

Appendix - VI

**Standard format for Preparation of
Thesis/Dissertation/Report**

for

**Ph.D./M.Tech./M.Phil./Int. M.Sc./M.Sc/MCA
Students**



**Veer Surendra Sai University of Technology (VSSUT)
Siddhi Vihar, P.O.: Engineering College, Burla
Sambalpur–768018, Odisha, India
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Title of the Dissertation

Abhishek Pandey



Department of Electrical Engineering
Veer Surendra Sai University of Technology, Burla

Title of the Dissertation

Dissertation submitted in partial fulfillment

of the requirements for the degree of

Doctor of Philosophy

in

Electrical Engineering

By

Abhishek Pandey

(Registration Number: xxxxxxxxxxxx)

based on research carried out

under the supervision of

Prof. xxxxxxxxxxxx

and

Prof. xxxxxxxxxxxx



January, 2023

Department of Electrical Engineering

Veer Surendra Sai University of Technology, Burla



January 05, 2023

Certificate of Examination

Registration Number: xxxxxxxx

Name: Abhishek Pandey

Title of Dissertation: xxxxxxxxxxxx

We the below signed, after checking the dissertation mentioned above and the official record book (s) of the student, hereby state our approval of the dissertation submitted in partial fulfillment of the requirements of the degree of *Doctor of Philosophy in Electrical Engineering* at *Veer Surendra Sai University of Technology, Burla*. We are satisfied with the volume, quality, correctness, and originality of the work.

Prof.xxxxxxxxxx
Co-Supervisor

Prof.xxxxxxxxxx
Supervisor

Prof.xxxxxxxxxx
Member, DRC

Prof.xxxxxxxxxx
Member, DRC

Prof.xxxxxxxxxx
Member, DRC

Prof.xxxxxxxxxx
External Examiner

Prof.xxxxxxxxxx
Chairman, DRC

Prof.xxxxxxxxxx
Head of the Department



Department of Electrical Engineering

Veer Surendra Sai University of Technology, Burla

Prof. xxxxxxxxxxxx

Professor

Prof. xxxxxxxxxxxx

Professor

January 05, 2023

Supervisors' Certificate

This is to certify that the work presented in the dissertation entitled, "*Title of the Dissertation*" submitted by *Abhishek Pandey*, Registration Number xxxxxxxxxxx, is a record of original research carried out by him under our supervision and guidance in partial fulfillment of the requirements of the degree of *Doctor of Philosophy in Electrical Engineering*. Neither this dissertation nor any part of it has been submitted earlier for any degree or diploma to any institute or university in India or abroad.

Prof. xxxxxxxxxxxx
Co-Supervisor

Prof. xxxxxxxxxxxx
Supervisor

Dedication

You may dedicate your dissertation in this page.

Dedication should be no more than one page.

You may choose your preferred font and size.

Signature

Include this page in the pre-text page count,
but do not place a page number on it.

Declaration of Originality

I, Abhishek Pandey, Registration Number xxxxxxxx hereby declare that this dissertation entitled, "*Title of the Dissertation*" presents my original work carried out as a doctoral student of VSSUT Burla and, to the best of my knowledge, contains no material previously published or written by another person, nor any material presented by me for the award of any degree or diploma of VSSUT Burla or any other institution. Any contribution made to this research by others, with whom I have worked at VSSUT Burla or elsewhere, is explicitly acknowledged in the dissertation. Works of other authors cited in this dissertation have been duly acknowledged under the sections "Reference" or "Bibliography". I have also submitted my original research records to the scrutiny committee for evaluation of my dissertation.

I am fully aware that in case of any non-compliance detected in future, the degree awarded to me may be withdrawn on the basis of the present dissertation.

January 05, 2023
VSSUT Burla

Abhishek Pandey
Regd. Number xxxxxxxx

Acknowledgment

This section shows the essence of the student's journey during the course of the research work and the role of other individuals in shaping his/her academic life. Acknowledgments are non-consequential in that a student is not evaluated on them. An acknowledgment has typically three sections —

- Reflection: Narration of the student's journey through his/her research career.
- Thanking: Expression of gratitude to those who have helped in the student's journey.
- Announcement: Accepting responsibility for the work and/or dedication of the dissertation to someone. This in fact is a repeat of declaration and dedication pages.

January 05, 2023
VSSUT Burla

Abhishek Pandey
Regd. Number xxxxxxxxx

Abstract

Write the abstract of the dissertation followed by 3 to 7 keywords or phrases. An abstract is a micro dissertation. Both the dissertation and abstract should answer the following few questions —

- What was done?
- Why was it done?
- How was it done?
- What was found?
- What is the significance of the findings?

