Fall 2014 Final Exam Practice Prob. CHUNK #3 – Topics 19-27		
Topic	**Q #**	**Question**
19	1	What class of elements make up ionic bonds? Covalent bonds? Metallic bonds?
	2	What is happening during an ionic bond? A covalent bond? Why do things bond in the first place???
	3	Identify the following as ionic, covalent, or metallic bonds: NaF KOH CS_2 Ni H_2 F_2
20	4	Describe in a few sentences how you name ionic compounds versus covalent molecules.
	5	Name the following compounds or molecules. N_4O_{10} P_4S_{10} $CuCl_2$ CCl_4 K_2S Al_2O_3
	6	Name the following: $ZnSO_4$ NH_4NO_2 $Ca(ClO_2)_2$
21	7	Write the formula for Calcium Chloride
	8	Write the formula for Ammonium Phosphite
	9	Write the formula for Calcium Perioxide
22	11	What is the definition of the octet rule?
	12	What are the main exceptions to the octet rule?
	13	Draw Lewis Structures for CO_2, N_2, O_2, H_2, H_2O, NH_3
	14	For the Lewis Structures you drew above identify which have single bonds, double bonds, triple bonds. Which have lone pairs? How many lone pairs does each one of those have?
	15	Draw a Lewis structure to figure out if each compound is held together with a single bond, a double bond, or a triple bond: HCl and N_2 and CO
23	16	What are the main types of IMFs?
	17	Look through your notebook and give two examples of compounds that have only London forces, two that have dipole-dipole, and two that have hydrogen bonding.
	18	What are the two main "real life biology" type examples of hydrogen bonding that you learned about?
	19	Identify the main/dominant/strongest type of IMF present in each of the following: H_2O, SiF_4, CH_3NH, CH_3OH, H_2S, O_2, CH_3COCH_3
24	21	What are three types of inter molecular forces and two types of intra molecular forces
25	22	What is polarity? What are three ways you can draw the polarity of a molecule (hint…it was in your notes!)
	23	Label the following as either polar or non polar: H_2O, H_2S, CO_2, SiO_2, CH_4, CH_3OH, C_2H_6
	24	Why is it important to know that water is bent? Make sure your answer talks about polar vs non polar
26	25	Rank the following from highest to lowest surface tension: CH_4, CH_3OCH_3 CH_3OH
	26	Which should have a higher boiling point? Why? CH_3OCH_3 or CH_3CH_2OH
	27	In one paragraph explain the point of the lab you did on IMFs. Describe the results you found and how that relates to IMFs. Think of it like a conclusion for a miniature lab report.
27	28	What are three examples of bulk solids that have unique properties due to the combination and interaction of inter and intra molecular forces?
	29	What could you predict about the boiling point or melting point of a network covalent molecule?
	30	What are two examples of network covalent molecules? (We talked about two during lecture). Which do you expect to have a higher melting point?