CHEMICAL REACTIONS2

PART A : Balance and determine the following reactions.

1)____ $NaBr$ + ____ H_3PO_4 → ____ Na_3PO_4 + ____ HBr Type of reaction: _____

2)____ $Ca(OH)_2$ + ____ $Al_2(SO_4)_3$ → ____ $CaSO_4$ + ____ $Al(OH)_3$ Type of reaction: _____

3)____ Mg + ____ Fe_2O_3 → ____ Fe + ____ MgO Type of reaction: _____

4)____ C_2H_4 + ____ O_2 → ____ CO_2 + ____ H_2O Type of reaction: _____

5)____ $PbSO_4$ → ____ $PbSO_3$ + ____ O_2 Type of reaction: _____

6)____ NH_3 + ____ I_2 → ____ N_2I_6 + ____ H_2 Type of reaction: _____

7)____ H_2O + ____ SO_3 → ____ H_2SO_4 Type of reaction: _____

8)____ H_2SO_4 + ____ NH_4OH → ____ H_2O + ____ $(NH_4)_2SO_4$ Type of reaction: _____

PART B: Balance the following reactions.

1)___ $NaNO_3$ + ___ PbO → ___ $Pb(NO_3)_2$ + ___ Na_2O

2)___ AgI + ___ $Fe_2(CO_3)_3$ → ___ FeI_3 + ___ Ag_2CO_3

3)___ $C_2H_4O_2$ + ___ O_2 → ___ CO_2 + ___ H_2O

4)___ $ZnSO_4$ + ___ Li_2CO_3 → ___ $ZnCO_3$ + ___ Li_2SO_4

5)___ V_2O_5 + ___ CaS → ___ CaO + ___ V_2S_5

6)___ $Mn(NO_2)_2$ + ___ $BeCl_2$ → ___ $Be(NO_2)_2$ + ___ $MnCl_2$

7)___ $AgBr$ + ___ $GaPO_4$ → ___ Ag_3PO_4 + ___ $GaBr_3$

8)___ H_2SO_4 + ___ $B(OH)_3$ → __ $B_2(SO_4)_3$ + ___ H_2O

9)__ S_8 + ___ O_2 → ___ SO_2

10)___ Fe + ___ $AgNO_3$ → ___ $Fe(NO_3)_2$ + ___ Ag

11)____ $AlBr_3$ + ____ K → ____ KBr + ____ Al

12)____ FeO + ____ PdF_2 → ____ FeF_2 + ____ PdO

13)____ P_4 + ____ Br_2 → ____ PBr_3

14)____ $LiCl$ + ____ Br_2 → ____ $LiBr$ + ____ Cl_2

15)____ $PbBr_2$ + ____ HCl → ____ HBr + ____ $PbCl_2$

16)____ $CoBr_3$ + ____ $CaSO_4$ → ____ $CaBr_2$ + ____ $Co_2(SO_4)_3$

17)____ Na_3P + ____ CaF_2 → ____ NaF + ____ Ca_3P_2

18)____ Mn + ____ HI → ____ H_2 + ____ MnI_3

19)____ Li_3PO_4 + ____ $NaBr$ → ____ Na_3PO_4 + ____ $LiBr$

20)____ CaF_2 + ____ Li_2SO_4 → ____ $CaSO_4$ + ____ LiF

21)____ HBr + ____ $Mg(OH)_2$ → ____ $MgBr_2$ + ____ H_2O

22)____ $LiNO_3$ + ____ $CaBr_2$ → ____ $Ca(NO_3)_2$ + ____ $LiBr$

23)____ $AgNO_3$ + ____ Li → ____ $LiNO_3$ + ____ Ag

24)____ $Si(OH)_4$ + ____ $NaBr$ → ____ $SiBr_4$ + ____ $NaOH$

25)____ $NaCN$ + ____ $CuCO_3$ → ____ Na_2CO_3 + ____ $Cu(CN)_2$

PART C: Write and balance the following chemical equations.

1) When dissolved beryllium chloride reacts with dissolved silver nitrate in water, aqueous beryllium nitrate and silver chloride powder are made.

2) When isopropanol (C_3H_8O) burns in oxygen, carbon dioxide, water, and heat are produced.

3) When dissolved sodium hydroxide reacts with sulfuric acid (H_2SO_4), aqueous sodium sulfate, water, and heat are formed.

4) When fluorine gas is put into contact with calcium metal at high temperatures, calcium fluoride powder is created in an exothermic reaction.

5) When sodium metal reacts with iron (II) chloride, iron metal and sodium chloride are formed.