In the abstract section, one should answer the above questions in short paragraphs. The total length of the abstract should typically be limited to two pages.

Mention 3 to 7 keywords, phrases, or index terms in ***bold-italics*** separated by semicolons. These words should be carefully chosen in a manner that they convey sufficient information on what the dissertation is all about. These words help other researchers to search and find your work.

Keywords: KW1; KW2; KW3; KW4; KW5.

Contents

Certificate of Examination	ii
Supervisors' Certificate	iii
Dedication	iv
Declaration of Originality	v
Acknowledgment	vi
Abstract	vii
Content	viii
List of Abbreviations	ix
List of Symbols	x
List of Figures	xi
List of Tables	xii
1 Introduction	1
1.1 Introduction	--
1.2 Problem Statement of the Thesis	--
1.3 Objectives of the Thesis	--
1.4 Organization of the Thesis	--
2 Literature Review	8
2.1 Introduction	--
2.1.1 Literature Review (Sub-sub-section)	--
2.2 Future Scope of the Research Work	--
3 Materials and Methods	9
3.1 Introduction	--

3.2	Summary	--
4	Name of the Chapter (Contributing Chapter 1)	10
4.1	Introduction	--
4.2	Results & Discussion	--
	4.2.1 Sub-sub-section	--
4.3	Summary	--
5	Name of the Chapter (Contributing Chapter 2)	11
5.1	Introduction	--
5.2	Results & Discussion	--
	5.2.1 Sub-sub-section	--
5.3	Summary	--
6	Name of the Chapter (Contributing Chapter 3)	12
6.1	Introduction	--
6.2	Results & Discussion	--
	6.2.1 Sub-sub-section	--
6.3	Summary	--
7	Name of the Chapter (Contributing Chapter 4)	13
7.1	Introduction	--
7.2	Results & Discussion	--
	7.2.1 Sub-sub-section	--
7.3	Summary	--
8	Conclusion & Future Scope of the Work	14
8.1	Conclusion	--
8.2	Future Scope of the Work	--
	References	--
	Appendices (if any)	I

Index	II
Curriculum Vitae	III
List of Publications (Journal and conference in separate list)	IV
Reprints of published papers related to thesis	V
Plagiarism Report	VI

List of Abbreviations

Abbreviations should be alphabetically written

Abbreviation	Description
AGC	Automatic Generation Control
AHCM	Agglomerative Hierarchical Clustering Method
CAISO	California Independent System Operator
CONOPT	Continuous Nonlinear Optimizer

List of Symbols

Symbols should be alphabetically written

Symbol	Nomenclature	Unit (MKS/CGS)
A	Area	m^2
ν	Frequency	Hz, s^{-1}

List of Figures

1.1	Role of DR in Energy Balancing for a Typical Power System	10
1.2	Schematic of V2G Power Flow in the Smart Grid	12
1.3	EV Load by an Hour of the Typical Day	14

List of Tables

1.1	Charging technologies	11
1.2	Types and Specifications of EVs	13
1.3	Simulation Parameters	15

Chapter 1

Introduction

1.1 Introduction

A treatise advancing a new point of view resulting from research is one of the compulsory requirements of an academic degree of VSSUT, Burla. Undergraduate students submit a project report in support of their candidature for B.Tech. degree. Similarly, Masters students submit theses, and doctoral students submit dissertations. Unless otherwise stated explicitly, henceforth in this document the word “dissertation” will be used as a synonym for “report” and “thesis”.

This document is intended to provide a guideline to students in the preparation of their dissertations. A dissertation is expected to have ethical standards and uniform format with readability.

1.2 Dissertation Arrangement

Each dissertation must be arranged in the following serial order. Optional pages may not be included.

i. Cover Page

The cover page comprises the dissertation title, author’s name, and institutional details. This page is excluded from page number counter. A sample cover page design and spine design is shown in Figure 1.1.

ii. Title Page

The title page includes the title of the dissertation followed by submission month-year, department, degree, author’s name, and supervisors’ names. Include this page in the pre-text page count, but do not place a page number on it. The top margin on this page shall be 60mm. [Sample Included]

iii. Certificate of Examination

Include this page in the pre-text page count, but do not place a page number on it. If the Chairman of the DRC is the HoD then he will sign twice. The top margin on this page shall be 60mm. [Sample Included]

iv. Supervisor's Certificate

Two samples are given; appropriate sample may be used depending on the number of supervisors. Include this page in the pre-text page count, but do not place a page number on it. The top margin on this page shall be 60mm. [Samples Included]

