



## ASSIGNMENT NO: 1

**SUBJECT: CHEMISTRY**

**CLASS-XI**

**April & May'2026**

Chapter:1 Some basic concept of chemistry

Very short answer type questions(2 marks)

1. Explain the following terms:  
(a) Avogadro number                      (b) Galussac law of gaseous combination
2. Find moles and atoms in 10g calcium.
3. Define the following :(a) Molarity (b) Mole fraction
4. Find molarity, molality and mole fraction for 40% aqueous solution of urea, if density of solution is 1.2g/ml
5. Explain the following terms:  
(a) Photo electric effect                      (b) Threshold energy
6. Explain E.M.wave theory with diagram.

Short answer type questions(3 marks)

7. A wave of frequency  $2 \times 10^{15}$  Hz fall on metal surface whose threshold frequency is  $4 \times 10^{14}$  Hz .find kinetic energy of electron emitted.
8. Find ratio of energies of two waves A & B whose wave length are 200pm and 400pm.(3 marks)
9. Find number of quanta of 200Pm emitted from 40w bulb in 5 second.
10. In 0.5M, 50ml aqueous solution if glucose 150ml water is added find molarity after adding water.
11. An organic compound contains 75% carbon, 25% hydrogen, if molar mass of compound is 16g/ml then find empirical and molecular formula.
12. What is limiting reagent? Explain with example.
13. 1kg hydrogen reacts with 2Kg nitrogen gas to prepare ammonia, Find the following:  
(a) Limiting reagent (b) mass of ammonia produce (c) How much other reactant left.

Long answer type questions (5 marks)

14. Explain hydrogen spectrum. mention all series in it with ground state.
15. (a) Explain A/T H.U.P. electron cannot locate in nucleus.  
(b) De-Broglie equation cannot apply on moving cricket ball. Explain.
16. (a) Find electronic configuration of  $\text{Mn}^{2+}$  and  $\text{Sc}^{3+}$  [At.No. Mn=25 Sc=21].  
(b) Why Cu and Cr have exceptional electronic configuration?
17. An organic compound has composition C=57.8%, H=3.6% remaining is oxygen if vapour density is 83 g/ml. Find empirical and molecular formula of compound.
18. (a) Among 1 molar and 1 molal solution which has more strength.  
(b) Among molarity and molality which is preferred by you also explain.
19. (a) In 0.4 M  $\text{Na}_2\text{SO}_4$  solution find Number of  $\text{Na}^+$  and  $\text{SO}_4^{2-}$  ions.  
(b) In 500ml aqueous solution of urea  $3.011 \times 10^{-22}$  molecules are present then find molarity of sol.
20. Find molarity, molality and mole fraction of 40% (w/w) solution of glucose if  $d=1.2\text{g/ml}$ .