Chemistry 115 - Name

Dr. Cary Willard

Quiz 5A (20 points) October 13, 2008

All work must be shown to receive credit.

Avogadro’s number = 6.022 x 1023/mol

1. (20 points) Answerthe following questions using the balanced reaction shown below:

4 FeS2 + 11 O2 🡪 2 Fe2O3 + 8 SO2

* 1. How many molecules of O2 are required to react with 16 formula units of FeS2
  2. How many moles of SO2 will be formed by the complete reaction of 5.92 moles of O2?
  3. What is the molar mass of Fe2O3?
  4. How many grams of Fe2O3 will be formed by the reaction of 5.00 mol of FeS2 with excess oxygen?
  5. How many moles of SO2 will be formed by the reaction of 5 moles of FeS2 with 5 moles of O2?

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Quiz 5B (20 points) October 13, 2008

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Avogadro’s number = 6.022 x 1023/mol

1. (20 points) Answerthe following questions using the balanced reaction shown below:

4 FeS2 + 11 O2 🡪 2 Fe2O3 + 8 SO2

* 1. How many molecules of O2 are required to react with 12 formula units of FeS2
  2. How many moles of SO2 will be formed by the complete reaction of 3.85 moles of O2?
  3. What is the molar mass of Fe2O3?
  4. How many grams of Fe2O3 will be formed by the reaction of 7.00 mol of FeS2 with excess oxygen?
  5. How many moles of SO2 will be formed by the reaction of 7 moles of FeS2 with 7 moles of O2?