ECE2000
Lab1 – Notebook Point Breakdown

Communications (Keeping a Proper Notebook) 30 Points Total
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

2. System Component Measurements 10 Points Total
Table of Components (Measured Values) ......................... 5
Measured Components used in Matlab ......................... 5

3. Analysis of Launcher Circuit 20 Points Total
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

4. Construction and Testing of Launcher 10 Points Total
Measured R and L of Coil .............................................. 5
Table of Launch Measurements ..................................... 5

5. Third-Order System 25 Points Total
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

Conclusion 5 Points Total

Launch (Extra Credit) 2 Points Total
Longest Shots (top 3) in Lab Section (more extra credit) .......... 3