

**Vasquez High School -- AP Chemistry B -- Test #2a -- Chapter 9 -- 50 points**

Write TRUE if the statement is true OR write the word(s) that substitutes for the underlined word(s) that would make it true. Writing false earns partial credit. Three points each.

- \_\_\_\_\_ 1) The energy required to completely separate one mole of a solid ionic compound into its gaseous ions is called the ionization energy.
- \_\_\_\_\_ 2) The C - O bond is shorter than the C = O bond.
- \_\_\_\_\_ 3) The polarity of a covalent bond is caused by a difference in electronegativities.
- \_\_\_\_\_ 4) Carbon disulfide, CS<sub>2</sub>, is most assuredly a non-polar covalent compound since the electronegativities of carbon and sulfur are equal.
- \_\_\_\_\_ 5) The formation of an ionic bond is endothermic.

Short Answer/Fill-in/Diagram section. Be neat and complete. Three points each.

6) What is the octet rule? \_\_\_\_\_  
\_\_\_\_\_

7) Show two resonant Lewis structures for the ozone, O<sub>3</sub>, molecule.

8) For a point each give Lewis dot diagrams for aluminum, oxygen, and iodine.

9) Considering ionicly vs. covalently bonded compounds, give three pairs of contrasting qualities:

IONIC

COVALENT

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10) Why does beer foam up when you pour salt in it? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

11) Determine the proper Lewis structure for the compound  $\text{POCl}_3$ , by examining formal charges in any proposed structure. Ten points on this one.

12) For five points each, determine the proper Lewis structures for each of the following:

