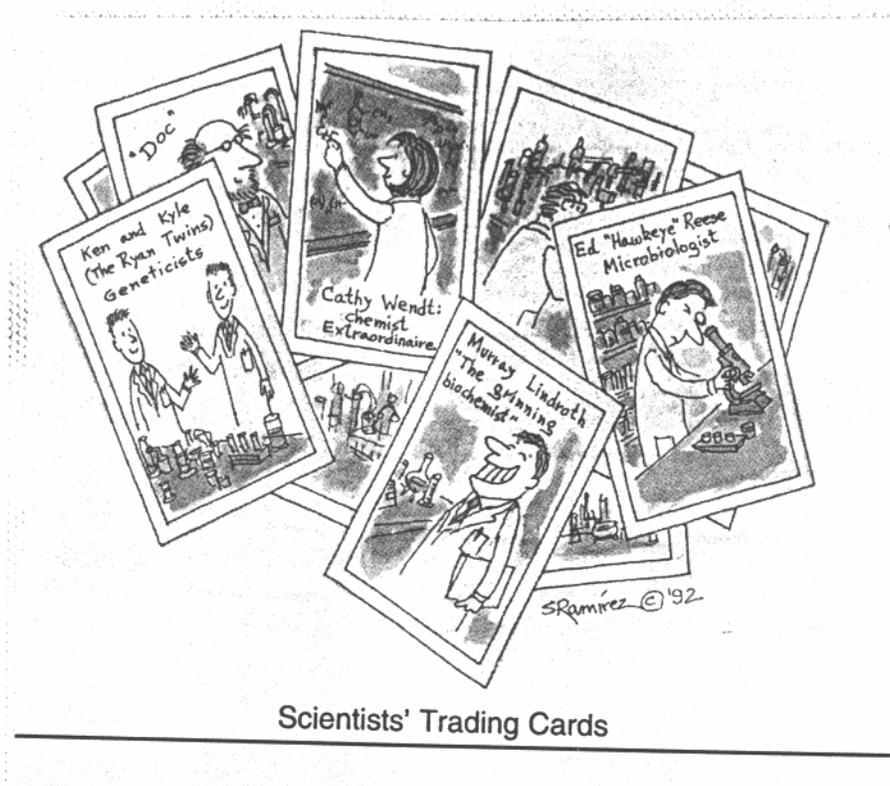


CHEM-342 Introduction to Biochemistry  
Mid-term Examination - Group Part  
Friday, 23 March 2007  
H. B. White - Instructor  
25 Points

Group Members \_\_\_\_\_  
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**Important - Please read this before you turn the page.**

1. Write your names or group number on each page of the exam you turn in.
2. This part of the examination is closed book and closed notes.
3. Please read each question carefully and make sure that you have thought it through with **everyone's** input before converging on a solution.
4. If you do not agree with your group, you may submit the examination under your own name for separate grading.





2. (15 Points) Hemoglobin carries oxygen from the lungs to the tissues where it is used in oxidative metabolism. Although the simple equation for respiration is often formally written with glucose as the substrate, the brain is one of the few organs that actually uses glucose almost exclusively as its carbon source for respiration. A typical adult human brain will convert about 150 grams of glucose to carbon dioxide and water per day.

Estimate the percentage of the oxygen you inhale every day that is used to oxidize glucose in your brain. Show your work and describe your reasoning. You will be provided with a plastic bag, a straw, and a ruler to estimate the amount of air you breathe each day.