

A GUIDE TO THE PREPARATION OF FORMAL LABORATORY REPORTS

1. Introduction

This report has been prepared, as a guide to those concerned in the preparation of formal laboratory / project reports in the Department of Mechanical Engineering. It is considered that close adherence to these recommendations will lead both to clarity of presentation and to consistency within the department.

2. Format

All formal laboratory reports should be produced to a standard size, A4. Normal text should be written in single spacing.

When illustrations, tables, charts, etc. have to be produced in larger size, they should be of A4 proportions.

3. Physical Arrangement

The lay-out of reports should be as follows:-

- a) Title page
- b) A summary of contents
- c) List of contents
- d) List of figures and tables
- e) Notation
- f) Main body of text
- g) References
- h) Appendices
- i) Tables, unless these are included in the text
- j) Illustrations

3.1 Title page

The title page should include the following information as shown in this report.

- a) The name of the University and Department
- b) The title of the experiment/project
- c) The name of the author and the date of writing

3.2 A Summary of the Contents

The Summary should be a brief statement of the aims, scope and findings of the work reported upon. It should be complete in itself and statements like 'previous work by Chattha' 'as stated in Para 5' must be avoided. If the report is one of a series, reference numbers of previous reports should be given.

3.3 List of Content

This should be entitled 'CONTENTS' and is statement of the main headings under which the text of the report is arranged page numbers should be those on which sections start, and inclusive page numberings, e.g. '22-23' should not be used.

3.4 List of Figures and Tables

Generally, if there are more than 5 illustrations and/or graphs etc., it is useful to include a list of figures. This should be entitled 'FIGURES'. Similarly if there are more than 5 tables, it is useful to include a list under the title 'TABLES'.

3.5 Notation

Any symbols used in the report should be listed under the heading 'NOTATION' and should appear before the main text.

3.6 Main Text

The main text should begin with an **INTRODUCTION** which should deal with the background to the work reported and the reasons for undertaking it and references to previous pertinent studies.

The main text should also include a **DISCUSSION** of the experimental technique employed. Diagrams of equipment or photographs should appear at the end of the report as indicated in PARA 3. Above.

Finally, the main text should terminate with **CONCLUSIONS**. This is perhaps the most important section and must, in the light of the test results, indicate the degree of success of the exercise. Additionally, reason for poor results should be clearly stated. Recommendations for further work may also be included in this section OR a separate section titled **RECOMMENDATIONS** BE included.

3.7 References

In the text of the report due reference must be given to the work of others if it has been used or referred to. For example '.....as shown by Tabassum [1]', or 'Bhutta [3] states that'. In the list of references, which should follow the main text, it must be made possible for the reader to identify and obtain the work of reference, e.g.,

REFERENCES

1. Tabassum, S. A., 'Solar Refrigeration: Option for Pakistan', Pakistan HVACR Journal, No.6, PP 17-28, 2002
2. Twidell, J. W. and Weir, A.D. Renewable Energy Resources, E. & F. N. Spon Ltd., USA, PP 56-59, 1986.
3. Bhutta, S. M., Nuclear Power Plants, Institution of Engineers, P 223, 1980.

Reference should be listed and numbered in the order in which they appear in the text. The titles of periodicals may be given in full or abbreviated in accordance with internationally accepted norms.

3.8 Appendices

Appendices are more detailed explanations of methods and techniques used in the report or further explanations of any items which, it is felt, requires more attention than could be given in the main text.

3.9 Tables

This may include tables of experimental results, which will prove useful in the analysis in subsequent work. In general standard tables such as stream tables or compressible flow tables should not be included. Due reference to these must, however, be made as indicated in PARA 3.7 above.

3.10 Illustrations

No standard convention is adopted for graphs, line drawings or photographs. Uniformity in any one report should, however, be maintained in particular with respect to labeling, heading and figure numbers.