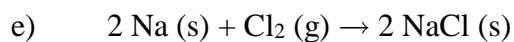
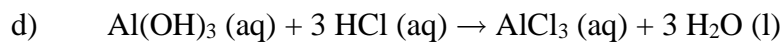
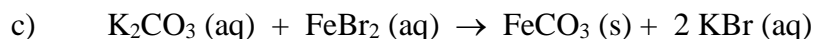
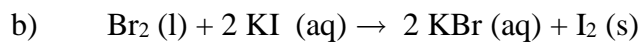


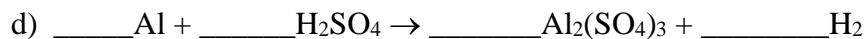
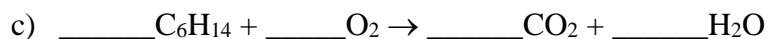
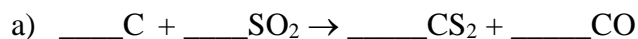
REVIEW QUESTIONS

Chapter 7

1. Classify each of the following reactions in as many ways as possible:



2. Balance each of the equations shown below:



3. Write a balanced equation for the photosynthesis reaction in which gaseous carbon dioxide and liquid water react to produce aqueous glucose ($\text{C}_6\text{H}_{12}\text{O}_6$) and oxygen gas.

4. Indicate whether each of the following is soluble or insoluble in water:

- a) MgSO_4 _____ b) KCl _____
c) $(\text{NH}_4)_2 \text{CO}_3$ _____ d) PbS _____
e) $\text{Ca}(\text{OH})_2$ _____ f) Na_3PO_4 _____
g) PbBr_2 _____ h) $\text{Al}(\text{OH})_3$ _____

5. Complete and balance the equations below for each neutralization and unstable product reaction:

- a) $\text{HCl (aq)} + \text{Ca}(\text{OH})_2 \text{(aq)} \rightarrow$
b) $\text{CaCO}_3 \text{(s)} + \text{HNO}_3 \text{(aq)} \rightarrow$
c) $\text{H}_2\text{SO}_4 \text{(aq)} + \text{LiOH (aq)} \rightarrow$
d) $\text{HClO}_3 \text{(aq)} + \text{LiHSO}_3 \text{(aq)} \rightarrow$

6. What solution can you add to each cation mixture below to separate them from each other by precipitating one while keeping the other one in solution? Write a net ionic equation for the precipitation reaction that occurs for each pair.

- a) $\text{NH}_4^+ \text{(aq)}$ and $\text{Ca}^{2+} \text{(aq)}$
b) $\text{Ba}^{2+} \text{(aq)}$ and $\text{Mg}^{2+} \text{(aq)}$

7. Predict the products of each reaction below and write balanced complete ionic and net ionic equations for each. If no reaction occurs, write NO REACTION.

