ANSWER KEY for BALANCING PRACTICE #3

Part 1:

1) $MgCl_2 + 2NH_4NO_3 \rightarrow Mg(NO_3)_2 + 2NH_4Cl$

2) $FeCl_3 + 3KOH \rightarrow Fe(OH)_3 + 3KCl$

3) $Na_2CO_3 + Ca(OH)_2 \rightarrow 2NaOH + CaCO_3$

4) $CaCl_2 + 2HNO_3 \rightarrow Ca(NO_3)_2 + 2HCl$

5) $(NH_4)_2SO_4 + Mg(NO_3)_2 \rightarrow 2NH_4NO_3 + MgSO_4$

6) $Ca(HCO_3)_2 + ZnCl_2 \rightarrow CaCl_2 + Zn(HCO_3)_2$

7) $BaO + ZnCl_2 \rightarrow BaCl_2 + ZnO$

8) $2CrCl_3 + 3H_2SO_4 \rightarrow Cr_2(SO_4)_3 + 6HCl$

9) $2AgNO_3 + K_2S \rightarrow Ag_2S + 2KNO_3$

10) $BaBr_2 + 2NaI \rightarrow BaI_2 + 2NaBr$

11) $Fe(NO_2)_2 + 2NH_4OH \rightarrow Fe(OH)_2 + 2(NH_4)NO_2$

12) $CaCO_3 + 2HC_2H_3O_2 \rightarrow Ca(C_2H_3O_2)_2 + H_2CO_3$
$CaCO_3 + 2HC_2H_3O_2 \rightarrow Ca(C_2H_3O_2)_2 + CO_2 + H_2O$

13) $2FeCl_3 + 3H_2SO_4 \rightarrow Fe_2(SO_4)_3 + 6HCl$

14) $AgNO_3 + NaCl \rightarrow AgCl + NaNO_3$

15) $Zn(CN)_2 + 2NaOH \rightarrow Zn(OH)_2 + 2NaCN$

16) $3Ba(NO_3)_2 + 2H_3PO_4 \rightarrow Ba_3(PO_4)_2 + 6HNO_3$

PART 2:

17) $2H_2 + O_2 \rightarrow 2H_2O$ SYNTHESIS / COMBINATION

18) $S_8 + 12O_2 \rightarrow 8SO_3$ SYNTHESIS / COMBINATION

19) $2HgO \rightarrow 2Hg + O_2$ DECOMPOSITION

20) $2Na + 2H_2O \rightarrow 2NaOH + H_2$ SINGLE REPLACEMENT (Single Displacement)

21) $C_{10}H_{16} + 8Cl_2 \rightarrow 10C + 16HCl$ SINGLE REPLACEMENT (Single Displacement)

22) $2N_2 + O_2 \rightarrow 2N_2O$ SYNTHESIS / COMBINATION

23) $2C_2H_2 + 5O_2 \rightarrow 4CO_2 + 2H_2O$ COMPLETE COMBUSTION

24) $C_7H_{16} + 11O_2 \rightarrow 7CO_2 + 8H_2O$ COMPLETE COMBUSTION

25) $SiO_2 + 4HF \rightarrow SiF_4 + 2H_2O$ DOUBLE REPLACEMENT (Double Displacement)

26) $2KClO_3 \rightarrow 2KCl + 3O_2$ DECOMPOSITION

27) $4KClO_3 \rightarrow 3KClO_4 + KCl$ DECOMPOSITION

28) $P_4O_{10} + 6H_2O \rightarrow 4H_3PO_4$ SYNTHESIS / COMBINATION

29) $4Sb + 3O_2 \rightarrow Sb_4O_6$ SYNTHESIS / COMBINATION

30) $C_3H_8 + 5O_2 \rightarrow 3CO_2 + 4H_2O$ COMPLETE COMBUSTION

31) $8H_2S + 8Cl_2 \rightarrow S_8 + 16HCl$ SINGLE REPLACEMENT (Single Displacement)

32) $3Fe + 4H_2O \rightarrow Fe_3O_4 + 4H_2$ SINGLE REPLACEMENT (Single Displacement)

33) $Fe_2(SO4)_3 + 6KOH \rightarrow 3K_2SO_4 + 2Fe(OH)_3$ DOUBLE REPLACEMENT (Double Displacement)

34) $Na_2CO_3 + 2HCl \rightarrow 2NaCl + H_2CO_3$ DOUBLE REPLACEMENT (Double Displacement)

35) $H_2CO_3 \rightarrow CO_2 + H_2O$ DECOMPOSITION

36) $P_4 + 5O_2 \rightarrow 2P_2O_5$ SYNTHESIS / COMBINATION

37) $2H_3AsO_4 \rightarrow As_2O_5 + 3H_2O$ DECOMPOSITION

38) $Al_2(SO_4)_3 + 3Ca(OH)_2 \rightarrow 2Al(OH)_3 + 3CaSO_4$ DOUBLE REPLACEMENT (Double Displacement)

39) $FeCl_3 + 3NH_4OH \rightarrow Fe(OH)_3 + 3NH_4Cl$ DOUBLE REPLACEMENT (Double Displacement)

40) $6H_3BO_3 \rightarrow H_4B_6O_{11} + 7H_2O$ DECOMPOSITION