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 + HCl
(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) $CaCO_3$
(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_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.
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: $CaOCl_2$ 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 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.
Ag_2S reacts with H_2SO_4 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) 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 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 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 1.0×10^{-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) $MgSO_4$
(b) $Na2CO_3$
(c) $NaHCO_3$
(d) $MgCO_3$

▼ Answer

(c) $NaHCO_3$
