**Honors Chapter 9 Review**

1. How many paired and unpaired electrons are there is the Lewis symbol for chlorine?
2. How many paired and unpaired electrons are there is the Lewis symbol for O2-?
3. What is the relationship between lattice energy and ionic radius?
4. What are the chemical formulas for sodium phosphide and calcium nitrate?
5. How many single bonds must carbon form to have an octet?
6. Which bond is most polar: S-O, N-O, Se-O, or Al-O?
7. How many nonbonding electron pairs are on the central atom in H2S?
8. How many equivalent resonance structures can be drawn for ozone?
9. Electron affinity is the energy associated with \_\_\_\_\_\_\_\_\_\_\_\_ an electron. Ionization energy is associated with \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ an electron.
10. With which alkaline earth metal would oxygen have a bond with the greatest lattice energy?
11. What valence electrons do transition metals lose first?
12. Which of the following cannot be drawn without violating the octet rule: NH3, CH4, BH3, PCl3?
13. Resonance structures should differ only in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
14. TRUE or FALSE: The true molecule is the blend of all its resonance structures.
15. Are bond enthalpies positive or negative?
16. Draw Lewis structures for the following: a) C3H8 b) NO2-  c) carbon dioxide
17. Use the bond enthalpy table to calculate the change in enthalpy for the following reaction:

C2H6 + 7/2 O2 🡪 2 CO2 + 3 H2O

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