Bauck's CHEM Ch. 9 Test Review

This is an optional assignment due the day of the test.

Materials: loose leaf paper, pen and/or pencil (You will be given a periodic table.)
Test date: _____
Test value: 200 points
Test format:

- multiple choice
- short answer essays
- *balance* and *classify* reactions that are already written out in symbols and properly crisscrossed when needed, such as $H_2 + O_2 \rightarrow H_2O$
- *write, balance* and *classify* reactions written in words only, such as *hydrogen + oxygen → water*
- *complete*, *balance* and *classify* reactions with no products given, such as *hydrogen + oxygen* → ____
- *net ionic equations* from a double displacement reaction, such as using
  $HCl\ (aq) + AgNO_3\ (aq) \rightarrow HNO_3 + AgCl\ (s)$
  To find the new ionic equation: $Ag^+\ (aq) + Cl^-\ (aq) \rightarrow AgCl\ (s)$

TOPICS TO STUDY:

1) Common **acids**: know the names and formulas for the six most common acids: HCl, HNO_3, H_3PO_4, H_2SO_4, H_2CO_3, and $HC_2H_3O_2$ *or* CH_3COOH
2) **Activity series**: What is it? How is it used? Know how to use it!

ACTIVITY SERIES:

HIGH → → → → decreasing activity → → → → LOW																			
(will displace others)																		(will not displace)	
F_2					Cl_2								Br_2						I_2
Li	Rb	K	Ba	Ca	Na	Mg	Al	Mn	Zn	Fe	Ni	Sn	Pb	H	Cu	Hg	Ag	Pt	Au

3) **Balancing equations**: How is it done? Why should all equations be balanced?
4) **Catalysts**: What are their characteristics? What is their function? Where is their formula written in a reaction?
5) **Coefficients**: What are they? What is their function in balancing equations?
6) **Combustion**: What is it? What gas must be present for it to occur? What are the two products of complete combustion of hydrocarbons?
7) **Net ionic equation**: What is it? Be able to write a net ionic equation from a regular double displacement reaction. Give one example for this review.
8) Polyatomic ions: list their names and formulas
9) **Products**: Where are they found in a chemical equation?
10) **Reactants**: Where are they found in a chemical equation?
11) Be able to identify **reaction types**, given examples:
    - **combination** (synthesis) $A + B \rightarrow AB$
    - **decomposition** $AB \rightarrow A + B$
    - **single displacement (single replacement)** $A + BC \rightarrow AC + B$
    - **double displacement (double replacement)** $AB + CD \rightarrow AD + CB$
    - hydrocarbon **combustion**, complete and incomplete

    For this review, write and identify an example of each type.
12) **Skeleton equation:** what is it?
13) **Spectator ions:** What are they?
14) **Symbols** used in reactions: What do these mean?: s, l, aq, Δ