CHEM: Periodic Table Extra Credit

1) How did Mendeleev create his periodic table?
2) Why were there gaps in his table?
3) What was the problem with Mendeleev's table?
4) Who fixed the periodic table and how?
5) Draw a periodic table showing where the s, p, d & f blocks are located. Above each group label the # of valence electrons and charge.
6) Draw a table with the location of metals, nonmetals and metalloids.
7) Draw a periodic table showing the location of alkali metals, alkaline earth metals, halogens, noble gases, transition metals, inner transition metals, lactinides and actinides.
8) Which way do groups/families go on the periodic table? Which way do periods go?
9) Determine whether the element is a nonmetal, metal or metalloid. (a) Sodium (b) Bromine (c) Chromium (d) Uranium
10) Determine the ending configuration, # of valence electrons and charge of (a) Potassium (b) Chlorine (c) Copper (d) Americium
11) What are the characteristics of metals, nonmetals and metalloids?
12) What is atomic radius? How does it change in a group? In a period?
13) What is ionization energy? How does it change in a group? period?
14) What is electronegativity? How does it change in a group? period?
15) Why aren't noble gases included in the trend for electronegativity?
16) Why do noble gases have the highest ionization energy?
17) Identify the element that matches the following descriptions:
    (a) Group 2, Period 3 (b) Group 3A, period 5 (c) Halogen, period 4
    (d) Group 6, Period 6 (e) Noble Gas, period 1 (d) Group 12, period 5
18) Which element has a smaller atomic radius? Explain.
    (a) B or N (b) K or Rb
19) Which element has a higher ionization energy? Explain.
    (a) Au or Ag (b) Ge or As
20) Which element has a higher electronegativity? Explain.
    (a) Mg or Ca (b) Fe or Co
21) Identify the elements based on the ending configurations:
    (a) $5s^1 4d^5$ (b) $6s^1$ (c) $2p^5$ (d) $4f^5$ (e) $3d^6$
22) What type of ion is made from an element with low Ionization energy? Explain.
23) Which elements are considered liquid at room temperature? Which are gases?