Name:_____

SCH 4C Balancing Quiz #2

Balance each equation by adding stoichiometric coefficients before each compound or element. Use pencil!

1. $2Hg_2O \rightarrow 4Hg + O_2$

2. $Mg + Cl_2 \rightarrow MgCl_2$

3. $2Se_2O_5 + 10Cl_2 \rightarrow 4SeCl_5 + 5O_2$

4. $2FeCl_3 + 3Na_2SO_4 \rightarrow Fe_2(SO_4)_3 + 6NaCl$

5. $2C_8H_{18} + 25O_2 \rightarrow 16CO_2 + 18H_2O$

Complete each synthesis reaction:

6. $4Al + 3O_2 \rightarrow 2Al_2O_3$

7. $Ga_2O_3 + 3H_2O \rightarrow 2Ga(OH)_3$

Complete each decomposition reaction:

8. $K_2CO_3 \rightarrow K_2O + CO_2$

9. $2Ag_3N \rightarrow 6Ag + N_2$

Complete each single replacement reaction:

10. $2Sc + Fe_2S_3 \rightarrow Sc_2S_3 + 2Fe$

11. $2Al_2O_3 + 6Br_2 \rightarrow 4AlBr_3 + 3O_2$

Complete each double replacement reaction:

12. $MgO + Ba(ClO_3)_2 \rightarrow Mg(ClO_3)_2 + BaO$

13. $3(NH_4)_2CO_3 + 2AlCl_3 \rightarrow 6NH_4Cl + Al_2(CO_3)_3$

Write balanced chemical equations for each word description:

14. the combustion of the hydrocarbon pentane with the chemical formula of C_5H_{12}

    $C_5H_{12} + 8O_2 \rightarrow 5CO_2 + 6H_2O$

15. the double displacement reaction between copper(II) nitrate with sodium phosphate

    $3Cu(NO_3)_2 + 2Na_3PO_4 \rightarrow Cu_3(PO_4)_2 + 6NaNO_3$

16. the decomposition of calcium nitride

    $Ca_3N_2 \rightarrow 3Ca + N_2$

17. the single replacement reaction between phosphorus(V) oxide and chlorine gas

    $2P_2O_5 + 10Cl_2 \rightarrow 4PCl_5 + 5O_2$

18. the synthesis of barium hydroxide from barium oxide plus a common substance

    $BaO + H_2O \rightarrow Ba(OH)_2$