PRISM WORLD

Std.: 8 (English) General Science

Chapter: 12

Q.1 Fill in the blank and rewrite the completed statements 3

1 Tartaric acid is a ..... acid.

Ans Tartaric acid is a **natural (organic)** acid.

2 Main constituent of acid is ..... .

Ans Main constituent of acid is **hydrogen ion.**

3 Main constituent of alkali is ..... .

Ans Main constituent of alkali is **hydroxide (OH^- ion).**

Q.2 Match the pair 2

1

Group A	Group B
i. Lemon	a. Acetic acid
ii. Vinegar	b. Citric acid
	c. Tartaric acid
	d. Lactic acid

Ans

i. Lemon	Citric acid
ii. Vinegar	Acetic acid

2

Group - A	Group - B
i. Tamarind	i. Acetic acid
ii. Curd	ii. Citric acid
	iii. Tartaric acid
	iv. Lactic acid

Ans

i. Tamarind	Tartaric acid
ii. Curd	Lactic acid

Q.3 State True or False 4

1 Oxides of metals are alkaline in nature.

Ans True

2 Metal corrodes due to salts.

Ans False - Metal corrodes due to water and oxygen.

3 Salts are neutral.

Ans True

4 Salt is acidic.

Ans **False -** Salt is neutral

Q.4 **Name the following** **6**

1 Write chemical name for given formula: NaOH

Ans Sodium hydroxide

2 Write chemical name for given formula. $Ca(OH)_2$

Ans Calcium hydroxide

3 Write chemical name from given formula: H_2SO_4

Ans Sulphuric acid

4 Write chemical name from given formula: KOH

Ans Potassium hydroxide

5 Write chemical name for given formula: NH_4OH

Ans Ammonium hydroxide

6 Write chemical name for given formula. HCl

Ans Hydrochloric acid

Q.5 **Answer the following** **4**

1 Which substances are produced by neutralization process ?

Ans Salt and water are the two substances produced by the neutralization process. For example, when hydrochloric acid reacts with sodium hydroxide, sodium chloride (salt) and water are produced

2 Classify following substances into acidic, basic and neutral group - HCl, NaCl, MgO, KCl, CaO, H_2SO_4 , HNO_3 , H_2O, Na_2CO_3

Ans

Acidic	Basic	Neutral
HCl	MgO	NaCl
H_2SO_4	CaO	KCl
HNO_3	$N_{a2}CO_3$	H_2O

Q.6 **Give scientific reasons** **4**

1 Which acid is used for getting chloride salt?

Ans i. Salt is formed by the combination of acid and alkali.
ii. In a chloride salt, the chloride ion comes from hydrochloric acid.
Hence, hydrochloric acid (HCl) is used for getting chloride salt.

2 The label on the bottle of chemical is spoiled. How will you find whether the chemical is acidic or not?

Ans i. We can identify whether the chemical is acidic or not by using indicators such as litmus paper.
ii. If the chemical turns blue litmus red, it is acidic and if it turns red litmus blue, it is basic. Thus, based on the colour change of the indicator, we can find our whether the chemical is acidic or not.

Q.7 **Activity based question (3 mks)** **3**

1 Identify the following solutions, whether they are acid or alkali.

Solution	Change in indicator			Acid/Alkali
	Litmus	Phenolphthalein	Methyl orange	
i.	.....	No change	.....	.....
ii.	.....	.....	Orange colour turns red	.....
iii.	Red litmus turns blue	.....	.....	.....

Ans

Solution	Change in indicator			Acid/Alkali
	Litmus	Phenolphthalein	Methyl orange	
i.	**Blue litmus turns red**	No change	**Orange colour turns red**	**Acid**
ii.	**Blue litmus turns red**	**No change**	Orange colour turns red	**Acid**
iii.	Red litmus turns blue	**Colourless solution turns Pink**	**Yellow**	**Alkali**

Q.8 Explain the statement. **3**

1 Sulphuric acid has highest importance in chemical Industry.

Ans
i. Sulphuric acid (H_2SO_4) is used in the manufacturing of number of other chemicals. It is used in making fertilizers, detergents, pigments, medicines, insecticides, explosives, etc.
ii. Medicines, insecticides, explosives, etc.
iii. Dilute sulphuric acid is used in the batteries (electric cell).
iv. It is used in iron and steel industry to remove rust from products.
v. Sulphuric acid is referred to as 'king of chemicals' due to its numerous applications.
Thus, sulphuric acid has the highest importance in chemical industry.

Q.9 Answer the following **6**

1 Explain the difference between Acid and Alkali.

Ans

Acid	Alkali
i. Acids are sour to taste.	i. Alkalies are bitter to taste.
ii. Acid molecules contain hydrogen ion (H^+) as the main constituent.	ii. Alkali molecules contain hydroxide ion (OH^+) as the main constituent.
iii. Acids turn blue litmus paper to red.	iii. Alkalies turn red litmus paper to blue.
iv. Nonmetal oxides are generally acidic in nature.	iv. Metal oxides are generally alkaline in nature.
E.g. - HCl, H_2SO_4, etc.	**E.g. -** NaOH, $Mg(OH)_2$, etc.

2 Why indicator does not get affected by salt?

Ans
i. Indicators change their colour in the presence of acid or alkali.
ii. Common salt (sdium chloride) is formed by the combination of acid (hydrochloric acid) and alkali (sodium hydrosice). This chemical reaction is called neutralization reaction.
iii. As a result, common salt is neutral in nature, that is, it is neither acidic nor alkaline. Hence, indicator does not get affected by common salt.

Q.10 Answer the following in detail **5**

1 Which are the industrial uses of acids?

Ans
i. Acids are used in the manufacturing of chemical fertilizers.
ii. Acids are used in the manufacturing of explosives, oil purification, medicines, dyes and paints.
iii. Hydrochloric acid (HCl) is used in preparing different chloride salts.

iv. Dilute sulphuric acid (H_2SO_4) is used in the batteries (electric cell).
v. Dilute HCl is used for sterilization of water.
vi. Acid is used for making of white paper from wood pulp.