Chemistry 141 Name

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Quiz 7b (20 points) November 6, 2008

All work must be shown to receive credit.

1. (12 points) Draw the Lewis electron dot structures for the following molecules/ions and tell their orbital and molecular geometries. Show resonance structures where appropriate

NO3-1

Orbital geometry\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Molecular geometry \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

XeF4

Orbital geometry\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Molecular geometry \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. (6 points) What if the formal charge of atoms indicated in the molecule below?



C \_\_\_\_\_\_\_\_\_\_

N \_\_\_\_\_\_\_\_\_\_

O \_\_\_\_\_\_\_\_\_\_

1. (2 points) The BrO3-1  ion is pyramidal. Without drawing the Lewis structure for the ion, explain how we know that there is at least one lone pair of electrons on the bromine atom.