Q2 → Assertion and Reason based Question – 3 ma

Answer the question by selecting the appropriate option given below –

(a) Both A & R are true, and R is correct explanation of A.
(b) Both A & R are true, but R is not correct explanation of A.
(c) A is true, but R is False.
(d) A is False, but R is true.

(i) Assertion (A) – Silver Chloride turns grey in Sunlight.
Reason (R) – Decomposition of AgCl into Ag & Cl_2 take place by sunlight.

(ii) Assertion (A) – HCl produces hydronium ions (H_3O^+) & chloride ion (Cl^-) in aqueous solution.
Reason (R) – In the presence of water, bases give H^+ ion.

(iii) Assertion (A) – Food cans are coated with tin, not with zinc.
Reason (R) – Zinc is more reactive than tin.

Q3 → Very short Answer type Question – 2×3 = 6 marks.

(a) A crystalline substance of green colour 'x' emits gases of the characteristic odour when heated over a flame. It 1st loses water and changes colour. On further heating, it decomposes & produces a solid compound Y.
(i) Identify x and Y.
(ii) State the change in colour observed when x is heated. & write the Reaction.

(b) What is the effect of dilution on H^+ ion concentration of an acid.

(c) What will happen if HCl is poured over Egg shell. Write the Reaction also.

Q4 → Short Answer Type Question – 2×3 = 6 marks

(a) An element 'x' is stored in kerosene, & cannot be extracted from its ore using a reducing agent. 'x' form an ionic compound on reaction with chlorine.
(i) Can we store 'x' in water? Give Reason to support your answer.
(ii) Identify element 'x'. Name the process used & write the equation for extraction of 'x' from its ore.

Q6→ Extra Questions – 12 marks

(i) 1 g of Copper powder was taken in a china dish and heated. What change take place on heating. When hydrogen gas is passed through this heated substance, a visible change is seen in it. Give the chemical equation of reaction, the name and the colour of products formed in each case 2 marks

(ii) Decomposition reaction require energy either in the form of heat or light or electricity for breakdown the reactants. Write one equation each for decomposition reaction where energy is supplied in the form of heat, light and electricity. 3 marks

(iii) Lead Nitrate solution is added to a test tube containing potassium Iodide solution.
(a) Write the name and colour of compound precipitated.
(b) Write the balance chemical equation for the reaction involve.
(c) Name the type of reaction justifying your answer. 3 marks

(iv) $MnO_2 + 4HCl \longrightarrow MnCl_2 + 2H_2O + Cl_2$. The reaction given is a redox reaction because in this case –
(a) MnO_2 is oxidised and HCl is reduced.
(b) HCl is oxidised.
(c) MnO_2 is Reduced 1 mark
(d) MnO_2 is reduced & HCl is oxidised.

(v) A small amount of CuO was taken in a beaker and dilute HCl was added with continuous stirring of solution. Name the compound formed and state the colour of its solution. Write the balance chemical equation for reaction that occur. Based on reaction state the nature of CuO. 2 mark

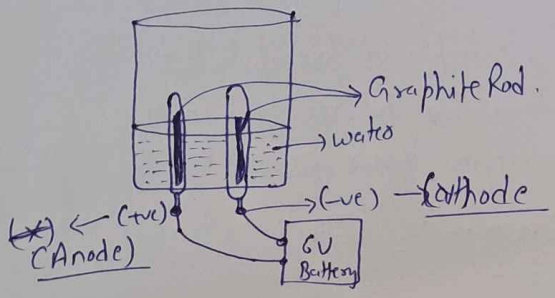
(vi) Four solution namely glucose, alcohol, HCl & H_2SO_4 filled in 4 separate beakers are connected one by one in an electric circuit with a bulb. The solution in which bulb will glow when ~~circuit~~ current is passed are –
(a) Glucose & Alcohol
(b) Alcohol & HCl
(c) Glucose & Sulphuric Acid
(d) Hydrochloric and Sulphuric Acid. 1 mark

