

AME 21216 – Tech Memo Score Sheet

A10 – 2nd Order Transient Response

NDID#: _____

For more details on any of the items below, please refer to the lab handout.

Item and Description	Points Awarded	Possible Points
Technical writing and format – Please address all questions from the lab handout in the paragraphs and captions. You should have the relevant equations in your paragraphs.		5
Plot of measured transient angle θ vs. time t for the response to an impulse (motor short-circuit and open-circuit on same plot)		5
A table containing: • The half-life of the oscillations τ_{half} (s) • The decay constant λ (1/s) • The ringing frequency ω_d (rad/s) • The radius of gyration R (m) • The damping ratio of the pendulum ζ		5
Plot of oscillatory torque and angle vs. time both on the same plot (Use “yyaxis left” to plot heater power on the left. Use “yyaxis right” to plot temperature on the right.)		5
A table containing these angles in degrees: • The theoretical amplitude of the oscillations • The measured amplitude of the oscillations • The theoretical phase • The measured phase		4
TOTAL		24