Bauck's CHEMISTRY Ch. 7 Test Review

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

Materials: loose leaf paper, pen and/or pencil, calculator (You will be given a periodic table.)
Test date: _____
Test value: 200 points
Test format: multiple choice**;** short answer essays**;** electron dot diagrams (Lewis structures); formula writing and naming; formula classification (BI, TI, other); electron configurations for ions:

a) Write the name of the ion that will form.
b) Write how many electrons are gained or lost to form the ion. (Do not use +or -).
c) Draw the electron dot diagram of the ion formed.
d) Write the valence electron configuration of the ion.
e) With which Noble Gas is the ion isoelectronic?

Information from this table will be given to use when naming cations with more than one possible charge.

ION	STOCK NAME	ION	STOCK NAME
Cu^{+}	copper(I)	Hg^{2+}	mercury(I)
Cu^{2+}	copper(II)	Hg_2^{2+}	mercury(II)
Fe^{2+}	iron(II)	Cr^{2+}	chromium(II)
Fe^{3+}	iron(III)	Cr^{3+}	chromium(III)
Pb^{2+}	lead(II)	Mn^{2+}	manganese(II)
Pb^{4+}	lead(IV)	Mn^{3+}	manganese(III)
Sn^{2+}	tin(II)	Co^{2+}	cobalt(II)
Sn^{4+}	tin(IV)	Co^{3+}	cobalt(III)

Topics to Review:

1) **Anion**—What is it? How do they form? Identify examples. What is the special ending for anion names?
2) **Cation**—What is it? How do they form? Identify examples. Contrast with **anion**.
3) Know the **charges** of the representative element groups ("Charge chant")
4) **Compound**—contrast with element
5) **"Criss-cross" method**—How does this work? Be able to do this method for BI and TI compounds.
6) **Crystal lattice**—What is this? Where is this found? Relate to **salts**.
7) **Electron dot diagrams**—How are they drawn for an atom? How are they drawn for an ion? How are they drawn for ionic compounds? Give examples.
8) **Formula unit**—What is it? Where is it found? Identify examples. Contrast with **molecule**.
9) **Halide ions**—What are these?
10) **Hydrates**—What are they? How are they named? Give an example for this review.
11) **Ionic bond**—Where is this found?
12) **Ionic compound**—What are some characteristics?
13) **Isoelectronic** – What is this?
14) **Noble Gas configuration**—What is this? How is this achieved?
15) **Polyatomic ion**—What is this? Compare and contrast with **monatomic ion**. Know the names, formulas, and charges of the polyatomic ions we use in class.
16) **Pseudo Noble Gas configuration**—How is this achieved? Why is it an exception to the octet rule?
17) **Octet rule**—How does this work?
18) **Properties of elements**– Why can they differ greatly when they are in a compound vs. alone?
19) **Salts**—What types of compounds are these?
20) **Superscript**—What is this? Where is it found? Contrast with **subscript**.
21) Types of compounds: **BI (binary ionic), TI (ternary ionic)**… How and when do these form?
22) **Valence**—What is this? Relate to bonding. Relate to dot diagrams.

*** Note *** There will be at least one question pertaining to material in past chapter(s) or unit(s).