AME 21216 – Score Sheet

A10 – Second 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 – Using the correct format, address all questions from the lab handout in the paragraphs.		3
A plot of acceleration (m/s^2) vs. time (s) for one of the data sets. (Show only three periods of oscillation.)		5
A plot of spectral density (amplitude vs. freq.) of the Y acceleration data computed using the FFT code on the A10 web page		4
A table containing the following parameters: • **The measured mass of the weight with electronics mounted *m* (kg).** • **The measured spring constant *k* (N/m).** • **The *theoretical* natural resonance frequency f_n (Hz).** • **The natural resonance frequency f_n (Hz) measured using the stopwatch.** • **The natural resonance frequency f_n (Hz) determined from the FFT plot.**		5
Plot of measured amplitude (V) vs. driving frequency (kHz) with theoretical curve for ultrasonic transducer		5
Measured resonance frequency and damping ratio for the UT (in caption of relevant plot)		2
TOTAL		24

NOTE: Although measured data is typically plotted as individual markers, transient signals (such as acceleration vs. time) should be plotted as a continuous line.