<u>Chemistry 20</u> : Reaction types:

1. **Numerical response question**

Left justify your answer in the boxes provided.

Consider the list of reactions given below

1. $Zn_{(s)} + NiCl_{2(aq)} \rightarrow ZnCl_{2(aq)} + Ni_{(s)}$
2. $CH_{4(g)} + 2O_{2(g)} \rightarrow CO_{2(g)} + 2H_2O_{(g)}$
3. $3CaCl_{2(aq)} + Al_2(SO_4)_{3(aq)} \rightarrow 3CaSO_{4(s)} + 2AlCl_{3(aq)}$
4. $N_{2(g)} + 3H_{2(g)} \rightarrow 2NH_{3(g)}$
5. $2H_2O_{(l)} \rightarrow 2H_{2(g)} + O_{2(g)}$

Match the numbers with the following reaction types:

_____ , _____ , _____

Synthesis double replacement single replacement

2. **Numerical response question**

Left justify your answer in the boxes provided

Gerald and Lyndon are performing experiments in the chemistry lab. Lyndon wants to produce carbon dioxide ($CO_{2(g)}$) and water ($H_2O_{(g)}$).

Identify the possible reactant(s) that he might use to accomplish this:

1. $O_{2(g)}$
2. $Cl_{2(g)}$
3. $C_3H_{8(g)}$
4. $CCl_{4(g)}$
5. $C_5H_{10(g)}$
6. $C_2H_5OH_{(l)}$
7. $CF_{4(g)}$

Put the answers in ascending order.

3. **Numerical response question**

Left justify your answer in the boxes provided.

Consider the incomplete single replacement reaction below.

$Li_{(s)} + MgF_{2(s)} \rightarrow$ _____

Predict the product(s) of this reaction using the list below.

1. $Li_2Mg_{(s)}$
2. $Mg_{(s)}$
3. $LiF_{(s)}$
4. $Li_{(s)}$
5. $LiF_{(aq)}$

Put the answer(s) in ascending order

4. **Numerical response question**

Left justify your answer in the boxes provided.

Consider the list of reactions given below

1. $Cu_{(s)} + NiCl_{2(aq)} \rightarrow CuCl_{2(aq)} + Ni_{(s)}$
2. $CH_{4(g)} + 2O_{2(g)} \rightarrow CO_{2(g)} + 2H_2O_{(g)}$
3. $3CuCl_{2(aq)} + Al_2(SO_4)_{3(aq)} \rightarrow 3CuSO_{4(s)} + 2AlCl_{3(aq)}$
4. $Cl_{2(g)} + H_{2(g)} \rightarrow 2HCl_{(g)}$
5. $2H_2O_{2(l)} \rightarrow H_{2(g)} + O_{2(g)}$

Match the numbers with the following reaction types:

_____ , _____ , _____

decomposition combustion formation

Solutions:

1. 413
2. 1356
3. 23
4. 524