



ST. MARYS CO-ED SCHOOL, HARDA

ONLINE CLASS HOME WORK

SUBJECT – CHEMISTRY

CLASS- XI

- Q1. Ferric sulphate is used in water and sewage treatment and in removal of suspended impurities. Its molecular formula is $\text{Fe}_2(\text{SO}_4)_3$. Calculate the mass percentage of iron, sulphur and oxygen in this compound.
- Q2. Calculate the percentage of water of crystallisation in the sample of Mohr salt, $\text{FeSO}_4(\text{NH}_4)_2\text{SO}_4 \cdot 6\text{H}_2\text{O}$.
- Q3. (I) Calculate the mass percentage of various elements present in magnesium sulphate, (MgSO_4) . (II) Calculate the percentage of cation in ammonium dichromate.
- Q4. A compound (molecular mass = 246) has the following data :

Element	% Composition	Relative no. of atoms
A	9.76	0.406
B	13.01	0.406
C	26.01	1.625
C	51.22	2.846

From the data out

- Atomic masses of the elements A, B, C and D.
 - Simple ratio,
 - Molecular formula of the compound.
- Q5. An organic compound containing carbon, hydrogen and oxygen gave the following percentage composition:
 $\text{C} = 40.68\%$, $\text{H} = 5.08\%$
The vapour density of the compound is 59. Calculate the molecular formula of the compound.
- Q6. An oxide of nitrogen contains 30.43% of nitrogen. The molecular weight of the compound is equal to 92 a.m.u. calculate the molecular formula of the compound.

Q7. A crystalline salt when heated becomes anhydrous and loses 51.2% of its weight. The anhydrous salt on analysis gave the following percentage composition: Mg = 20.0%, S = 26.66%, O = 53.33%

Calculate the molecular formula of the anhydrous salt and the crystalline salt. Molecular weight of the anhydrous salt is 120.

Q8. A compound on analysis gave the following percentage composition : sodium = 18.59%, sulphur = 25.80%, hydrogen = 4.03% and oxygen = 51.58%. calculate the molecular formula of crystalline salt on the assumption that all the hydrogen atoms in the compound are present in combination with oxygen as water of crystallisation. The molecular weight of the compound is 248 a.m.u.

Q9. The compound adrenaline is released in the human body in times of stress. It was found by experiments to have the composition 56.8% C 6.50% H, 28.4% O and 8.28% N. what is the empirical formula of the adrenaline?

