



INDIAN SCHOOL DARSAIT
DEPARTMENT OF CHEMISTRY

Subject : CHEMISTRY	Topic : Work sheet-Atoms and molecules-I	Date of Worksheet : 24.10.2017
Name of the Student : _____	Class & Division : IX----	Roll Number : ____

- 1 State whether the symbols of the following elements given are correct or not. If not, correct it.

Cobalt – CO , Sodium – S , Zinc – ZN , Mercury – Me , Potassium – P
Copper – Co , Helium – He , Gold – Gl , Lithium – LI , Beryllium – By

- 2 Classify the following into monoatomic, diatomic, triatomic and polyatomic species.

Phosphorus , Sodium, Calcium, Sulphur, Helium, Nitrogen, Ozone, Oxygen, Iron,
Copper, Chlorine, Neon, Bromine.

- 3 Write the symbols and valencies of the following ions :

<i>Name of the ion</i>	<i>Symbol</i>	<i>Valency</i>	Sulphide	<i>Symbol</i>	<i>Valency</i>
Sulphate			Nitride		
Nitrate			Chloride		
Carbonate			Bromide		
Phosphate			Potassium		
Sulphite			Hydroxide		
Hydrogen carbonate			Calcium		
Oxide			Magnesium		

- 4 Write the chemical formulae of the following compounds :

a) Sodium chloride b) Calcium nitrate c) Aluminium chloride d) Sodium sulphate
e) Ammonium carbonate f) Magnesium hydroxide g) Sodium sulphite h) Sodium hydrogen carbonate i) Aluminium nitride j) Potassium nitrate

- 5 Name the cation and the anion which constitute the molecule of magnesium oxide.

- 6 Write the names of the following compounds:

a. $Al_2(SO_4)_3$ b. NH_4OH c. $Mg(NO_3)_2$ d. $CaSO_4$

- 7 Show that water illustrates the law of constant proportions.

- 8 Give one word for the following:

a. Positively charged ion b. A group of atoms carrying a charge

- 9 100 gm of Calcium carbonate ($CaCO_3$) decomposes on heating to form 56 gm of calcium oxide and 42 gm of carbon dioxide. Is this statement in accordance with the law of conservation of mass? If this is to satisfy the law, how much carbon dioxide should be formed?

- 10 Magnesium and oxygen combine in the ratio 3:2 by mass to form magnesium oxide. What mass of oxygen gas will be required to react completely with 24 gm of Mg?

- 11 Find the ratio by mass of the combining elements in the following compounds

a. $MgCl_2$ b. H_2SO_4 c. CaO