Muffakham Jah College of Engineering and Technology
(Sponsored by Sultan-Ul-Uloom Education Society, Estd. 1980)
(UGC Autonomous Institution)
Approved by AICTE & Affiliated to Osmania University
Accredited by NAAC 'A+' grade

MANUAL

FOR

PREPARATION OF PROJECT REPORT (PHASE-I AND PHASE-II)

M.E. /M.TECH.

S.NO	CONTENT	PAGE NO
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2.	NUMBER OF COPIES TO BE SUBMITTED FOR EVALUATION	3
3.	SIZE OF REPORT/THESIS	3
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GUIDELINES FOR PREPARATION OF

M.E./M.Tech. PHASE–I REPORT AND PHASE–II THESIS

1. GENERAL

The following guidelines are prescribed for the preparation and submission of the **M.E./M.Tech. Phase–I Report and Phase–II Thesis**.

The report/thesis shall present, in an organized and systematic manner, the work carried out by the student under the guidance of the Supervisor. The Phase–II thesis, in particular, shall demonstrate the student's ability to undertake sustained research and present the findings in an appropriate academic and technical manner.

The research work may involve **analytical, experimental, computational, simulation-based, hardware-oriented, or other appropriate methodologies**. The work should demonstrate a clear understanding of the problem, appropriate methodology, analysis of results, and meaningful conclusions. Wherever applicable, the work should contribute to new knowledge, techniques, methods, applications, or systematic correlation and interpretation of existing knowledge.

The actual accomplishments of the work shall be clearly stated, and the results and conclusions shall be presented objectively and honestly.

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2. NUMBER OF COPIES TO BE SUBMITTED FOR EVALUATION

The following number of copies shall be submitted to the respective Department:

Document	Number of Copies	Distribution
M.E./M.Tech. Phase–I Report	3	One copy each for the Student, Supervisor, and Department Library
M.E./M.Tech. Phase–II Thesis	3	One copy each for the Student, Supervisor, and Department Library

The Department may require additional soft copies or printed copies, if necessary, for evaluation, records, or other academic purposes.

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3. SIZE OF THE REPORT/THESIS

The minimum length of the report/thesis shall be:

- **Phase–I Report:** Minimum **25 pages**
- **Phase–II Thesis:** Minimum **40 pages**

The page count shall be reckoned from the **first page of Chapter 1 to the last page of the Appendices**.

Greater emphasis shall be placed on the **methodology, results, analysis, discussion, and conclusions**, rather than merely increasing the number of pages.

The prescribed minimum page limit is only a guideline, and the report/thesis may exceed the minimum wherever the nature and scope of the research work require additional content.

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4. ARRANGEMENT OF CONTENTS OF THE REPORT/THESIS

The report/thesis shall be arranged and bound in the following sequence:

1. **Cover Page and Title Page**
2. **Certificate**
3. **Abstract**
4. **Acknowledgement**
5. **Table of Contents**
6. **List of Tables**
7. **List of Figures**
8. **List of Symbols, Abbreviations and Nomenclature** *(Optional, wherever applicable)*
9. **Chapters**
10. **References**
11. **Appendices**

Tables and Figures

Tables and figures shall be incorporated at appropriate locations within the relevant chapters and shall be:

- Properly numbered;
- Given appropriate titles/captions; table title and number should be at the top of the table and figure title and number should be at the bottom of the figure.
- Referred to in the text;
- Clearly legible; and
- Prepared within the prescribed page margins.

Large figures, drawings, charts, photographs, or other illustrations shall be appropriately reduced in size before insertion, without compromising readability.

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5. PAGE DIMENSIONS AND MARGINS

The report/thesis shall be prepared on **standard A4-size paper (210 mm × 297 mm)**.

The following margins shall be maintained:

Margin	Requirement
Top	25–30 mm
Bottom	25–30 mm
Left	35–40 mm
Right	20–25 mm

The report/thesis shall be printed on **good-quality white paper**, preferably **not less than 80 GSM**.

All text, tables, figures, equations, graphs, and other material shall conform to the prescribed margin requirements.

6. MANUSCRIPT PREPARATION

The general text of the thesis shall be typed in **Times New Roman**, with a font size of **12 points**. Headings shall be typed in **14-point** font size.

6.1 Cover Page and Title Page

A specimen copy of the Cover Page and Title Page for the report/thesis is given in Appendix 1A and1B.

6.2 Certificate

A specimen copy of the Certificate is given in **Appendix 2A and 2B**.

