CLASS X
SAMPLE PAPER
CHEMISTRY

MULTIPLE CHOICE QUESTIONS

Q1A drop from a liquid X is poured on the pH paper, such that the colour of pH paper changes to red. Answer the following questions:

(i) The liquid X is:
(a) Acidic (b) Basic
(c) Neutral (d) None of these

(ii) The pH of the liquid X is:
(a) 7 (b) 9 (c) 5 (d) 2

(iii) To the liquid X is added few drops of liquid Y. On testing this mixture with pH paper, the pH is 4.The liquid Y is:
(a) Neutral in nature (ii) acidic in nature
© Alkaline in nature (iv) none of these

(iv) In order to bring the pH of solution to 7 another liquid Z is added to the mixture of liquids X and Y. The pH of the liquid Z must be
(a) Neutral in nature (b) acidic in nature
© Alkaline in nature (d) none of these

(v)The name of process taking place in (iv) is:
(a) Displacement (b) precipitation
© Decarboxylation (d) none of these

Q2 The lowest pH is associated with
(i) CH_3COOH (ii) dil H_2SO_4
(iii) Citric acid (iii) dil NaOH

Q3 The highest pH value is associated with:
(i) Milk (ii) human blood
(iii) Milk of magnesia (iv) dilute potassium hydroxide

Q4 A solution has pH 5. To this solution is added 1 ml of dilute hydrochloric acid. The pH of new solution will be:
(i) More than 5 (ii) less than 5
(iii) 5 only (iv) none of these

Q5 Some HCl is added to distilled water. The concentration of H^+ ions in distilled water:
(i) Remains same (ii) decreases
(iii) Increases (v) none of these

Q6 The name of scientist who introduced the concept of pH is:
(i) Einstein (ii) Davy (iii) Sorensen (iv) Lavoisier

Q7 When acetic acid is added to sodium bicarbonate the formula of the salt formed is:

(i) C_2H_5ONa (ii) CH_3COONa (iii) CH_3ONa (iv) NaCl

Q8 The pH scale tells the concentration of

(i) H^+ ions (ii) OH^- ions (iii) both (i) and (ii) (iv) None of these

Q9 A fruit juice has pH between 3.4 to 2.6. The fruit juice is

(i) Acidic in nature (ii) basic in nature

(iii) Neutral in nature (iv) None of these

Q10 The substance used to determine pH of a solution is

(i) Universal indicator (ii) turmeric solution

(iii) Methyl orange solution (iv) litmus solution

Q11 On adding Zn to dilute HCl and then warming the mixture following changes occurs in a sequential order

(i) Zn dissolves with the evolution of hydrogen gas

(ii) Zn acquires dull appearance, evolves hydrogen gas and dissolves

(iii) Zn turns black with the evolution of hydrogen gas and finally dissolves

(iv) Zn remains shiny with the evolution of hydrogen gas

Q12 When Zn reacts with dilute HCl it evolves hydrogen gas and the solution acquires

(i) Milkiness (ii) blue Colour

(ii) yellow Colour (iv) Remains colourless

Q13 Baking powder is added to cakes in order to make cake fluffy, this fluffiness is due to the evolution of

(i) Hydrogen gas (iii) Carbon dioxide gas

(ii) Water vapour (iv) All the above

Q14 What happens when Dilute sulphuric acid is added to sodium sulphite?

(i) CO_2 is evolved (ii) SO_2 is evolved

(ii) Hydrogen is evolved (iv) None of the above

Q15 Name the reaction between dilute sulphuric acid and Sodium sulphite.

(i) Combination (ii) Decomposition

(iii) Neutralization (iv) Displacement

Q16 Name the type of reaction between sodium carbonate and HCl

(i) Combination (ii) Redox reaction

(iii) Decomposition (iv) Both (ii) and (iii)

Q17 Sulphur dioxide turns:

(i) moist blue litmus paper red

(ii) moist blue litmus paper red and then decolourises it

(iii) moist red litmus paper blue

(iv) moist red litmus paper blue and the decolourises it

Q18 When Sulphurdioxide is passed through a solution of acidified potassium permanganate, the purple colour of $KMnO_4$ turns:

(i) Green (ii) blue (iii) Colourless (iv) Light pink

Q19 Tick the incorrect statement:

(i) SO_2 is a colourless gas

(ii) SO_2 is denser than air

(iii) SO_2 is a poisonous gas

(iv) SO_2 is insoluble in water

Q20 Sulphur dioxide is an anhydride of:

(i) Sulphurous acid

(ii) Sulphuric acid

(iii) Thiosulphuric acid
(iv) None of these

Q21 Which of the chemical reactions cannot occur?
(i) $2AgNO_3$ (aq) + Fe(s) ⟶ Fe $(NO_3)_2$(aq) +2Ag
(ii) $CuSO_4$ (aq) + Zn(s) ⟶ $ZnSO_4$ (aq) + Cu
(iii) CuSO4 (aq) + 2Ag(s) ⟶ Cu (s) +2$AgSO_4$ (aq)
(iv) $2AgNO_3$ (aq) + Zn(s) ⟶ $ZnSO_4$ (aq) +2Ag

Q22 Blue colour of copper sulphate solution is destroyed when iron filings are added to it because:
(i) Iron is less reactive than copper
(ii) Iron is more reactive than copper
(iii) Iron is not reactive at all
(iv) Copper is not reactive at all.

Q23 Which metal container can be used for storing copper sulphate solution?
(i) Silver (ii) Aluminum (iii) Zinc (iv) Iron

Q24 After preparing a gas in the laboratory, a teacher asked the students to check the nature of the gas i.e. to find whether the gas is acidic or basic. The student introduced moist red litmus paper in the gas jar and observed that the red litmus turned white. What conclusion you draw from this observation?
(i) The gas is CO_2 and is bleaching agent
(ii) The gas is SO_2 and is oxidizing agent
(iii) The gas is SO_2 and is bleaching agent
(iv) The gas is basic in nature

Q25 The metal used in the preparation of Sulphurdioxide act as:
(i) Reducing agent (ii) oxidizing agent (iii) a catalyst (iv) dehydrating agent

Q26 The corrosive non-volatile acid is:
(i) conc. hydrochloric acid (ii) Conc.sulphuric acid (iii) conc. nitric acid (iv) conc. acetic acid