1. During the centuries following the collapse of the Western Roman Empire, marble CaCO3 was taken from the monuments of Rome and heated to form calcium oxide which was used to make plaster. Carbon dioxide, was also produced. Write the balanced equation for this reaction.
2. When a match is lit, sulfur (S8) reacts with oxygen to release energy and form sulfur dioxide. Write the balanced equation for this reaction.
3. Zinc reacts with water to produce zinc hydroxide, Zn(OH)2, and hydrogen gas. Write the balanced equation for this reaction.
4. Barium, Ba, reacts with S8, to form barium sulfide. Write the balanced Equation for this reaction.
5. Automobile airbags rely on the decomposition of the compound sodium azide (NaN3) to produce the nitrogen gas, N2, needed to rapidly inflate the bag. Sodium is also produced. Write the balanced equation for this reaction.
6. A reaction involves thermite, which is a mixture of aluminum and iron oxide, Fe2O3. When the thermite reaches a high temperature, the components react to produce molten iron, aluminum oxide (Al2O3), and a great deal of energy. Write the balanced equation for the reaction.
7. Uranium reacts with fluorine gas to form uranium (VI) fluoride. Write the balanced equation for this synthesis reaction.
8. Iron reacts with chlorine gas, to form iron (III) chloride, FeCl3. Write the balanced equation for this synthesis reaction.
9. Aluminum sulfate, Al2(SO4)3, decomposes to form aluminum oxide, Al2O3, and sulfur trioxide, SO3. Write the balanced equation for this reaction.
10. Water is decomposed by electrolysis to form the gaseous products hydrogen, H2, and oxygen, O2. Write the balanced equation for this reaction.
11. Potassium chlorate, KClO3, decomposes to form potassium chloride, KCl, and oxygen gas. Write the balanced equation for this reaction.
12. Chlorine gas, Cl2, reacts with potassium bromide, KBr, to form potassium chloride and bromine, Br2. Write the balanced equation for this reaction.
13. Ammonium chloride, NH4Cl, reacts with calcium hydroxide, Ca(OH)2, to form

calcium chloride, nitrogen trihydride and water. Write the balanced equation for

this reaction.

1. Zinc reacts with hydrochloric acid, HCl, to form zinc (II) chloride, and hydrogengas. Write the balanced equation for this reaction.
2. Fluorine reacts with sodium chloride, to form sodium fluoride, and chlorine. Write the balanced equation for this reaction.
3. Calcium oxide, reacts with sulfur dioxide to form calcium sulfite, CaSO3. Write the balanced equation for this reaction.
4. In air, calcium sulfite, CaSO3, reacts slowly with oxygen to form calcium sulfate,

CaSO4. Write the balanced equation for this reaction.

1. When heated, mercury (II) oxide, decomposes to form mercury and oxygen. Through this reaction, Joseph Priestley demonstrated the existence of oxygen in 1774.Write the balanced equation.
2. Methanol, decomposes to form carbon monoxide, CO, and hydrogen gas, H2.Write the equation.
3. Potassium nitrate, KNO3, decomposes to form potassium nitrite, KNO2, and oxygen gas, O2. Write the balanced equation.
4. Antimony(V) chloride, reacts with potassium iodide , to form the products

potassium chloride, iodine, and antimony(III) chloride. Write the balanced equation for this reaction.

1. HNO3, reacts with dihydrogen monosulfide, to form nitrogen dioxide, water, and sulfur. Write the balanced equation for this reaction.
2. Chromium(III) oxide, reacts with silicon to form chromium metal and silicon

dioxide. Write the balanced equation for this reaction.

1. When heated, solid carbon reacts with chlorine gas to form carbon pentachloride, Write the balanced equation for this reaction.
2. Iron (II) sulfide, reacts with HCl, to form dihydrogen monosulfide and iron (II) chloride. Write the balanced equation.