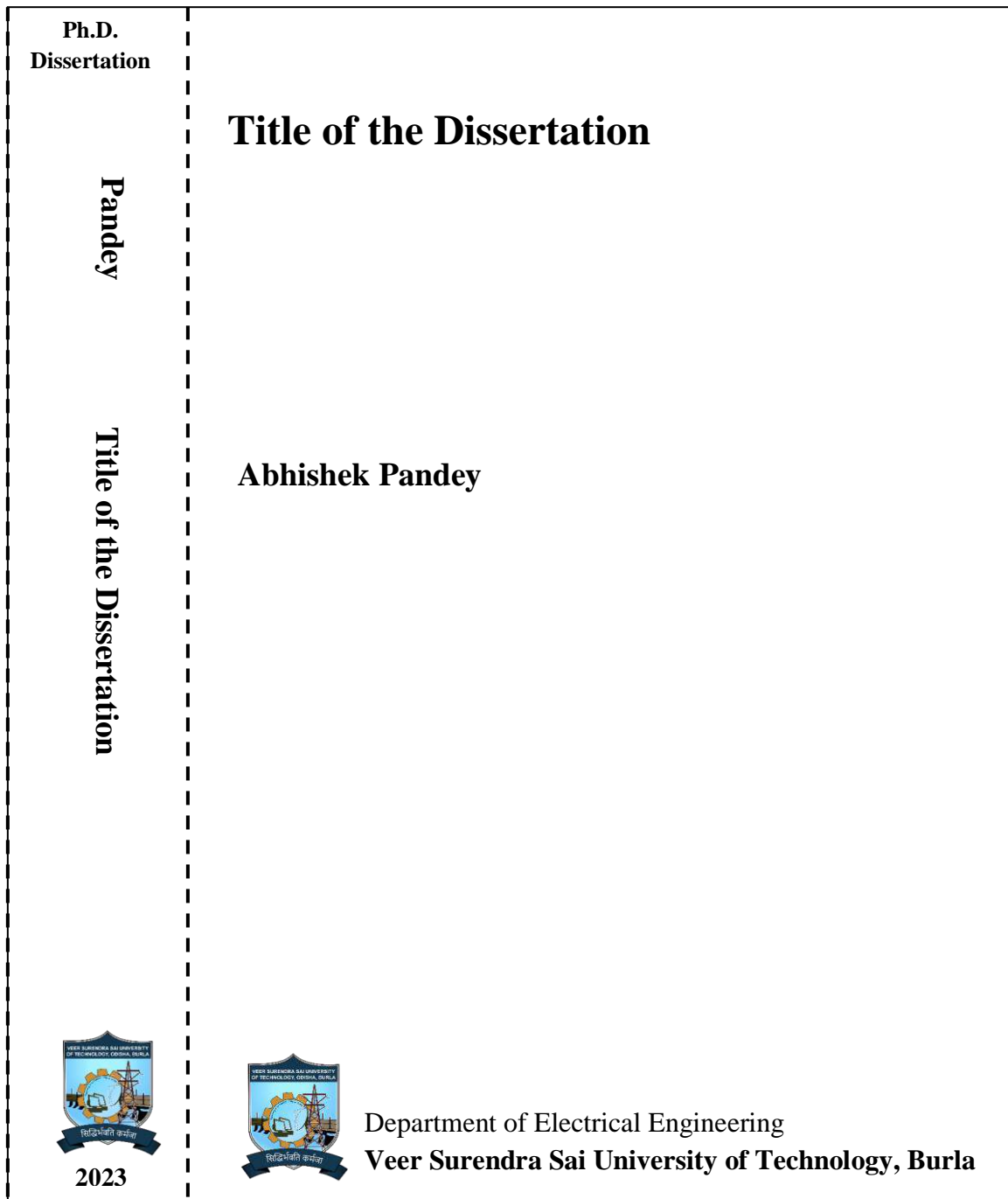


Figure 1.1: Cover page and spine.

v. Dedication [Optional]

This dedication page should be limited to one page. The author may choose his/her preferred font and size. Include this page in the pre-text page count, but do not place a page number on it. The top margin on this page shall be 60mm.