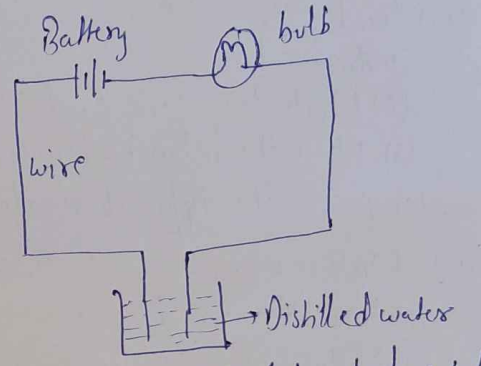
(b) Write chemical formula of washing Soda. How is it obtain from baking Soda? List two uses of washing Soda. (3)

Q.5 → Long Answer type Questions – 2×4 = 8marks

(i) What happens when –
(a) Bleaching powder reacts with dilute sulphuric Acid.
(b) Slaked lime reacts with chlorine.
(c) Sodium Hydrogencarbonate is heated.
(d) Gypsum is heated.

(ii) Amrita electrolysed distilled water using setup shown in figure. She was ~~ex~~ expecting two gases to be evolve at anode & cathode respectively





Suddenly she realised that the bulb in the circuit did not glow when she used distilled water. After this realisation, she added a substance to distilled water for electrolysis to take place. Answer the questions based on information given above.

(a) Which gas was she expecting to be formed at anode and which one at cathode.
(b) Why did the bulb not glow when Amrita passed electricity through distilled water.
(c) Which substance was added by Amrita to distilled water to get the expected result?
(d) What is the Ratio of gases obtain at two terminal / Rod and why?

Time – 1h

Class – 10th
Chemistry Test

M.m = 40 marks

5 marks.

Q.1 → Multiple Choice Question –

(a) A metal 'm' displace iron from aqueous solution of Ferrous Sulphate but fails to do so in case of aqueous solution of the Aluminium Sulphate. The metal 'M' is –

(a) Mg (b) Cu

(c) Pb (d) Zn

(b) A metal X on treatment with NaOH liberates a gas 'G'. It also liberates the same gas 'G' on treatment with dilute H_2SO_4, based on above information, 'X' and 'G' respectively are –

(a) Cu, $SO_2\uparrow$ (b) Zn, $SO_2\uparrow$

(c) Zn, ~~$SO_2\uparrow$~~ $H_2\uparrow$ (d) Cu, $H_2\uparrow$

(c) When excess of CO_2 is passed through lime water, the milkiness disappear because.

(a) Water soluble $CaCO_3$ convert to water soluble $Ca(HCO_3)_2$

(b) Insoluble $CaCO_3$ convert to water soluble $Ca(HCO_3)_2$

(c) Water soluble $CaCO_3$ convert to insoluble $Ca(HCO_3)_2$

(d) Insoluble $CaCO_3$ convert to insoluble $Ca(HCO_3)_2$

(d) Which of the following equation represent redox reactions and what are the values of P & Q in these equations.

Equation-1 – $Fe_2O_{3(s)} + 2Al_{(s)} \longrightarrow Al_2O_{3(s)} + PFe_{(l)} + heat$

Equation-2 – $2C_4H_{10(g)} + 13O_{2(g)} \xrightarrow{\Delta} 8CO_{2(g)} + qH_2O_{(g)}$.

(a) Only equation 1 is redox reaction, P=1 & q=3.

(b) Both equation are redox, P=2 and q=10

(c) Only equation 2 is redox, P=2 & q=10

(d) Both are redox, P=2 and q=12.

(e) If the Reaction of aqueous solution of Barium chloride with aqueous solution of sodium sulphate, the aqueous solution formed will be

(a) $BaCl_2$ (b) $BaSO_4$ (c) Na_2SO_4 (d) NaCl