Fall 2014 Final Exam Practice Prob. CHUNK #2 – Topics 10-18		
Topic	**Q #**	**Question**
10	1	What element is represented by the e- configuration of: $1s^2 2s^2 2p^6 3s^2 3p^6 4s^2 3d^{10} 4p^2$?
	2	What element is represented by the electron configuration of: $1s^2 2s^2 2p^6 3s^2 3p^6 4s^1$
	3	Write the electron configuration for silver
11	4	Sketch what the orbital diagram should look like for sulfur. (sketch it like the one on your p. 123 practice test)
	5	Sketch what the orbital diagram should look like for Mn
	6	Write a short paragraph explaining how to fill an orbital diagram.
12	7	Draw a picture of what happens during atomic absorption. Write 3 sentences describing what happens.
	8	Draw a picture of what happens during atomic emission. Write 3 sentences describing what happens.
	9	What is the definition of ground state? Of excited state?
13	11	List the three main types of radiation, what their symbols are (including the little numbers on top and bottom of the symbol), and what stops them.
	12	Which type of radiation is pure energy? Which type is a high energy electron? Which type is a helium nucleus?
	13	What is the charge on the three main types of radiation & what type of charge would they be attracted to?
14	14	Finish the following nuclear equation: $^{99}_{43}Tc \rightarrow$ _____ + $^{0}_{-1}e$
	15	Finish the following nuclear equation: $^{238}_{92}U \rightarrow {}^{234}_{90}Th +$ ____
	16	Write the nuclear equation for Samaium undergoing beta emission
15	17	The half-life of Iron-59 is 44.5 days. How much of a 1.750 mg sample will remain after 243.5 days?
	18	If the half life of a radioactive substance is 5 weeks, what percentage is left after 100 days?
	19	The half life of a substance is 12 days. How much did you start with if you have 9.3 grams left after 4 weeks?
16	21	Draw a sketch of a periodic table and draw an arrow pointing from lowest ionization energy towards the highest.
	22	Rank the atoms from lowest to highest ionization energy: Na, F, Fr, Ca, Fe, S
	23	Draw a sketch of a periodic table and draw an arrow pointing from lowest electronegativity towards the highest.
	24	Rank the following atoms from lowest to highest electronegativity: Na, F, Fr, Ca, Fe, S
	25	Draw a sketch of a periodic table and draw an arrow pointing from smallest to largest atomic radius.
	26	Rank the following atoms from smallest to largest atomic radius: Na, F, Fr, Ca, Fe, S
17	27	What charge do alkali metals, alkaline earth metals, halogens, and noble gases like to have? (example, alkali metals like to have +1 charge)
	28	How many valence electrons does each of the following have: Na, Cs, Be, F, O, S, C, B
	29	Label a sketch of a periodic table with the names of each group.
	30	List two of each type of atom: metals, nonmetals, metalloid, and transition metals
18	31	Write out the formulas for the following ions: Carbonate, Phosphate, Iron (III), Nitrate
	32	Write the formula for the following compounds. Don't forget to cross over! Gallium Oxide, Calcium Chloride
	33	MEMORIZE YOUR COMMON IONS!