6.3 Abstract

The Abstract shall be written as an essay-type narrative and shall not exceed **two pages**. It should briefly outline the research problem statement, the theme, the methodology used to address the problem, and a summary of the findings. The Abstract shall be typed with **double line spacing**.

6.4 Acknowledgement

The Acknowledgement shall be brief and shall not exceed **one page**. It shall be typed with **double line spacing**. The student's signature shall be placed at the **bottom right-hand corner**, above the student's name typed in capital letters.

6.5 Table of Contents

The Table of Contents shall list all the material that follows it, as well as the relevant preliminary material that precedes it.

The **Title Page, Certificate, and Acknowledgement** shall not be listed as separate entries in the Table of Contents. However, their page numbers shall be accounted for using **lowercase Roman numerals**.

One-and-a-half line spacing shall be used for typing the matter under this heading.

A specimen copy of the Table of Contents for the report/thesis is given in **Annexure III**.

6.6 List of Tables

The List of Tables shall use exactly the same captions as those appearing above the tables in the text. Table captions shall follow **sentence case**.

One-and-a-half line spacing shall be used for typing the matter under this heading.

6.7 List of Figures

The List of Figures shall use exactly the same captions as those appearing below the figures in the text. Figure captions shall follow **sentence case**.

One-and-a-half line spacing shall be used for typing the matter under this heading.

6.8 List of Symbols, Abbreviations and Nomenclature

One-and-a-half line spacing shall be used for typing the matter under this heading. Standard symbols, abbreviations, and nomenclature shall be used wherever applicable.

6.9 Chapters

The chapters of the report/thesis may include the following:

For Phase I Report

Chapter I – Introduction

Chapter II – Literature Review

Chapter III – Theoretical Background / Concepts / Methodology / Design / Modelling

The subsequent chapters may include **Project Implementation, Results and Discussion**, as applicable.

Conclusions and Work Schedule for Phase II

Appendices (if any)

References (which must also be cited in the text)

For Phase II Thesis

Chapter I – Introduction

Chapter II – Literature Review

Chapter III – Theoretical Background / Concepts / Methodology / Design / Modelling

The subsequent chapters may include **Analytical Results, Design, Modelling and Simulation, Experimental Study, and Discussion**, as applicable.

Conclusions and Scope for Future Work

Appendices (if any)

References (which must also be cited in the text)

The main text may consist of several chapters, and each chapter may be divided into several sections and subsections.

Each chapter shall be given an appropriate and descriptive title.

Tables and figures in a chapter should be placed as close as possible to the location where they are first referred to or cited in the text.

Footnotes should be used sparingly. They shall be typed in **single spacing** and placed directly below the text on the same page to which they refer.

6.10 Appendices

Appendices are provided to present supplementary information which, if included in the main text, may distract the reader and obscure the central theme of the work.

- Appendices shall be numbered using **Arabic numerals**, e.g., **Appendix 1, Appendix 2**, etc.
- Appendices, tables, and references appearing in the Appendices shall be numbered and referred to at appropriate places in the text, following the same conventions used for chapters.
- Each Appendix shall carry an appropriate title. The same title shall also be included in the Table of Contents.
- The list of publications made by the research student during the period of research shall be included in an Appendix titled **"List of Publications"**. The same title shall also be included in the Table of Contents. Publications listed in the Appendix may be referred to in the text of the Report/Thesis by mentioning the author's name, followed by the Appendix number and the year of publication in parentheses.

6.11 List of References

Any work of other researchers that is used either directly or indirectly shall be appropriately cited at the relevant places in the Report/Thesis.

The author's own publications during the period of research shall not be included in the list of references. They may be listed separately under the **"List of Publications"** Appendix, as specified in Section 6.10.

Examples of Citation

1. An improved algorithm has been adopted in the literature (Txxxxxxx, 1980).
2. Jaz and Walt (1968) have discussed this principle in detail.
3. The problem of simulation has been studied by Robert *et al.* (1984), and certain limitations of the method used have been pointed out by Sue *et al.* (1984a).

The list of references shall begin **four spaces below the heading "REFERENCES"**. References shall be arranged in **alphabetical order**, typed in **single spacing**, and left-justified.

The reference material shall be listed consistently according to the citation style adopted for the Report/Thesis. The name(s) of the author(s) shall be followed immediately by the year of publication and other relevant bibliographic details.

A typical illustrative reference corresponding to the citation examples given above is as follows:

Author Name, (Year), "Title of the Paper," Name of the Journal, Volume, Page Number.

