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.

NaHCO, formed by reaction of

- (a) NaOH + H_2CO_3
- (b) NaCl + H_2CO_3
- (c) $Na_2CO_3 + HCI$
- (d) NaOH + Na_2CO_3

▼ Answer

(a) NaOH + H_2CO_3

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) Ca(OH) ₂ (d) CaCl ₂
▼ Answer
(a) CaCO ₃
Question 6. Which of the following is not a acidic salt? (a) CuSO ₄ (b) NH ₄ Cl (c) FeCl ₃ (d) CH ₃ COONa
▼ Answer
(d) CH ₃ COONa
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) HCI
- (c) Sodium bicarbonate
- (d) Ethanoic acid.
- **▼** Answer
- (c) Sodium bicarbonate

Question 14.

Lime water reacts with chlorine to give

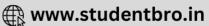
- (a) bleaching powder
- (b) baking powder
- (c) baking soda
- (d) washing soda
- ▼ Answer
- (c) baking soda

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.

 Na_2CO_3 . $10H_2O$ 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

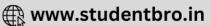
Question 20.

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: CaOCl₂ reacts with CO₂ present in atmosphere to form CaCO₃ 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 NH2OH

- (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.

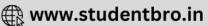
Question 25.

Ag₂S reacts with H₂SO₄ to form

- (a) $AgSO_4$
- (b) $Ag_2SO_4 + H_2S$







- (c) $Ag_2O + H_2S$
- (d) $AgOH + H_2S$

▼ Answer

(b) $Ag_2SO_4 + H_2S$

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 milkey. The solution contains

- (a) NaCl
- (b) HCI
- (c) LiCl
- (d) KCI

▼ 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 if 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 CO₂
- (b) Changing into
- (c) Combining with water CaCO₃
- (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.

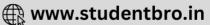
The H⁺ ion concentration of a solution is 1.0×10^{-5} m. The solution is

- (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 con-tain water of crystallisation?

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

▼ Answer

(b) Baking soda

Question 44.

The or dour 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

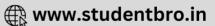
(d) Hydration

Question 46.

Chemical formula of baking soda is:







- (a) MgSO₄
- (b) Na2CO₃
- (c) NaHCO₃
- (d) MgCO₃
- **▼** Answer
- (c) NaHCO₃

