Format for Electric Machinery Laboratory Reports

Reports should be double spaced on one side of a sheet only, with 1 inch margins on each side of a page. The left margin should be 1.5 inches if the report is bound along the left edge. Graphs, tables, diagrams, and equations should be done in ink or on a computer.

There are two preliminary sections to the report: the Title Page and the Executive Summary. Preliminary pages are numbered with lower case Roman numerals; i.e., i, ii, iii, iv, etc. However, the page number is not printed on the title page.

Title Page

The first preliminary page of your report is the title page; it consists of the following items, centered on the page.

1. Title and number of experiment
2. Course number and section
3. Your name
4. Date
5. Names of your lab partners

The title of the experiment is in all capital letters.

Executive Summary

The second preliminary page of your report is the executive summary. The executive summary is a condensation of the entire report. In the executive summary the writer states what was done, how it was done, principal results, and their significance. The executive summary should be one page or shorter.

Main Body

The main body of the report consists of six primary sections: objective, theory, procedure, results, conclusion, and opinions. The six primary section headings are typed in all capital letters, centered, and enumerated by Roman numerals. For example:

I. OBJECTIVE

Secondary section headings within a primary section are placed flush with the left margin and enumerated with capital letters followed by periods. Secondary headings should be on a separate line with the first letter of each word capitalized. For example:
A. Comparison of Current Measurements

Pages in the main body of the report are numbered consecutively with Arabic numbers beginning with the number 1.

I. OBJECTIVE

In the objective section state the purpose of the experiment in one or two sentences.

II. THEORY

The theory that underlies the experiment is briefly presented here. Don't get too basic. Don't discuss theory everyone in the expected audience understands completely unless it is a necessary part of a more complex development. Assume that your audience is students who have just finished EE212 (with a passing grade).

III. PROCEDURE

The procedure section should note any deviations from the steps listed in the experiment instruction sheet. A copy of the experiment instruction sheet should be placed in an appendix and referenced in the procedure section.

IV. RESULTS

The results section should include all items called for in the report section of the experiment handout (e.g. calculated quantities, graphs, diagrams, etc). Do not simply list these items by themselves. They should be placed within a body of written text. Use the text to explain to the reader what the quantities, graphs, and diagrams are and what they signify.

The results section should include all equations used, each near the text discussing them.

When presenting the results of many calculations put them in one or more tables. All figures, tables, and graphs must have a number and a title. The title for a table is placed above the table. The title for a figure or a graph is placed below it. All axes must have scales and labels.
V. CONCLUSIONS

In the conclusion section summarize in one or two paragraphs what your results were and what they signify. State what you learned.

VI. OPINIONS - optional

State any opinions or recommendations that you have. All other sections of the report should be technical and objective. This section is the place where you can evaluate the experiment. Discuss what you have learned and make suggestions for improving the experiment.

References

In a technical report it is important not to make unsupported statements. Support statements with data, a mathematical proof, a logical discussion, or a reference.

In this section references are listed in the order in which they appear in the text. They are numbered as 1, 2, 3, etc. In the text the referenced material is followed by the designation [1], [2], [3], etc. The course text is a very good place to get references to prove a point.

Appendix

The appendix is separated from the main body of the report by a title sheet. Appendixes are lettered; e.g., Appendix A. The title of the appendix is in all capital letters and centered on the page.

The appendix should include a copy of the experiment instruction sheet, all calculation sheets, and the data sheet. All sheets placed in the appendix should be neat and easy to read. Calculation sheets should show equations used to find lists of data. The data sheet should include:

1. equipment nameplate data
2. instrumentation serial or UI property numbers
3. raw data (premade data format preferred)
4. instrument scales
5. CT and PT ratios
6. wattmeter multipliers
7. any other pertinent observations
8. lab instructors name (later on you need signatures of witnesses for patent claims)