CLASS 11TH

TIME = 1h | MONDAY TEST (CHEMISTRY) | M.M. = 30

SECTION - A (10 marks)

Q1. State the number of significant figures in the following numbers. 2

(a) 0.00048 (b) 43.800 (c) 800.0 (d) 234000

Q2. Express the following in the scientific notations: 2

(a) 0.00046 (b) 235000 (c) 0.0000136 (d) 6.012×10^{23}

Q3. State and explain the law of Multiple Proportion with an example. 2

Q4. If ten volume of dihydrogen gas reacts with five volume of dioxygen gas how many volume Of water vapour can be produced? 2

Q5. Calculate the number of atoms in each of the following:- 2

(i) 52 moles of Ar (ii) 52 u of He.

SECTION – B (12 marks)

Q6. In three moles of Ethane (C_2H_6), calculate the following: 3

(i) Number of moles of carbon atoms.

(ii) Number of moles of Hydrogen atoms.

(iii) Number of molecules of ethane.

Q7. $CaCO_3 + 2HCL \longrightarrow CaCL_2 + CO_2 + H_2O$. 3

In above reaction if 20g of $CaCO_3$ reacts with 20g of HCL, how many grams of CO_2 will be Produced? Also tell which act as Limiting Reagent and the amount of Reactant left unreacted.

Q8. Find normality of the solution when 100 mL of 0.1 M H_2SO_4 is mixed with 100 mL of 0.1 N NaOH Solution. 3

Q9. Solution of Oxalic Acid $(COOH)_2.2H_2O$ is prepared by dissolving 0.63g of acid in 250cm^3 of Solution. Calculate (i) Molarity (ii) Normality of Solution. 3

SECTION – C (8 marks)

Q9. An Organic substance containing Carbon, Hydrogen and Oxygen gave following percentages: C = 40.68%, H_2 = 5.085% and O_2 = 54.22%. The vapour density of the compound is 59. Calculate the Empirical formula and molecular formula of the compound. 4

Q10. Calculate the mass percent of different elements present in sodium sulphate (Na_2SO_4). 4