Some Important Numericals

Chemistry

(1) How many gram of moles present in 11gm CO_2.

(2) Calculate OH^- Conc of Solution whose pH is 10.

(3) Calculate the pH of $\frac{N}{10}$ NaOH Solution.

(4) Calculate pH of a Solution if its pOH is 4.

(5) find the pH of a Solution whose hydrogen ion Concentration is 2×10^{-3}.

(6) Calculate the hydrolysis Constant of NaCN ($K_a = 1.8 \times 10^{-5}$)

(7) 1.62 gm of metal was dissolved in Nitric acid to prepare its Nitrate On strong heating of Nitrate 2.02 gm oxide obtained. find Equivalent wt of Metal.

(8) Calculate the normality of Solution Containing 6.3 gm of oxalic acid Crystal (Mol mass = 126) dissolved in 500 ml Solution.

(9) The Volume of Gas Sample is 100 ml at 100°C. If the pressure is held Constant at what temprature Volume become 200 ml.

(10) Calculate the amount of 400 ml of N/10 Na_2CO_3 Solution.

(11) A Current of 3A passing through $AgNO_3$ Solution for 20 min deposited 4gm of Silver. What is the Electrochemical Equivalence of water.

(12) If the Equivalent wt of a Substance is 40 and its Valency is 2 find its atomic wt.

(13) 2.46 gm of NaOH are dissolved in water and Solution is made to 100 cm^3. Calculate the Molarity of Solution.

(14) Calculate the number of moles of 0.032 mg of Methane.

(15) find Out weight of Magnesium Oxide formed when 3gm of Mg are burned in Oxygen.

(16) Calculate the molarity of Water. density of water is 1gm/ml.

(17) If the hydrogen ion conc is 0.0000/M What is OH^- Conc And its pOH.

(18) If H^+ Conc is 5×10^{-5}. Calculate its pH.

(19) A gas at $-20^\circ C$ occupies the Volume of 140 ml. Calculate the temprature at which Volume of gas become 65 ml. Pressure remains constant.

(20) What Current will be required to liberate 10^{-3} kg of Iodine from KI Solution in two hours (Ece of I is 10^{-6} kg/c)

(21) Calculate the pH of 0.001 M HCl.

(22) A Current of 0.5 Ampere is passed for 30 min through $CuSO_4$ Solution. Calculate wt of Cu deposit (at wt of Cu = 63.6)

(23) Calculate the mole fraction of water in a mixture of 12 gm Water, 108 gm Oxalic acid and 92 gm Ethyl alcohol (Molar mass of Water = 18, for acetic acid = 60, for Ethyl alcohol = 46)

(24) Helium has isotopic Mass 4.0026 amu. Calculate Mass defect ($m_p = 1.00815$ amu, $m_n = 1.00867$ amu)

(25) An orgain Compound have C = 57.8%, H = 3.6%, O = 38.6% If Molecular wt of Compound is 166. find Molecular formula (Ans - $C_8H_6O_4$)

(26) The H^+ ion Conc of a fruit juice is 3.3×10^{-2}. find its pH Value.

(27) The dissociation Constant of formic acid and acetic acid are 21.4×10^{-5} and 1.81×10^{-5} find their Relative Strength.

28 10 gm of Hydrogen is burnt in the presence of oxygen. Determine the mass of water formed. (Ans- 90 gm)

29 Calculate the pH of $\frac{M}{1000}$ HCl solution. (Ans- 3)

30 15 ml 0.1N NaOH solution is neutralized by 10 ml HCl solution find out Normality of HCl. (Ans- 0.15N)