

Acids, Bases and Salts

Question 1.

Assertion: Universal indicator gives green colour with distilled water.

Reason: pH of distilled water is 7 and it is neutral and universal indicator gives green colour with neutral solution.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ Answer

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

Question 2.

NaHCO₃, formed by reaction of

- (a) NaOH + H₂CO₃
- (b) NaCl + H₂CO₃
- (c) Na₂CO₃ + HCl
- (d) NaOH + Na₂CO₃

▼ Answer

- (a) NaOH + H₂CO₃
-

Question 3.

Calcium phosphate is present in tooth enamel. Its nature is

- (a) basic
- (b) acidic
- (c) neutral
- (d) amphoteric

▼ Answer

- (a) basic
-

Question 4.

An aqueous solution turns red litmus solution blue. Excess addition of which of the following solution would reverse the change?

- (a) Baking power
- (b) Lime
- (c) Ammonium hydroxide solution
- (d) Hydrochloric acid

▼ Answer

- (d) Hydrochloric acid
-

Question 5.

Egg shell is made up of

- (a) CaCO₃
- (b) CaO

- (c) $\text{Ca}(\text{OH})_2$
- (d) CaCl_2

▼ Answer

- (a) CaCO_3
-

Question 6.

Which of the following is not an acidic salt?

- (a) CuSO_4
- (b) NH_4Cl
- (c) FeCl_3
- (d) CH_3COONa

▼ Answer

- (d) CH_3COONa
-

Question 7.

Which one of the following types of medicines is used for treating indigestion?

- (a) Antibiotics
- (b) Analgesic
- (c) Antacid
- (d) Antiseptic

▼ Answer

- (c) Antacid
-

Question 8.

Sodium hydroxide turns phenolphthalein solution

- (a) pink
- (b) yellow
- (c) colourless
- (d) orange

▼ Answer

- (a) pink
-

Question 9.

Sodium hydroxide is a

- (a) weak base
- (b) weak acid
- (c) strong base
- (d) strong acid

▼ Answer

- (c) strong base
-

Question 10.

Rain is called acid rain when its:

- (a) pH falls below 7
- (b) pH falls below 6

- (c) pH falls below 5.6
- (d) pH is above 7

▼ [Answer](#)

- (c) pH falls below 5.6
-

Question 11.

Tooth enamel is made up of

- (a) calcium phosphate
- (b) calcium carbonate
- (c) calcium oxide
- (d) potassium

▼ [Answer](#)

- (a) calcium phosphate
-

Question 12.

What is the pH range of human body?

- (a) 7.0 – 7.8
- (b) 7.2 – 8.0
- (c) 7.0 – 8.4
- (d) 7.2 – 8.4

▼ [Answer](#)

- (a) 7.0 – 7.8
-

Question 13.

A drop of liquid sample was put on the pH paper, paper turned blue. The liquid sample must be of

- (a) Lemon Juice
- (b) HCl
- (c) Sodium bicarbonate
- (d) Ethanoic acid.

▼ [Answer](#)

- (c) Sodium bicarbonate
-

Question 14.

Lime water reacts with chlorine to give

- (a) bleaching powder
- (b) baking powder
- (c) baking soda
- (d) washing soda

▼ [Answer](#)

- (c) baking soda
-

Question 15.

At what temperature is gypsum heated to form Plaster of Paris?

- (a) 90°C
- (b) 100°C
- (c) 110°C
- (d) 120°C

▼ Answer

(b) 100°C

Question 16.

$\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ is

- (a) washing soda
- (b) baking soda
- (c) bleaching powder
- (d) tartaric acid

▼ Answer

(a) washing soda

Question 17.

Sodium carbonate is a basic salt because it is a salt of a

- (a) strong acid and strong base
- (b) weak acid and weak base
- (c) strong acid and weak base
- (d) weak acid and strong base

▼ Answer

(d) weak acid and strong base

Question 18.

Tomato is a natural source of which acid?

- (a) Acetic acid
- (b) Citric acid
- (c) Tartaric acid
- (d) Oxalic acid

▼ Answer

(d) Oxalic acid

Question 19.

Brine is an

- (a) aqueous solution of sodium hydroxide
- (b) aqueous solution of sodium carbonate
- (c) aqueous solution of sodium chloride
- (d) aqueous solution of sodium bicarbonate

▼ Answer

(c) aqueous solution of sodium chloride

Question 20.

What is formed when zinc reacts with sodium hydroxide?

- (a) Zinc hydroxide and sodium
- (b) Sodium zincate and hydrogen gas
- (c) Sodium zinc-oxide and hydrogen gas
- (d) Sodium zincate and water

▼ Answer

(b) Sodium zincate and hydrogen gas

Question 21.

When hydrogen chloride gas is prepared on a humid day, the gas is usually passed through the guard tube containing calcium chloride. The role of calcium chloride taken in the guard tube is to

- (a) absorb the evolved gas
- (b) moisten the gas
- (c) absorb moisture from the gas
- (d) absorb Cl^- ions from the evolved gas

▼ Answer

- (c) absorb moisture from the gas
-

Question 22.

Plaster of Paris is made from

- (a) Lime stone
- (b) Slaked Lime
- (c) Quick lime
- (d) Gypsum

▼ Answer

- (d) Gypsum
-

Question 23.

Assertion: Bleaching power liberate chlorine when kept in atmosphere.

Reason: CaOCl_2 reacts with CO_2 present in atmosphere to form CaCO_3 and chlorine gas.

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ Answer

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

Question 24.

