2CL Grading Rubrics Summer Session II 2009

Note: Selected Analysis means one or more bullet points from the end of the lab will be selected randomly to be graded. Completeness refers to any data tables, units, calculations not included in the selected analysis; it is a measure of how much of the lab writeup you've done. It may include prelab questions and HW, which will be collected by your TAs.

Quiz 0
2 pts

Expt. 0
Plot (titles, axes labels, and do not penalize yet for missing error bars)
Selected Analysis
Conclusion/Discussion (restatement of results with respective uncertainty)
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10 pts.

Quiz 1
2 pts

Expt. 1
Completeness
Plot and fit for decay (error bars, axis label, dimensions and significance of fitting parameters)
Selected Analysis
Conclusion/Discussion: comments on limits/advantages of each method (e.g in the context of precision and accuracy)
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10 pts.

Quiz 2
2 pts

Expt. 2
Completeness
Plot of exponential decay and extraction of time constant from plot and comparison to that computed from
        (MEASURED) component values
Selected Analysis
Conclusion/Discussion
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10 pts.

Quiz 3
2 pts

Expt. 3
Completeness
Frequency response plot
elected Analysis
Conclusion/Discussion
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10 pts.

<u>Quiz 4</u>
3 pts

<u>Expt. 4 Informal Report</u>
Completeness
Plot m vs. d in order to determine wavelength in the acrylic from the slope
Selected Analysis
Conclusion/Discussion
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15 pts.

<u>Quiz 5</u>
3 pts

<u>Expt. 5 Informal Report</u>
Completeness
Plot of u vs L/a
Selected Analysis
Conclusion/Discussion
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15 pts.

<u>Quiz 6</u>
3 pts

<u>Expt. 6 Informal Report</u>
Completeness
Linear fit and plot of $1/v$ vs. $1/u$ [vertical error bars, title, axes labels, dimensions]
Selected Analysis
Conclusion/Discussion
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15 pts.

<u>Formal Report Modifications</u>
Title page and Abstract: Statement of problem, method (briefly), results (with uncertainties)
Introduction: Objective, summary of experiment, mention of significance and possibly applications
Theory/Background: relevant formulae and solutions
Procedure: written "as-performed" (past tense), mention of which equipment was used and when, schematics
Results: (see Informal Report rubrics above, excluding Conclusion/Discussion)
       Raw Data - tabulated and somehow detached from notebook and attached to formal report
       Plot(s) - Axis labels, fitting formulae
       Quantitative comparison(s) (either discrepancy, relative error, or just an acknowledgement that the
       computation is within experimental error)]
Discussion/Conclusion: brief re-statement of results with uncertainty, assessment of results, validity of assumptions,
complications and improvements /*the vague and popular "human error" is not acceptable without specification*/
General presentation/organization/writing

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25 pts.

Total: 127 pts