vi. Declaration of Originality

The student is expected to declare that the work and ideas in his/her dissertation are all his/her own and original. Include this page in the pre-text page count, but do not place a page number on it. A sample declaration is included. The top margin on this page shall be 60mm. [Sample Included]

vii. Acknowledgment [Optional]

Include this page in the pre-text page count, but do not place a page number on it. The top margin on this page shall be 60mm.

viii. Abstract

Abstract followed by three to seven keywords/phrases should be written in this section in no more than two pages. One may follow single line spacing in this section. Include this page in the pre-text page count, but do not place a page number on it. The top margin on this page shall be 60mm.

ix. Contents

Begin placing the page numbers at the bottom of this page, counting all preceding pages except the cover page. This counting should continue up to the page preceding the first page of the first chapter. Numbers should be in lower case Roman numerals. Page numbers are centered 15mm from the bottom of the page. The content pages should be generated automatically with the aid of software used for dissertation preparation. [Sample Included]

x. List of Abbreviations [Optional]

This section should be generated automatically with the aid of software used for dissertation preparation. Continue the page numbering with lower case Roman numerals and place it 15mm from the bottom of the page. [Sample Included]

xi. List of Symbols [Optional]

This section should be generated automatically with the aid of software used for dissertation preparation. Continue the page numbering with lower case Roman numerals and place it 15mm from the bottom of the page. [Sample Included]

xii. List of Figures [Optional]

This section should be generated automatically with the aid of software used for dissertation preparation. Continue the page numbering with lower case Roman numerals and place it 15mm from the bottom of the page. [Sample Included]

xiii. List of Tables [Optional]

This section should be generated automatically with the aid of software used for dissertation preparation. Continue the page numbering with lower case Roman numerals and place it 15mm from the bottom of the page. [Sample Included]

xiv. Chapters

All pages from the first page of the first chapter through the Vita should be numbered consecutively in Arabic numerals, beginning with numeral “1”. [Samples Included]

xv. References

References may be in one of the two commonly used styles: (a) numbered in sequence following the order of appearance, or (b) author and year of publication arranged alphabetically, depicting on the style used in the dominant journal in your field.

Please give names of ALL authors, surname first, title, name of journal, volume (bold), page numbers (start - end), and year of publication. Do not use “et al” in this section. You may use “*et al.*” while referring to article in the main text.

This section should be generated automatically with the aid of software used for dissertation preparation. There should be only one “Reference” section in a dissertation and should be placed after the Conclusion Chapter and before Appendices, if any. Continue page numbering with Arabic numerals. [Sample Included]

1.3 Dissertation Layout

Students are advised to adhere to following points while writing their dissertation.

a) Institute logo

It is a matter of pride to print the Institute logo in the dissertation. The printed logo should be contained in a square of 25mm each side. Students are advised to use high resolution logo. A logo is provided in the dissertation writing template.

b) Font

The entire dissertation must be written using only a single font including all the texts inside graphs, figures, block diagrams, *etc.* While writing captions of tables and figures, the font size should be decreased by one point. Similarly, the font size of bibliography and index should also be lessened by a point. Students are advised to use the following in the body text —

serif fonts like Times New Roman (TNR) of size 12pt

or

sans-serif fonts like Arial of size 11pt.

Needless to say that the use of font should be uniform throughout. Headings, Titles *etc.* should use fonts as given below in Table 1.1.

Table 1.1: Font sizes to be used in the dissertation

Item	Arial	TNR	Justification
Main Text	11 normal	12 normal	Justified
Sub-sub Heading	11 bold	12 bold	Left
Sub Heading	13 bold	14 bold	Left
Heading [#]	16 bold	17 bold	Left
Chapter Title	22 bold	24 bold	Center
Chapter Number	16 bold	17 bold	Left

[#]Add serial number with one decimal place.

c) Table and Figure

All tables, figures, and other such illustrations referenced in the text should be numbered for unique identification. The number format should be $p.q$ with p signifying the chapter number where the illustration appears and q denoting the serial number of that illustration in the chapter p . The serial number should be set to 1 at the beginning of a new chapter. A table caption should be placed at the top of the table, and a figure caption should be placed at the bottom of the figure. The caption should

- (a) = Page Width = 210
 (b) = Page Height = 297
 (c) = Text Width = 154
 (d) = Text Height = 247
 (e) = Left Margin = 31
 (f) = Top Margin = 25
 (g) = Head Separation = 5
 (h) = Head Height = 5
 (i) = Foot Skip = 10
 All units are in mm.

