



Cosmo School

Chemistry

Class-10

Chapter-6

Concept of Mole and Chemical counting

Subject teacher- Syeeda Sultana

Revision Work sheet -2

Date-10.10.2020

Write down the answers of the following questions on your copy.

Questions:

1. What is percent composition of an element?
2. What is structural formula?
3. What do you mean by empirical & molecular formula?
4. Differentiate between the empirical and molecular formula.
5. Determine the percent composition of water in blue-vitriol.
6. Determine the percent composition of the elements of the following compounds:
H₂O, H₂SO₄, Na₂CO₃, NaOH, etc.
7. How can we find out the empirical formula from molecular formula of the following compounds?
C₆H₁₂O₆, C₃H₈, H₂O₂.
8. In a compound of carbon and hydrogen, carbon is 92.31%. Determine the empirical formula & molecular formula of that compound. The molecular mass of the compound is 78.
9. In an organic acid there are C=26.7%, H=2.24% and O=71.06%. If the vapor density of the compound is 45, what will be the molecular formula and empirical formula of that compound? [Hints: Molecular mass= 2 × vapor density]
10. By analyzing 20 g of compound 'A', 0.226 g hydrogen, 7.19 g sulphur and 12.584 g oxygen obtained. The molecular mass of the compound is 178. Determine the molecular formula of the compound 'A'.
11. What is chemical reaction and chemical equation?
12. What is balanced chemical equation?
13. What is reactants and products?
14. Why balancing of a chemical equation should be needed?
15. How can you write a complete chemical reaction between CaCO₃ & HCl?
16. Balancing & completing the following equations:
 - a) CaCO₃ (s) + HCl → CaCl₂ (g) + CO₂ (g) + H₂O (l)
 - b) Mg (NO₃)₂ (s) → MgO (s) + ? + O₂ (g)
 - c) Al₂O₃ (s) + HCl (aq) → ?
 - d) AgNO₃ (s) → Ag (s) + NO₂ (g) + ?
 - e) Na₂CO₃ (s) + HCl (aq) → ?
 - f) Na₂CO₃ + 2CH₃COOH → ?
 - g) 2HCl + Na₂CO₃ → 2NaCl + ? + 2H₂O
 - h) FeSO₄ + 2NaOH → ? + Na₂SO₄