



JYOTI PUBLIC SCHOOL
Holiday Homework Assignment (2018-19)

Class-12th

Sub-Chemistry

1. Revise Chapter 1, 2, 3, and 10

2. Make a project on—

- (i) Different types of defect in crystals.
- (ii) Different types of colloid solution .

3: Make a ray diagram on colourful chart on the allotted topics.

- (i) Functional group ----- Roll No- 1
 - (ii) Coordination Compound ----- Roll No- 2
 - (iii) Galvanic Cell ----- Roll No- 3
 - (iv) Fuel cell ----- Roll No- 4
 - (v) Danial Cell ----- Roll No- 5
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Topic

1- The solid state

2- Solution

3- Electrochemistry

Q-1(i) What is meant by the term 'coordination number'?

(ii) What is the coordination number of atoms?

- (a) In a cubic close – packed structure?
- (b) In a body – centred close packed structure.

Q-2. How will you distinguish between the following pairs of terms?

- (i) Hexagonal close –packing and cubic close – packing .
- (ii) Crystal lattice and Unit cell?
- (iii) Tetrahedral Void and octahedral Void.

Q-3. Calculate the efficiency of packing in case of metal crystal for -----

- (i) Simple cubic .
- (ii) Body centred cubic .
- (iii) Face centred cubic .

Q-4. Niobium crystallises in body –centred cubic structure .If density is 8.55gcm^{-3} , calculate atomic radius of Niobium using its atomic mass $93u$.

Q-5. Analysis shows that nickel has the formula $\text{Ni}_0.98\text{O}_{1.00}$. What fractions of nickel exist as Ni^{2+} and Ni^{3+} ions .

Q-6. Calculate the mole fraction of benzene (C_6H_6) and carbon (CCl_4) if 22g of benzene is dissolved in 122g of carbon tetrachloride.

Q-7. Calculate the molarity of each of the following solution –

(a) 30g of $\text{Co}(\text{NO}_3)_2 \cdot 6\text{H}_2\text{O}$ in 4.3 L of solution

(b) 30 ml of 0.5 M H_2SO_4 diluted to 500ml .

Q-8. Calculate (a) Molarity (b) Molality (c) Mole fraction of KI is $1.2.2 \text{ g mL}^{-1}$

Q-9 Boiling point of water at 750mmhg is 99.63°C How much sucrose is to be added to 500 g of water such that it boils at 100°C Molal elevation constant for water is $0.52 \text{ K Kg mol}^{-1}$.

Q-10. Define the followings

(a) Osmotic pressure

(b) Ferro magnetism

(c) Ferri magnetism

(d) Para magnetism

(e) Coordination number

(f) ideal solution

(g) Non ideal solution

Q-11 Explain Henry law and Raoult law.