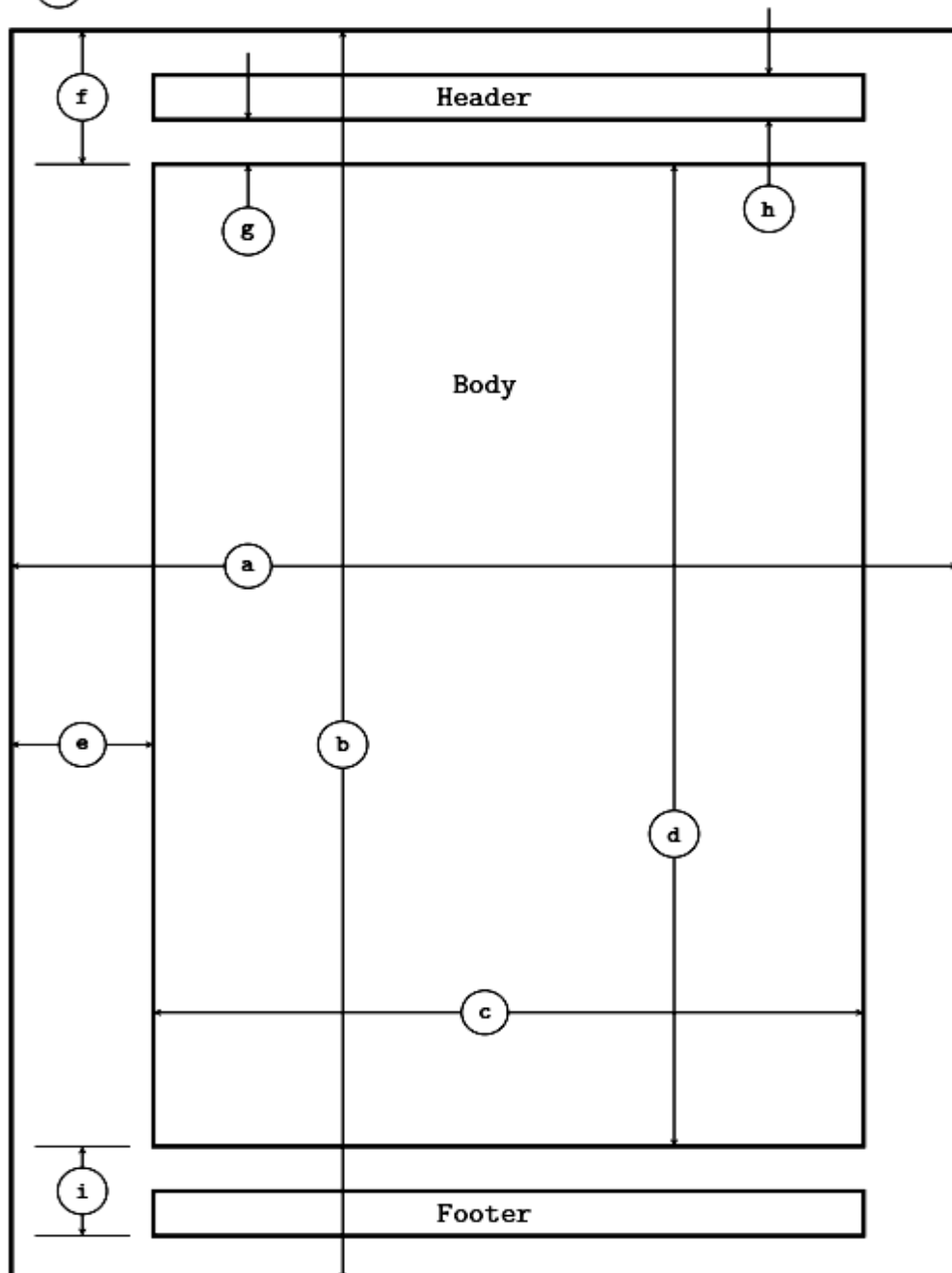


Figure 1.2: Page size and margin follow the unique number $p.q$. The size of the font in the caption of tables and figures should be one less than the text font size.

d) References

“References” should be treated as the last chapter and placed at the end of the dissertation. It should not be numbered like other chapters. Texts within the references should have single spacing. The size of the font may be reduced by a point or two. Journal article [1, 2], Patent [3, 4], book [5, 6], conference article [7, 8], online 7 resource [9, 10], Ph.D. dissertation [11, 12] are usually referred in the text. Some samples of various bibliographic styles are included in this guideline for illustration. You are advised to follow one reference format of any dominant journal of your field.

