MODEL QUESTION PAPER FOR FORMATIVE ASSESSMENT

TIME: 1 HOUR **SUB: CHEMISTRY** **MARKS: 25**

PART-A

Answer any four of the following:- 1x4=4

1. Express 5g cm^{-3} in Kg m^{-3}.
2. Define molar mass.
3. Write the following number in the scientific notation: 0.000456
4. What are cathode rays?
5. State Pauli's exclusion principle.

PART-B

Answer any four of the following:- 2x4=8

6. What are homogeneous mixtures? Give an example.
7. Mention the significant figures in 1206 and 1260.
8. Calculate the mass percent of nitrogen in urea (NH_2CONH_2). [H=1U, N=14U, C=12U, O=16U]
9. What are isotopes? Give example.
10. Write the electronic configuration of elements with atomic number 17 and 29.

PART- C

Answer any two of the following:- 4x2=8

11. a) Write any two postulates of Dalton's atomic theory
    b) State 'law of definite proportions'. OR
    a) Calculate the number of moles of glucose in 36 g of glucose ($C_6H_{12}O_6$) given molar masses of carbon, hydrogen, oxygen atoms as 12g, 1g, 16g respectively.
    b) State law of 'conservation of mass'.
12. Define mole fraction, calculate the mole fraction of CO_2 and H_2O, when 44 g of CO_2 dissolved in 36g of H_2O.
13. a) How is wave length related to frequency for an electromagnetic radiation? Calculate the wave number of the yellow light emitted from a sodium lamp of wave length 580nm.

    b) Which has more energy? 5p or 3d orbital.

PART-D

Answer any one of the following: 5x1=5

14. a) What is empirical formula? A compound contains 54.55% carbon, 9.09% hydrogen and rest being oxygen. Determine its empirical formula.
    b) Write the prefix for the multiple 10^{-3}. (4+1)

    OR

    a) What is a limiting reagent? 8g of hydrogen is reacted with 80g of oxygen to form water. Determine the mass of water obtained and identify the limiting reagent?

    Given: $2H_2 + O_2 \rightarrow 2H_2O$

    b) Define molality. (4+1)
15. a) Write the significance of four quantum numbers.
    b) Name the series of spectral lines obtained in the visible region of hydrogen spectrum.

****