soap? (Basic)

2) 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)

3. 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?

(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.)

4. 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.)

V-EXEMPLAR QUESTIONS

1. Paheli observed that most of the fish in the pond of her village were gradually dying. She also observed that the waste of a factory in their village is flowing into the pond which probably caused the fish to die.

i) Explain why the fish were dying. (The factory wastes are acidic in nature)

ii) If the factory waste is acidic in nature, how can it be neutralised?

(By adding basic substances to the wastes)

2. Paheli is suffering from acidity due to indigestion. Is it advisable to give her orange juice in this situation and why? (Orange juice contains citric acid hence it should not be given. Instead milk of magnesia should be given to neutralise the effect of acidity)

3. 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

- 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 Mrs. Rexy Ninan

Checked by : HOD - SCIENCE