1.4 Chapters

In the text of the dissertation, each chapter should begin on a fresh page. They should also be designated in the Table of Contents along with other major sections of each chapter. The page numbers listed on the Table of Contents must correlate with the beginning of each section or chapter. All texts should be written with 1.5-spacing. Each chapter should begin with a chapter number in Arabic numerals (font size: Times New Roman 17 points or Arial16 points, Bold) followed by the chapter title in bold face of size 24 points in Times New Roman font or 22 points in Arial font.

The first level section should have number of format *a.b*, where the number *a* is an Arabic number denoting the chapter number and *b* is also an Arabic number starting from 1 and counting up for each section. For example 3.1, 4.2, or 1.5, *etc.* The section title should follow the section number. Both the title and number should be in the bold face of size 17points in Times New Roman font or 16 points in Arial font.

The second level section should have number of format *a. b. c*, where *c* is an Arabic number. For example 3.1.1, 4.2.1, or 1.5.2 *etc.* The sub-section title in bold letters should follow the number in bold. The font size should be 14 points Times New Roman or 13 points Arial. Except when it is commonly followed in your field, it is suggested not to give serial number beyond *a.b* stage, *i.e.* serializing like *a.b.c* is discouraged. The third level section should have no number. The sub-sub-section title should be in bold letters. The font size should be 12 points Times New Roman or 11 points Arial.

Chapter 2

Literature Review

2.1 Introduction

The “Literature Review” is a very useful section of Indian theses. This section should cite most of the publications in the field including all related past work done. Several common mistakes found in recent theses from our country should be avoided. Some theses reproduce, albeit using the author’s own language, a large amount of textbook information. While for the sake of readability some basic ideas of the field may be articulated, it is certainly improper to reproduce large sections of text books. A reader is expected to have prior knowledge of the general field. Authors sometimes summarise articles in serial order but neither bring out the link between one article and its following one, nor bring out the relation the article in question has with the main title of the thesis.

2.2 Sub-Sections as per the requirement

Chapter 3

Materials and Methods

3.1 Introduction

Experimental research in several research fields, particularly those dealing with material science, food technology, biotechnology *etc*, invariably contain a chapter on “Materials and Methods” which describe the instruments and chemicals used in the experiments, plus the processing techniques. This chapter is usually irrelevant in theses in electrical sciences and those relying on mathematical analysis. Use the practice followed in dissertations of your field.

3.1.2 Sub-Sections as per the requirement

Chapter 4

Name of the Chapter

(Contributing Chapter – 1)

4.1 Introduction

There should be four contributing chapters starting from **Chapter 4 to Chapter 7** out of the research work of the Ph.D scholars.

4.2 Results & Discussion

The section and subsections of these chapters will be as per the requirement of the research work done and should be in line with the research papers published or communicated by the scholar first author.

Chapter 5

Name of the Chapter

(Contributing Chapter – 2)

5.1 Introduction

There should be four contributing chapters starting from **Chapter 4 to Chapter 7** out of the research work of the Ph.D scholars.

5.2 Results & Discussion

The section and subsections of these chapters will be as per the requirement of the research work done and should be in line with the research papers published or communicated by the scholar first author.

Chapter 6

Name of the Chapter

(Contributing Chapter – 3)

6.1 Introduction

There should be at least four contributing chapters starting from **Chapter 4 to Chapter 7** out of the research work of the Ph.D scholars.

6.2 Results & Discussion

The section and subsections of these chapters will be as per the requirement of the research work done and should be in line with the research papers published or communicated by the scholar first author.

Chapter 7

Name of the Chapter

(Contributing Chapter – 4)

7.1 Introduction

There should be four contributing chapters starting from **Chapter 4 to Chapter 7** out of the research work of the Ph.D scholars.

7.2 Results & Discussion

The section and subsections of these chapters will be as per the requirement of the research work done and should be in line with the research papers published or communicated by the scholar first author.

Chapter 8

Conclusion & Future Scope of the Work

8.1 Conclusion

The conclusion is one of the most important chapters of the dissertation and often it is one of the most badly written chapters. The student is expected to make a clear and concise statement of the original contributions made in the dissertation. The links between the key ideas spread across the chapters should be briefed in this chapter. Leave a positive impression with the examiner. One must remember not to claim those findings that have neither been proven nor corroborated in the dissertation.

8.2 Future Scope of the Work

This is not the end of the road. Narrate the way the research can be furthered.