CHEM 330: Aquatic Chemistry Lab

Error Analysis Answer Sheet

Instructions: *Enter your data and calculations into this document. Use formulas to calculate your answers, and use Excel to display the correct number of significant digits. Your calculations must match your instructor's* ***exactly*** *for full credit! Your calculations should also be clearly shown in your lab notebook. Do not change the format of this worksheet, add or remove cells, etc.*

Specify your masses in grams and density in g/ml!

Your Name: _____

Class Measurements				
	Class Mean	Class SD	Class 50% CI	Class 95% CI
Part 1				
Part 2				
Part 3A				
Part 3B				

Your Data									
	Mean Density	SD	50% CI	95% CI	Mass 1	Mass 2	Mass 3	Mass 4	Mass 5
Part 1									
Part 2									
Part 3A									
Part 3B									

Unknown Data									
ID	Mean Density	SD	50% CI	95% CI	Mass 1	Mass 2	Mass 3	Mass 4	Mass 5

Question 1: Which had the smallest standard deviation, your data or the class data? Is this what you expected? Why or why not?

Question 2: Discuss the magnitude of the random (indeterminate) error in measurements using the different methods for measuring volume. Which method has the smallest random error? Why?

Question 3: Do you suspect any systematic error in this experiment? Why? What could (or should) be done to correct it?