

**Name:** \_\_\_\_\_

## Lab 7: Prelab Grading Sheet

Read through the entire lab assignment and complete the following before coming to lab.

**Keep one copy of the prelab for you to consult during the lab. Submit the completed prelab to the TA before the start of the lab.**

### **Part 1: Circuit Improvements**

The instrumentation amplifier constructed in Lab 6 is a very basic realization of this circuit. Many variations of this circuit are possible to meet different application-based performance demands. Study different advanced implementations of instrumentation amplifiers using books, reliable sources on internet, or any other available source of information. Make note of structures that provide interesting and useful performance characteristics. As a prelab assignment, prepare some comments about these structures (their unique characteristics, applications, etc.)

Attach relevant schematics to the prelab.

List all the sources you consulted to finalize your schematics.

### **Part 2: LabVIEW User Interface**

Consider the input and output needs of an instrumentation amplifier, and think about how those needs could be met using a LabVIEW interface. If necessary, look back at Lab 6 and note the I/O required to test circuit features. Think of how you would construct the “instrument panel” for a LabVIEW vi. For your prelab assignment, sketch an initial concept for the user interface of this vi (what toggles, buttons, displays, etc. would be on your user interface). Be sure to consider both the AC and DC requirements. You will be asked to implement these functions during the in-lab assignment, so the better you prepare here the faster that will go. You are welcome, but not required, to start constructing your vi in LabVIEW before coming to lab.

### **Deliverables**

- Comments/schematics for improving instrumentation amplifier
- Plan for LabVIEW user interface to test and operate the instrumentation amplifier