A MANUAL FOR PREPARATION OF PROJECT REPORT

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Appendix 1 : B.E. / B.Tech. Title Page

# A Manual for preparation of Project report

1. **GENERAL :**

The manual is intended to provide broad guidelines to the B.E. / B.Tech. candidates in the preparation of the project report. In general, the project report shall report, in an organised and scholarly fashion an account of original research work of the candidate leading to the discovery of new facts or techniques or correlation of facts already known (analytical, experiments, hardware oriented etc.)

**2. NUMBER OF COPIES TO BE SUBMITTED:**

**B.E. / B.Tech. :** Students should submit three copies (one copy each to the student, Guide and CoE) to the Head of the Department concerned on or before the specified date along with one copy in CD and one page abstract with first page for the main library

**3. Size of Project report :**

The size of project report should not exceed 60 pages of typed matter reckoned from the first page of Chapter 1 to the last page.

**4. Arrangement of contents of project report :**

The sequence in which the project report material should be arranged and bound should be as follows :

1. Title page
2. Bonafide Certificate
3. Abstract
4. Acknowledgement
5. Table of Contents
6. List of Tables
7. List of Figures
8. List of Symbols, Abbreviations or Nomenclature (Optional)
9. Chapters
10. Appendices
11. References

The Tables and Figures shall be introduced in the appropriate places.

**5. Page Dimensions and Margin :**

The dimensions of the final bound copies of the project report should be 290mm x 205mm. Standard A4 size (297mm x 210mm) paper may be used for preparing the copies.

The final five copies of the project report (at the time of submission) should have the following page margins :

Top edge : 30 to 35 mm

Bottom edge : 25 to 30 mm

Left side : 35 to 40 mm

Right side : 20 to 25 mm

The project report should be prepared on good quality white paper preferably not lower than 80 gms /Sq. Meter.

Tables and figures should conform to the margin specifications. Large size figures should be photographically or otherwise reduced to the appropriate size before insertion.

**6. MANUSCRIPT PREPARATION :**

The candidates shall supply a typed copy of the manuscript to the guide for the purpose of approval. In the preparation of the manuscript, care should be taken to ensure that all textual matter is typed to the extent possible in the same format as may be required for the final project report.

Hence, some of the information required for the final typing of the project report is included also in this section.

The headings of all items 2 to 11 listed section 4 should be typed in capital letters without punctuation and centred 50mm below the top of the page. The text should commence 4 spaces below this heading. The page numbering for all items 1 to 8 should be done using lower case Roman numerals and the pages thereafter should be numbered using Arabic numerals.

6.1 **Title page** – A specimen copy of the title page for B.E. / B.Tech.. project report are given in Appendix 1.

6.2 **Bonafide Certificate** – Using double spacing for typing the Bonafide Certificate should be in this format :

Certified that this project report titled…………………………is the bonafide work of Mr./ Ms………………………………..who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

(Certificate to be countersigned by the HOD.)

6.3. **Abstract** – Abstract should be an essay type of narrative not exceeding 600 words, outlining the problem, the methodology used for tackling it and a summary of the findings.

6.4. **Acknowledgement** – It should be brief and should not exceed one page when typed double spacing.

6.5. **Table of contents** – The table of contents should list all material following it as well as any material which precedes it. The title page, bonafide Certificate and acknowledgement will not find a place among the items listed in the table of contents but the page numbers of which are in lower case Roman letters. One and a half spacing should be adopted for typing the matter under this head.

6.6. **List of Tables** – The list should use exactly the same captions as they appear above the tables in the text. One and a half spacing should be adopted for typing the matter under this head.

6.7. **List of Figures** – The list should use exactly the same captions as they appear below the figures in the text. One and a half spacing should be adopted for typing the matter under this head.

6.8. **List of Symbols, Abbreviations and Nomanclature**– One and a half spacing should be adopted for typing the matter under this head. Standard symbols, abbreviations etc. should be used.

6.9. **Chapters** – The chapters may be broadly divided into 3 parts (i) Introductory chapter, (ii) Chapters developing the main theme of the project report, (iii) Results, Discussion and Conclusion.

The main text will be divided into several chapters and each chapter may be further divided into several divisions and sub-division.

* + - Each chapter should be given an appropriate title.
    - Tables and figures in a chapter should be placed in the immediate vicinity of the reference where they are cited.
    - Footnotes should be used sparingly. They should be typed single space and placed directly underneath in the very same page which refers to the material they annotate.

6.10. **Appendices** – Appendices are provided to give supplementary information, which if included in the main text may serve as a distraction and cloud the central theme under discussion.

