Chemistry 141 Name

Dr. Cary Willard

Quiz 9a (20 points) Wednesday, November 7, 2012

1. (16 points) Write a Lewis electron dot structure for the following two molecules/ions. Tell the orbital and molecular geometry of each and give the hybridization of the central atom. Show resonance structures and charges where appropriate.
   1. HCO2− (Both oxygens and the hydrogen are attached directly to the central carbon.)

|  |  |
| --- | --- |
| orbital geometry around C |  |
| molecular geometry around C |  |
| hybridization of C |  |

* 1. BrF3

|  |  |
| --- | --- |
| orbital geometry around Br |  |
| molecular geometry around Br |  |
| hybridization of Br |  |

1. (4 points) Carbon dioxide is a non-polar molecule whereas sulfur dioxide is polar. Explain this difference in polarity.