

## Ch. 6 Test review

- 1) Why do atoms form bonds?
- 2) What is the difference between an ionic and covalent?
- 3) What are the 2 types of covalent bonds – and how are they distinguished?
- 4) What is a molecular formula? Give an example.
- 5) Define bond energy.
- 6) How many electrons are MOST atoms trying to get in their outermost energy level to be the most stable?
- 7) What is represented in a Lewis structure?
- 8) How do you represent double bonds in a Lewis structure? Show it with  $\text{CO}_2$ .
- 9) Draw a Lewis structure for  $\text{CCl}_4$
- 10) What is the basis of VSEPR – what is trying to get as far away as possible?
- 11) What are the shapes of the following molecules:  $\text{H}_2\text{O}$ ,  $\text{HCl}$ ,  $\text{CH}_4$
- 12) What type of bond is present in  $\text{CO}_2$ ,  $\text{CaCl}_2$ ,  $\text{H}_2$ ?
- 13) Draw dash formulas (Lewis) for the following:  $\text{CSe}_2$ ,  $\text{F}_2$ ,  $\text{H}_2$ ,  $\text{C}_2\text{H}_4$ ,  $\text{COH}_2$ ,  $\text{C}_2\text{H}_6$
- 14) How can you determine how many valence electrons an element has?
- 15) How does bond energy relate to bond length?
- 16) What happens when electrons “get excited”?
- 17) Describe the valence electrons of metals?
- 18) What are some properties of metals due to their electrons?
- 19) Draw a Lewis dot structure for an ionic bond – remember they form ions! (ex:  $\text{CaCl}_2$ )
- 20) Draw dot diagrams of: H, Ca, O, and N

21) Lewis dot structure of ionic bonds between  $\text{Al}_2\text{O}_3$ ,  $\text{MgS}$

22) Draw Structural diagrams (dashes for bonds and only extra valence e- on the central atoms):

a.  $\text{N}_2$

b.  $\text{CHCl}_3$

c.  $\text{CH}_3\text{OH}$

d.  $\text{C}_2\text{H}_4\text{OH}$

e.  $\text{N}_2\text{H}_2$

f.  $\text{CH}_6$