* Appendices should be numbered using Arabic numerals, e.g. Appendix 1, Appendix 2, etc.
* Appendices, Tables and References appearing in appendices should be numbered and referred to at appropriate places just as in the case of chapters.

6.11. **List of References** – Any work of other researcher is used either directly or indirectly the origin of the material thus referred to at appropriate places in the project report should be indicated. A paper, a monograph or a book may be designated by the name of the first author followed by the year of publication, placed inside brackets at the appropriate places in the project report should be indicated. A paper, a monograph or a book may be designated by the name of the first author followed by the year of publication, placed inside brackets at the appropriate place of reference. The citation may assume any one of the following forms.

**Examples of citation**

1. An improved algorithm has been adopted in literature (Tsychiya 1980)
2. Jankins and Walts (1968) have dealt at length this principle.
3. The problems of mechanical manupulators has been studied by Shin et al (1984) and certain limitations of the method used, has been pointed out by Shin et al (1984 a).

The listed should be typed 4 space below the heading “REFERENCES” in alphabetical order in single spacing left-justified. The reference material should be listed in the alphabetical order of the first author. The name of the author/authors should be immediately followed by the year and other details. A typical illustrative list given below relates to the citation examples quoted above.

**REFERENCES**

1. Ariponnammal S. and Natarajan S. (1994) ‘Transport Phonomena of Sm Se 1-x Asx’ Pramana – Journal of Physics Vol. 42 No.5 pp.421-425

2. Barnard R.W. and Kellogg C. (1980) ‘Applications of Convolution operators to Problems in univalent function theory. Michigan Mach. J., Vol 27, pp 81-94

3. Jankins G.M. and Walts D.G. (1968), Spectral Analysis and its Applications’ Holder Day, Sanfrancisco.

1. Shin K.G. and MckayN.D. (1984) ‘Open loop minimum time control of mechanical manupulations and its applications’, Proc. Amer. Contr. Conf., San Diego, CA, pp. 1231-1236.

6.12. **Tables and Figures** – By the word Table, is meant tabulated data in the body of the project report as well as in the appendices. All other material used in the body of the project report and appendices such as charts, graphs, maps, photographs and diagrams may be designated as figures.

* A table or figure including caption should be accommodated within the prescribed margin limits and appear on the page following the page where their first reference is made.
* Tables and figures on half page or less in length may appear on the same page along with the text. However, they should be separated from the text both above and below by triple spacing.
* All tables and figures should be prepared on the same paper or material used for the preparation of the rest of the project report.
* For preparing captions, numerals, symbols or characters in the case of tables or figures, the Computer should be used.
* Two or more small tables or figures may be grouped if necessary in a single page.
* Whenever possible, the entire photograph(s) may be reproduced on a full sheet of photographic paper.
* Photographs, if any, should be included in the colourxerox form only. More than one photograph can be included in a page.
* Samples of Fabric, Leather, etc., if absolutely necessary may be attached evenly in a page and fixed/pasted suitably and should be treated as figures.

1. **TYPING INSTRUCTIONS**
   1. **General**

This section includes additional information for final typing of the project report. Some information given earlier under ‘Manuscript preparation’ shall also be referred.

The impressions on the typed copies should be black in colour.

The font and size : ‘12 point Times New Roman’ with bold letters wherever necessary shall be used to have uniformity of the project report

A sub-heading at the bottom of a page must have atleast two full lines below it or else it should be carried over to the next page.

The last word of any page should not be split using a hyphen.

One and a half spacing should be used for typing the general text.

Single spacing should be used for typing:

1. Long Tables
2. Long quotations
3. Foot notes
4. Multiline captions
5. References

All quotations exceeding one line should be typed in an indented space – the indentation being 15mm from either margins.

Double spacing should be used for typing the Bonafide Certificate and Acknowledgement.

* 1. **Chapters**

The format for typing chapter headings, divisions headings and sub division headings are explained through the following illustrative examples.

Chapter heading : CHAPTER 1

Division heading INTRODUCTION

Division heading : 1.1 OUTLINE OF PROJECT REPORT

Sub-division heading : 1.1.2. Literature review.

The word CHAPTER without punctuation should be centered 50mm down from the top of the page. Two spaces below, the title of the chapter should be typed centrally in capital letters. The text should commence 4 spaces below this title, the first letter of the text starting 20mm, inside from the left hand margin.

The division and sub-division captions along with their numberings should be left-justified. The typed material directly below division or sub-division heading should commence 2 spaces below it and should be offset 20mm from the left hand margin. Within a division or sub-division, paragraphs are permitted. Even paragraph should commence 3 spaces below the last line of the preceding paragraph, the first letter in the paragraph being offset from the left hand margin by 20mm.

