

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.