

ECE2260**Lab1 – Notebook Point Breakdown**

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| <i>Communications (Keeping a Proper Notebook)</i> | <i>30 Points Total</i> |
| Written in Ink | 4 |
| Student Signed every page | 4 |
| Student Dated every page | 4 |
| TA Signature for every lab session (-3 each session missed) | 6 |
| Student's work Reproducible from notebook | 12 |
| | |
| <i>2. System Component Measurements</i> | <i>10 Points Total</i> |
| Table of Components (Measured Values)..... | 5 |
| Measured Components used in Matlab | 5 |
| | |
| <i>3. Analysis of Launcher Circuit</i> | <i>20 Points Total</i> |
| Overdamped: | |
| Circuit Schematic | 2 |
| Derivation of I(t) | 2 |
| Matlab Plot of I(t) Expression | 2 |
| State Equations Derivations | 2 |
| Matlab Comparison of I(t) for 2 Methods..... | 2 |
| Underdamped: | |
| Circuit Schematic | 2 |
| Derivation of I(t) | 2 |
| Matlab Plot of I(t) Expression | 2 |
| State Equations Derivations | 2 |
| Matlab Comparison of I(t) for 2 Methods..... | 2 |
| | |
| <i>4. Construction and Testing of Launcher</i> | <i>10 Points Total</i> |
| Measured R and L of Coil..... | 5 |
| Table of Launch Measurements | 5 |
| | |
| <i>5. Third-Order System</i> | <i>25 Points Total</i> |
| Circuit Schematic | 2 |
| State Equations Derivations | 6 |
| Matlab Code for ODE45 Solver | 3 |
| Matlab Plot of ODE45 Solution | 2 |
| Measured V2 Plot..... | 4 |
| Matlab Code for Comparison | 3 |
| Matlab Comparison Plot | 2 |
| Comments on Measured vs. Calculated Comparison | 3 |
| | |
| <i>Conclusion</i> | <i>5 Points Total</i> |
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| <i>Launch (Extra Credit)</i> | <i>2 Points Total</i> |
| Longest Shots (top 3) in Lab Section (more extra credit) | 3 |