

BRAIN INTERNATIONAL SCHOOL

Chemistry Assignment

Class XI

APR'18

Some basic concept of chemistry

1. Define law of multiple proportions with example.
2. Calculate the molecular mass of $C_{12}H_{22}O_{11}$
3. Calculate the no. of atoms present in 11.5 litres of H_2 at N.T.P.
4. Calculate the no. of moles of 5.68 gm. of iron.
5. What is the effect of temp. on molality and molarity?
6. An atom of an element is 10.1 times heavier than the mass of a carbon atom. What is its mass in a.m.u.?
7. Explain with example, limiting reagent.
8. Differentiate between molarity and molality.
9. 1.82 g. of glucose (molar mass-180) is dissolved in 25g of water. Calculate (a) the molality (b) mole fraction of glucose and water.
10. The molecular mass of an organic compound is 90 and its %age composition is C- 26.6%; O=71.1% and H=2.2%. Determine the molecular formula of the compound.
11. How chemical equations are made more informative?
12. How Avogadro's hypothesis used to deduce atomicity of elementary gases?
13. Verify law of Reciprocal proportions or law of equivalent proportions, with example.
14. Define formula mass and how does it differs from molecular mass?
15. Discuss Dalton's Atomic theory and its limitations?
16. Discuss Modern Atomic theory. Why it is better than Dalton's Atomic theory?
17. Commercially available sulphuric acid contains 91% acid by mass and has a density of 1.83g mL^{-1}
 - (i) Calculate the molarity of the solution
 - (ii) volume of concentrated acid required to prepare 3.5L of 0.50 M H_2SO_4