**8. NUMBERING INSTRUCTIONS**

* 1. **Page Numbering**

All pages numbers (whether it be in Roman or Arabic numbers) should be typed without punctuation on the upper right hand corner 20mm from top with the last digit in line with the right hand margin. The preliminary pages of the project report (such as Title page, Acknowledgement, Table of Contents etc.) should be numbered in lower case Roman numerals. The title page will be numbered as (i) but this should not be typed. The page immediately following the title page shall be numbered (ii) and it should appear at the top right hand corner as already specified. Pages of main text, starting with Chapter 1 should be consecutively numbered using Arabic numerals.

* 1. **Numbering of Chapters, Divisions and Sub-Divisions**

The numbering of chapters, divisions and sub-divisions should be done, using Arabic numerals only and further decimal notation should be used for numbering the divisions and sub-divisions within a chapter. For example, sub-division 4 under division 3 belonging to chapter 2 should be numbered as 2.3.4. The caption for the sub-division should immediately follow the number assigned to it.

Every chapter beginning with the first chapter should be serially numbered using Arabic numerals. Appendices included should also be numbered in an identical manner starting with Appendix 1.

* 1. **Numbering of Tables and Figures**

Tables and Figures appearing anywhere in the project report should bear appropriate numbers. The rule for assigning such numbers is illustrated through an example. Thus if as figure in Chapter 3, happens to be the fourth then assign 3.4 to that figure. Identical rules apply for tables except that the word Figures is replaced by the word Table. If figures (or tables) appear in appendices then figure 3 in Appendix 2 will be designated as Figure A 2.3. If a table to be continued into the next page this may be done, but no line should be drawn underneath an unfinished table. The top line of the table continued into the next page should, for example read Table 2.1 (continued) placed centrally and underlined.

* 1. **Numbering of Equations**

Equations appearing in each Chapter or Appendix should be numbered serially, the numbering commencing a fresh for each Chapter or Appendix. Thus for example, an equation appearing in Chapter 2, if it happens to be the eighth equation in that Chapter should be numbered (2.8) thus:

C(s) G1 G2

----- = ----------------- (2.8)

R(s) 1 + G1 G2 H

While referring to this equation in the body of the project report it should be referred to as Equation (2.8).

**9. BINDING SPECIFICATIONS**

Project report submitted for B.E. / B.Tech. should be bound using flexible cover of thick white art paper. The spine for the bound volume should be of black Calico of 20mm width. The cover should be printed in black letters and the text for printing should be identical to what has been prescribed for the title page.

**FABRICATION OF AUTOMATIC FEEDING MACHINE**

**A PROJECT REPORT**

***Submitted by***

|  |  |
| --- | --- |
| **BALAMURUGAN . E** | **(Reg. No. 201201001)** |
| **GRI BABU . P** | **(Reg. No. 201201021)** |

***in partial fulfillment for the award of the degree***

***of***

**BACHELOR OF ENGINEERING**

**in**

MECHANICAL ENGINEERING

**DEPARTMENT OF MECHANICAL ENGINEERING**

**MEPCO SCHLENK ENGINEERING COLLEGE, SIVAKASI**

**(An Autonomous Institution affiliated to Anna University Chennnai)**

**April 2017**

**BONAFIDE CERTIFICATE**

Certified that this project report titled **DESIGN AND EVALUATION OF PARAMETERS OF CEMICAL REACTOR** is the bonafide work of **Mr.R.SUNDARA RAJAN.,** who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

Dr.N.SELVAKUMAR,M.E.,Ph.D., Dr.P.Nagaraj, M.E., Ph.D.,

**Internal guide Head of the Department**

**Professor, Senior Professor,**

**Department of Mechanical Engineering, Department of MechanicalEngineering,**

**MepcoSchlenk Engineering College, MepcoSchlenk Engineering College,**

**Sivakasi. Sivakasi.**

Submitted for viva-Voce Examination held at **MEPCO SCHLENK ENGINEERING COLLEGE, SIVAKASI (AUTONOMOUS)** on **……………..............**

**Internal Examiner External Examiner**

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**ABBREVIATION**

**Cp : Specific heat of the coolant at Constant pressure, J/kg-K**

**K: Thermal conductivity W/m-K**

**: Density, kg/m3**

**K : Mole**

M : Molecular weight

**P : Vapour pressure mmHg**

A,B,C : The antonie coefficients

T : Temp in K

P : Internal pressure , bar

d1 : Internal diameter of the vessel,m

h3 : Height of the reactor vessel ,m

sh : Hoop Stress

sl : Longitudinal stress

t : Thickness of vessel