

AME 21216 – Tech Memo Score Sheet

A10 – Transient Signals

NDID#: _____

Lab Section (Day/time): _____

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 temperature T vs. t (both heating and cooling on same plot) | | 3 |
| Plot of linearized temperature data $y(t)$ vs. t with linear curve fits for time constants (both heating and cooling on same plot) | | 3 |
| A table containing all 4 extrapolated time constants τ for the thermocouples in water | | 2 |
| Plot of measured amplitude vs. driving frequency with theoretical curve for ultrasonic transducer | | 3 |
| Plot from FFT code of amplitude vs. frequency for one of the baseball bats | | 1 |
| Plot of measured strain gauge output vs. time with curve fit for one of the baseball bats | | 3 |
| A table containing: <ul style="list-style-type: none">• Resonance frequency f_0 for the UT• Damping ratio ζ_{UT} for the UT• Ringing frequency f_d for both bats• Damping ratio ζ_B for both bats | | 4 |
| TOTAL | | 24 |