(vii) The "Formal Report" must be typed on loose leaf A4 paper. Diagrams, graphs, tables and equations may be neatly drawn/written by hand. The sheets should be *clipped together* and marked FORMAL to avoid any confusion.

FORMAT OF FORMAL REPORT

Name, Title

Summary (or Abstract)

Not more than 100 words giving the objectives, an indication of the methods by which these were achieved and a statement of the main results and conclusions. This should be on a separate sheet in front of the main contents.

1. Objectives

   It is necessary to state the object of the experiment. This should provide the essential formulation of the questions to which answers are sought and should be more than simply a title since it determines the whole course of the investigation.

2. Introduction

   There should be a brief introduction so that an electronic engineer who is not familiar with the topic may understand enough to enable him to properly assess the relevance of the work to his particular field and interests.

3. Theory

   The theoretical background to the experiment should be outlined and the *results* of standard theory (*not* derivations) should be given. This should be limited to that directly applicable to the experimental work. Where appropriate suitable references should be listed.

4. Experimental Procedure

   The essential steps taken in carrying out the tests and in making the calculations must be explained, reference being made to the equipment used, to appropriate diagrams and to any tables of results and curves (*which should be included in the following section*).

5. Results

   These should include both experimentally and theoretically derived results. Graphical presentation is usually preferable when possible, and where several sets of results are to be compared they should be plotted on the same graph. This applies particularly to the comparison of experimental and theoretical results. Where results are plotted it is not necessary to include the tables from which the points were obtained, as these are already recorded in the laboratory log report.

6. Discussion

Here the results obtained and the shortcomings or otherwise of the methods by which they were obtained should be discussed. Reasons for the observed characteristics should be given. Comparison between measured and theoretically derived results should be made and where these differ by more than the expected experimental error, a credible explanation should be found in terms of shortcomings in the theoretical model or in the experimental technique.

7. Conclusions

This last section should include brief abstracted conclusions from the arguments of the Discussion, and provide answers to any questions posed by the stated objective of the experiment. This section should not in general exceed 50 words.

REQUIREMENTS OF THE COURSES

Students have to submit the log book and report/formal report to the laboratory supervisor for assessment. Students have to consult the laboratory supervisor for the detail requirement of the write-up.

FAULTY EQUIPMENT PROCEDURE

If equipment is suspected of being faulty, it is ***most important*** that this should be brought to the attention of either the lecturer/supervisor or the laboratory technician so that, if confirmed, a replacement can be arranged. Please ***do not*** merely put the equipment aside and use another as this can progressively cause more and more problems and frustrations for other students, as well as for yourself.