CHEMISTRY-11	Chapter#01 (Complete) Test-5		
	Name:	Class:	ID:
Date: / /	**Marks Total: 40**	**Marks Obtained:**	
Time Allowed: 75 Min.			

Maximum Marks: 08 **(OBJECTIVE TYPE)** Time Allowed: 15 Min.

NOTE: Tick The Correct Option:

01: Isotopes differ in:

(a) Properties which depend upon mass
(b) Arrangement of electrons in orbitals
(c) Chemical properties
(d) The extent to which they may be affected in electromagnetic field.

02: The mass of one mole of electron is:

(a) 1.008 mg (b) 0.55 mg (c) 0.184 mg (d) 1.673 mg

03: One mole of SO_2 contains:

(a) 6.02×10^{23} atoms of Oxygen (b) 18.1×10^{23} molecules of SO_2
(c) 6.02×10^{23} atoms of Sulphur (d) 4 gram atoms of SO_2

01: Tin has isotopes:

(a) 8 (b) 9 (c) 10 (d) 11

02: The number of carbon atoms in 22.0 g of CO_2 is:

(a) 3.01×10^{23} (b) 6.02×10^{23} (c) 3.01×10^{22} (d) 6.02×10^{22}

01: Masses of atoms range from:

(a) 10^{-27} g to 10^{-25} g (b) 10^{-30} kg to 10^{-27} kg (c) 10^{-27} kg to 10^{-25} kg (d) 10^{-30} g to 10^{-27} g

02: One amu is _____ of the mass of one Mg atom.

(a) $\frac{1}{2}$ (b) $\frac{1}{12}$ (c) $\frac{1}{24}$ (d) $\frac{1}{6}$

03: If 8 g of H_2 is allowed to react with 32 g of O_2, the limiting reactant will be:

(a) H_2 (b) O_2 (c) Both (d) None

Maximum Marks: 32 **(SUBJECTIVE TYPE)** Time Allowed: 60 Min.

SECTION-I

Q.2: GIVE BRIEF ANSWERS TO THE FOLLOWING QUESTIONS: (20)

i. What is J. Berzelius famous for?
ii. What are ions? Under what conditions are they produced?
iii. Why do most of the elements have fractional atomic masses?
iv. Define gram formula. Give two examples.
v. 180 g of glucose and 342 g of sucrose have the same number of molecules but different number of atoms present in them. Give reason.
vi. Calculate the mass in grams of 2.74 moles of $KMnO_4$.
vii. Define Avogadro's number. Give an equation to relate the Avogadro's number and the mass of an element.

viii. One mole of two different gases, say H_2 and CH_4, has different masses but same volume. Explain.

ix. What are the limitations of a chemical equation?

x. What are the steps to identify a limiting reactant?

SECTION-II

NOTE: Attempt All Questions: (12)

Q.3: What is stoichiometry? Give its assumptions. Mention two important laws which help to perform the stoichiometric calculations..

Q.4: Mg metal reacts with HCl to give hydrogen gas. What is the minimum volume of HCl solution (27% by weight) required to produce 12.1 g of H_2? The density of HCl solution is 1.14 g/cm^3.

Q.5: Silicon carbide (SiC) is an important ceramic material. It is produced by allowing sand (SiO_2) to react with carbon at high temperature. $SiO_2 + 3C \longrightarrow SiC + 2CO$
When 100 kg sand is reacted with excess of carbon, 51.4 kg of SiC is produced. What is the percentage yield of SiC?