Chemistry 090 – Unit 6
Answers to Practice Problems

Balance the following and indicate the type of chemical reaction.

1. $Li_2O + H_2O \rightarrow 2\ LiOH$ **combination**

2. $2\ HgO \rightarrow 2\ Hg + O_2$ **decomposition**

3. $Zn(OH)_2 + H_2SO_4 \rightarrow ZnSO_4 + 2\ H_2O$ **double replacement: neutralization**

4. $2\ PbO_2 \rightarrow 2\ PbO + O_2$ **decomposition**

5. $2\ Al + 6\ HCl \rightarrow 2\ AlCl_3 + 3\ H_2$ **single replacement**

6. $Fe_2(SO_4)_3 + 3\ Ba(OH)_2 \rightarrow 3\ BaSO_4\ (s) + 2\ Fe(OH)_3\ (s)$ **double replacement: precipitation**

7. $2\ Al + 3\ CuSO_4 \rightarrow Al_2(SO_4)_3 + 3\ Cu$ **single replacement**

8. $3\ Mg + N_2 \rightarrow Mg_3N_2$ **combination**

9. $3\ FeCl_2 + 2\ Na_3PO_4 \rightarrow Fe_3(PO_4)_2\ (s) + 6\ NaCl$ **double replacement: precipitation**

10. $2\ C_3H_7CHO + 11\ O_2 \rightarrow 8\ CO_2 + 8\ H_2O$ **combustion**

11. $Bi(NO_3)_3 + 3\ NaOH \rightarrow Bi(OH)_3\ (s) + 3\ NaNO_3$ **double replacement**

12. $FeS + 2\ HBr \rightarrow FeBr_2 + H_2S\ (g)$ **double replacement**

13. $P_4O_{10} + 6\ H_2O \rightarrow 4\ H_3PO_4$ **combination**

14. $CaI_2 + H_2SO_4 \rightarrow CaSO_4\ (s) + 2\ HI$ **double replacement: precipitation**

15. $C_3H_7COOH + 5\ O_2 \rightarrow 4\ CO_2 + 4\ H_2O$ **combustion**

16. $Mg(CN)_2 + 2\ HCl \rightarrow 2\ HCN\ (g) + MgCl_2$ **double replacement**

17. $(NH_4)_2S + 2\ HBr \rightarrow 2\ NH_4Br + H_2S\ (g)$ **double replacement**

18. $H_2SO_4 + 2\ NaC_2H_3O_2 \rightarrow Na_2SO_4 + 2\ HC_2H_3O_2$ **double replacement**

19. $4\ Fe + 3\ O_2 \rightarrow 2\ Fe_2O_3$ **combination**