Chemistry 115 Name

Dr. Cary Willard

Quiz 7a (20 points) October 28, 2010

All work must be shown to receive credit. NA = 6.022 x 1023/mol

Carbon disulfide and carbon monoxide are produced when carbon is heated with sulfur dioxide.

9 C(s) + 2 SO2(g) 🡪 5 CS2(l) + 4 CO(g)

1. (5 points) What mass of carbon disulfide will be produced from the reaction of 4.00 g of solid carbon with 6.00 g of sulfur dioxide gas?
2. (3 points) If 12.9 g of carbon disulfide are produced, what is the percent yield?
3. (4 points) Describe how the bonding in ionic and covalent compounds differs. (Give a complete answer, tell me about the bonds, not just types of atoms involved.)
4. (2 points) Which electrons are involved in covalent bonding?
5. (6 points) Draw an electron dot diagram for nitrogen tribromide (NBr3). Be sure to show all bonds and lone(non-bonding) electrons.

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Quiz 7b (20 points) October 28, 2010

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Carbon disulfide and carbon monoxide are produced when carbon is heated with sulfur dioxide.

9 C(s) + 2 SO2(g) 🡪 5 CS2(l) + 4 CO(g)

1. (5 points) What mass of carbon disulfide will be produced from the reaction of 5.00 g of solid carbon with 7.00 g of sulfur dioxide gas?
2. (3 points) If 16.2 g of carbon disulfide are produced, what is the percent yield?
3. (4 points) Describe how the bonding in ionic and covalent compounds differs. (Give a complete answer, tell me about the bonds, not just types of atoms involved.)
4. (2 points) Which electrons are involved in covalent bonding?
5. (6 points) Draw an electron dot diagram for oxygen dichloride (OCl2). Be sure to show all bonds and lone(non-bonding) electrons.

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Quiz 7c (20 points) November 2, 2010

All work must be shown to receive credit. NA = 6.022 x 1023/mol

Carbon disulfide and carbon monoxide are produced when carbon is heated with sulfur dioxide.

9 C(s) + 2 SO2(g) 🡪 5 CS2(l) + 4 CO(g)

1. (5 points) What mass of carbon monoxide will be produced from the reaction of 5.00 g of solid carbon with 7.00 g of sulfur dioxide gas?
2. (3 points) If 4.83 g of carbon monoxide are produced, what is the percent yield?
3. (4 points) Describe how the bonding in ionic and covalent compounds differs. (Give a complete answer, tell me about the bonds, not just types of atoms involved.)
4. (2 points) Which electrons are involved in covalent bonding?
5. (6 points) Draw an electron dot diagram for dibromomethanal (Br2CO). Be sure to show all bonds and lone(non-bonding) electrons. (C is central atom, Br’s and O bonded directly to C)

Chemistry 115 Name

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Quiz 7d (20 points) October 28, 2010

All work must be shown to receive credit. NA = 6.022 x 1023/mol

Carbon disulfide and carbon monoxide are produced when carbon is heated with sulfur dioxide.

9 C(s) + 2 SO2(g) 🡪 5 CS2(l) + 4 CO(g)

1. (5 points) What mass of carbon monoxide will be produced from the reaction of 6.00 g of solid carbon with 8.00 g of sulfur dioxide gas?
2. (3 points) If 5.94 g of carbon monoxide are produced, what is the percent yield?
3. (4 points) Describe how the bonding in ionic and covalent compounds differs. (Give a complete answer, tell me about the bonds, not just types of atoms involved.)
4. (2 points) Which electrons are involved in covalent bonding?
5. (6 points) Draw an electron dot diagram for dichloromethane thiol (Cl2CS). Be sure to show all bonds and lone(non-bonding) electrons. (C is central atom, Cl’s and S bonded directly to C)