CHEMISTRY

ASSIGNMENT-1 (Ch.- 'Some Basic Concepts of Chemistry')

"Mole Concept"

Q1. . Number of atoms in the following samples of substances is the largest in :
(1) 127.0g of iodine
(2) 48.0g of magnesium
(3) 71.0g of chlorine
(4) 4.0g of hydrogen

Q2. Mass of magnesium required to produce 220 mL of hydrogen gas at STP on reaction with excess of dil. HCl is

Q3. 2.8×10−3 mol of CO2 is left after removing 1021 molecules from its ' x ' mg sample. The mass of CO2 taken initially is ?

Q4. The number of moles of methane required to produce 11 g CO2(g) after complete combustion is : (Given molar mass of methane in g mol−1:16)

Q5. A solution is prepared by adding 2 g of "X" to 1 mole of water. Mass percent of "X" in the solution is :

Q6. Match List I with List II

	List - I		List - II (Δ0)
A.	16 g of CH4 (g)	I.	Weighs 28 g
B.	1 g of H2 (g)	II.	60.2×1023 electrons
C.	1 mole of N2 (g)	III.	Weighs 32 g
D.	0.5 mol of SO2 (g)	IV.	Occupies 11.4 L volume of STP

Q7. The number of molecules and moles in 2.8375 litres of O2 at STP are respectively

Q8. Find the total no. of atoms in 5.85 g of NaCl ?

Q9. Find the total no. of atoms in 3.36 litres of CO_2 ?

Q10. Find the total no. of moles of O-atoms in 0.448 litres of SO_3 gas ?

Nitish