Assertion: Ammonium hydroxide is Weak Base

Reason: Phenolphthalein becomes pink in NH_2OH

- (a) Both A and R are true and R is the correct explanation of A.
- (b) Both A and R are true but R is not the correct explanation of A.
- (c) A is true but R is false.
- (d) A is false but R is true.
- (e) Both A and R are false.

▼ Answer

- (b) Both A and R are true but R is not the correct explanation of A.
-

Question 25.

Ag_2S reacts with H_2SO_4 to form

- (a) AgSO_4
- (b) $\text{Ag}_2\text{SO}_4 + \text{H}_2\text{S}$

- (c) $\text{Ag}_2\text{O} + \text{H}_2\text{S}$
- (d) $\text{AgOH} + \text{H}_2\text{S}$

▼ Answer

- (b) $\text{Ag}_2\text{SO}_4 + \text{H}_2\text{S}$
-

Question 26.

A sample of soil is mixed with water and allowed to settle. The clear supernatant solution turns the pH paper yellowish-orange. Which of the following would change the colour of this pH paper to greenish-blue?

- (a) Lemon juice
- (b) Vinegar
- (c) Common salt
- (d) An antacid

▼ Answer

- (d) An antacid
-

Question 28.

Which of the following salts does not contain water of crystallisation?

- (a) Blue vitriol
- (b) Baking soda
- (c) Washing soda
- (d) Gypsum

▼ Answer

- (b) Baking soda
-

Question 29.

How many water molecules does hydrated calcium sulphate contain?

- (a) 5
- (b) 10
- (c) 7
- (d) 2

▼ Answer

- (d) 2
-

Question 30.

10 mL of a solution of NaOH is found to be completely neutralized by 8 mL of a given solution of HCl. If we take 20 mL of same solution of NaOH, the amount of HCl solution required to neutralize it will be

- (a) 4 mL
- (b) 8 mL
- (c) 12 mL
- (d) 16 mL

▼ Answer

- (d) 16 mL
-

Question 31.

An aqueous solution turns red litmus solution blue. Excess addition of which of the following solution would reverse the change?

- (a) Baking powder
- (b) Lime
- (c) Ammonium hydroxide solution
- (d) Hydrochloric acid

▼ [Answer](#)

- (d) Hydrochloric acid
-

Question 32.

Sodium hydroxide is used

- (a) as an antacid
- (b) in manufacture of soap
- (c) as a cleansing agent
- (d) in alkaline batteries

▼ [Answer](#)

- (b) in manufacture of soap
-

Question 33.

A solution reacts with crushed egg-shells to give a gas that turns lime-water milky. The solution contains

- (a) NaCl
- (b) HCl
- (c) LiCl
- (d) KCl

▼ [Answer](#)

- (b) HCl
-

Question 34.

When copper oxide and dilute hydrochloric acid react, colour changes to

- (a) white
- (b) bluish-green
- (c) blue-black
- (d) black

▼ [Answer](#)

- (b) bluish-green
-

Question 35.

If pH of solution is 13, it means that it is

- (a) Weakly acidic
- (b) Weakly basic
- (c) Strongly acidic
- (d) Strongly Basic

▼ [Answer](#)

- (d) Strongly Basic
-

Question 36.

Nettle sting is a natural source of which acid?

- (a) Metiwanoic acid
- (b) Lactic acid
- (c) Citric acid
- (d) Tartaric acid

▼ Answer

- (a) Metiwanoic acid
-

Question 37.

Alkalis are

- (a) acids, which are soluble in water
- (b) acids, which are insoluble in water
- (c) bases, which are insoluble in water
- (d) bases, which are soluble in water

▼ Answer

- (d) bases, which are soluble in water
-

Question 38.

Plaster of Paris hardens by

- (a) Giving off CO_2
- (b) Changing into
- (c) Combining with water CaCO_3
- (d) Giving out water

▼ Answer

- (c) Combining with water
-

Question 39.

The odour of acetic acid resembles that of

- (a) Rose
- (b) Burning Plastic
- (c) Vinegar
- (d) Kerosene

▼ Answer

- (c) Vinegar
-

Question 40.

The H^+ ion concentration of a solution is $1.0 \times 10^{-5} \text{m}$. The solution is

- (a) Acidic
- (b) Alkaline
- (c) Neutral
- (d) Amphoteric

▼ Answer

- (a) Acidic
-

Question 41.

In terms of acidic strength, which one of the following is in the correct increasing order?

- (a) Water < Acetic acid < Hydrochloric acid
- (b) Water < Hydrochloric acid < Acetic acid
- (c) Acetic acid < Water < Hydrochloric acid
- (d) Hydrochloric acid < Water < Acetic acid

▼ Answer

- (a) Water < Acetic acid < Hydrochloric acid
-

Question 42.

An aqueous solution with pH-zero is

- (a) Acidic
- (b) Alkaline
- (c) Neutral
- (d) Amphoteric

▼ Answer

- (a) Acidic
-

Question 43.

Which one of the following salts does not contain water of crystallisation?

- (a) Blue vitriol
- (b) Baking soda
- (c) Washing soda
- (d) Gypsum

▼ Answer

- (b) Baking soda
-

Question 44.

The odour of acetic acid resembles that of

- (a) Rose
- (b) Burning Plastic
- (c) Vinegar
- (d) Kerosene

▼ Answer

- (c) Vinegar
-

Question 45.

Setting of Plaster of Paris takes place due to

- (a) Oxidation
- (b) Reduction
- (c) Dehydration
- (d) Hydration

▼ Answer

- (d) Hydration
-

Question 46.

Chemical formula of baking soda is:

- (a) MgSO_4
- (b) Na_2CO_3
- (c) NaHCO_3
- (d) MgCO_3

▼ [Answer](#)

- (c) NaHCO_3
-

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