INTERNATIONAL INDIAN SCHOOL, RIYADH

SA-2 Worksheet (2013-14)

Sub : Chemistry

Class : IXth

Chapter – Atoms and Molecules

1) Define the following –
   a) Polyatomic ion
   b) Atomic Mass Unit
   c) Relative Atomic mass
   d) Molecules
   e) Atoms
   f) Valency
   g) Chemical Formula

2) Write the chemical formulae of the following compounds –
   a) Aluminium Sulphate
   b) Ammonium Hydroxide
   c) Sodium Carbonate
   d) Barium Chloride
   e) Potassium Nitrate
   f) Potassium Carbonate
   g) Calcium Carbonate
   h) Sodium Chloride
   i) Aluminum Nitride
   j) Potassium Fluoride
   k) Cupric Chloride
   l) Zinc Sulphate
   m) Calcium Bicarbonate

n) Sodium Sulphide
o) Aluminium Phosphate

3) How many atoms are present in one molecule of Ozone?
4) An element X has a valency of 3. Write the formula of its oxide.
5) What is meant by Avogadro Constant?
6) What is meant by molar mass?
7) What is an ion? Write the symbols of Calcium ion and Aluminium ion.
8) State the postulates of Dalton's atomic theory which explains the law of conservation of mass.
9) Name the smallest particle of an element which can retain all the chemical properties.
10) Calculate the number of moles in 34 g of NH_3
(atomic mass of N = 14u; H= 1u)
11) Calculate the mass of 3.011×10^{23} number of "N" atoms.
(atomic mass of N = 14u)
12) Calculate the mass of 1 molecule of Oxygen gas.
(atomic mass of Oxygen = 16u)
13) Give one word for the following
a) Positively charged ion.
b) A group of atoms carrying a charge.
14) 2.8 g of Nitrogen gas was allowed to react with 0.6 g of Hydrogen gas to produce 3.4 g of Ammonia. Show that these observations are in agreement with the Law of Conservation of Mass. State the law of Conservation of Mass.
15) An element E has a valency of 4.
a) What will be the formula of its Chloride?
b) What will be the formula of its Sulphide?
16) Calculate the number of Iron atoms in piece of Iron weighing 2.8g
(atomic mass of Iron = 56u)
17) Convert 12.044×10^{21} molecules of Sulphur dioxide into moles.