SNC 2D Major Task – Chemistry - Practice Name: Soln

1. Compare and contrast ionic and covalent compounds with respect to: (4 marks)

i) types of elements that form each compound

Ionic – metals + Non metals

Molecular – non metals + Non metals

ii) the type of bonds that form in each compound

Ionic – opposite charge attraction (cation + anion)

Molecular – electron sharing

2. Complete the chart by identifying the type of compound and writing its name or formula.(20 marks)

Formula	Ionic (I) or Covalent (C) Molecule	Name
N_2O_5	covalent	diNitrogen pentoxide
$\overset{+2}{Mg}\overset{-2}{SO_4}$	Ionic	magnesium Sulfate
$\overset{+2}{Ca}\ Cl_2$	Ionic	Calcium chloride
$\overset{+3}{Fe_2}(\overset{-2}{CO_3})_3$	Ionic	Iron (III) carbonate
H_3N	covalent	trihydrogen mononitride
$\overset{+2}{Zn}(\overset{-1}{OH})_2$	ionic	zinc hydroxide
P_3O_5	covalent	triphosphorus pentoxide
$\overset{+2}{Sn_3}(\overset{-3}{PO_4})_2$	Ionic	Tin II Phosphate
$\overset{+1}{Li}\overset{-1}{OH}$	Ionic	Lithuim Hydroxide
$\overset{+4}{Sn}(\overset{-2}{SO_4})_2$	Ionic	tin (IV) sulfate
$\overset{+2}{Ca}(\overset{-1}{C_2H_3O_2})_2$	Ionic	calcium acetate

3. State the **Law of Conservation of Matter**.(2 marks)

Matter cannot be created or destroyed in a chemical reaction

4. State the **Law of Conservation of Mass**.(2 marks)

The total mass of reactants is alway equal to the mass of the products.

5. The skeleton equation is given, write the balanced chemical equation beside it. (10 marks)

a. $Na + F_2 \rightarrow NaF$ $2Na + F_2 \rightarrow 2NaF$

b. $CaCO_3 \rightarrow CO_2 + CaO$ $CaCO_3 \rightarrow CO_2 + CaO$

c. $H_2SO_4 + Al \rightarrow Al_2(SO_4)_3 + H_2$

$3H_2(SO_4) + 2Al \rightarrow Al_2(SO_4)_3 + 3H_2$