



JYOTI PUBLIC SCHOOL
Holiday Homework Assignment, (2018-19)

Class-XI

Sub-Chemistry

Topic

1. : Some Basic concepts of chemistry
2. : Structure of atom .

Q-1. How many significant figures are present in the following?

- (i) 0.0025 (ii) 208 (iii) 500.0 (iv) 2.0034

Q-2. Explain law of conservation of mass.

Q-3. Explain Dalton's atomic theory.

Q-4. Calculate the molarity of a solution of ethanol in water in which the mole fraction of ethanol is 0.040 (assume the density of water to be one)

Q-5. Calculate the number of atoms in each of the following (i) 52 moles of Ar
(ii) 52 u of He (iii) 52 g of He .

Q-6. How much Copper can be obtained from 100g of Copper sulphate (CuSO_4)

Q-7. What is the concentration of sugar ($\text{C}_{12}\text{H}_{22}\text{O}_{11}$) in mole L^{-1} if its 20g are dissolved in enough water to make a final volume up to 2L ?

Q-8. : Explain Law of Constant proportions .

Q-9.: Define the following ---

- (a) molarity (b) molality (c) mole fraction (d) Significant figures .

Q-10. Calculate the molarity of NaOH in the solution prepared by dissolving its 4g in enough water to form 500 ML of the solution .

Q-11. Indicate the number of unpaired electron in-
(a) P (b) Si (c) Cr (d) Fe (e) Kr .

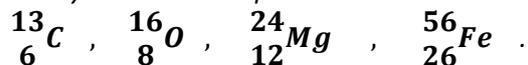
Q-12. (a) How many Sub-Shells are associated with $n=4$

(b) How many electrons will be present in the Sub-Shells having m value of $-1/2$ for $n=4$.

Q-13. How many electrons in an atom may have the following quantum numbers?

- (a) $n=4$, $m_s = -1/2$ (b) $n=3$, $l=0$

Q-14. How many neutrons and protons are there in the following nuclei ?



Q-15. Yellow light emitted from a sodium lamp has a wave length (λ) of 580 nm. Calculate the frequency (ν) and wave number ($\bar{\nu}$) of the yellow light .

Q-16. Explain Pauli exclusion Principle .

Q-17. Explain Hund's rule of maximum multiplicity .

Activity :-

1. Revise chapter -1, 2 and 3

2. Make a project on ---

On Radio active- Radioactivity , properties rays .

3. Make a colourful diagram on chart paper on the allotted topics –

(1) Periodic table ----- Roll No- 1, 2

(2) Preparation of hydrogen ----- Roll No- 3, 4

(3) Extraction of metal ----- Roll No- 5

(4) Acid names and formula- ----- Roll No- 6

(5) Properties of organic compound - --- Roll No- 7