REFERENCES

1. Natarajan, S. (1994), "Design of Algorithm," *Journal of Computer Science*, Vol. 42, No. 5, pp. 421–425.

6.12 Tables and Figures

The term **Table** refers to tabulated numerical or textual data presented in the main body of the thesis as well as in the Appendices. All other non-verbal material used in the main body of the thesis and Appendices, such as charts, graphs, maps, photographs, and diagrams, shall be designated as **Figures**.

- A table or figure, including its caption, shall be accommodated within the prescribed margin limits and should, as far as possible, appear on the page where it is first referred to in the text.
- Tables and figures occupying half a page or less may appear on the same page as the text. However, they shall be separated from the text above and below by **triple spacing**.
- Two or more small tables or figures may be grouped on a single page, if necessary.
- Photographs, if included, shall be provided as **colour prints**. More than one photograph may be included on a page, provided that they remain clear and legible.

The **figure caption** shall follow sentence case, be **centre-aligned**, and be placed **below the figure**.

The **table caption** shall follow sentence case, be **left-aligned**, and be placed **above the table**.

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7. NUMBERING INSTRUCTIONS

7.1 Page Numbering

Page numbers shall be placed at the **bottom of the page**.

7.2 Numbering of Tables and Figures

Tables and figures appearing anywhere in the thesis shall be assigned appropriate numbers.

The numbering shall generally follow the **chapter-wise numbering system**. For example, a figure appearing in Chapter 3 shall be numbered **Figure 3.1**. The same rule shall apply to tables, with the word **"Table"** replacing **"Figure"**; for example, **Table 3.1**.

Given appropriate titles/captions; table title and number should be at the top of the table and figure title and number should be at the bottom of the figure.

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8. BINDING SPECIFICATIONS

The thesis shall be **hard-bound** in **black or blue**.

PHASE I APPENDIX 1 A (A typical Specimen of Cover Page & Title Page)

Muffakham Jah College of Engineering and Technology
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(UGC Autonomous Institution)
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Accredited by NAAC 'A+' grade

<Font Style Times New Roman–Bold>

TITLE OF PHASE I PROJECT REPORT

<Font Size18><1.5 line spacing>

A PHASE I PROJECT REPORT
<Font Size14>

Submitted by
<Font Size14><Italic>
NAME OF THE CANDIDATE(S)
<FontSize16>

In partial fulfillment for the award of the degree of

<Font Size14><1.5line spacing><Italic>

NAME OF THE DEGREE
<Font Size14>
IN
BRANCH OF STUDY
<Font Size 14>

MONTH & YEAR
<Font Size 14>

PHASE II APPENDIX 1 B (A typical Specimen of Cover Page & Title Page)

Muffakham Jah College of Engineering and Technology
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(UGC Autonomous Institution)
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<Font Style Times New Roman–Bold>

TITLE OF PROJECT REPORT

<Font Size18><1.5line spacing>

A PROJECT REPORT

<Font Size 14>

Submitted by

<FontSize14><Italic>

NAME OF THE CANDIDATE(S)

<Font Size 16>

In partial fulfillment for the award of the degree of

<Font Size 14><1.5 line spacing><Italic>

NAME OF THE DEGREE

<Font Size 14>

IN

BRANCH OF STUDY

<Font Size 14>

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MONTH & YEAR

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Cover Page
SPECIMEN



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(UGC Autonomous Institution)
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AI-Driven Predictive Maintenance Models for Industrial Manufacturing Equipment

A PROJECT REPORT

Submitted by

ABCDEF

In partial fulfillment for the award of the degree of

MASTER OF Engineering

IN

Mechanical Engineering
with specialization in CAD/CAM

June 2026

APPENDIX – 2A: (A typical Specimen of Bonafide Certificate for Phase I Report)

Font Style<Times New Roman >

Muffakham Jah College of Engineering and Technology

(Sponsored by Sultan-Ul-Uloom Education Society, Estd. 1980)

(UGC Autonomous Institution)

Approved by AICTE & Affiliated to Osmania University

Accredited by NAAC 'A+' grade

Font Style<Times New Roman –size-18>

BONAFIDE CERTIFICATE

Font Style<Times New Roman – Size-16>

Font Style<Times New Roman – Size-13>

Certified that this Report titled "**TITLE OF THE PROJECT**" is the bonafide work of **NAME OF THE CANDIDATE (Roll No.....)** who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported here in does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

<<Signature of the HOD with date>>	<<Signature of the Supervisor with date>>
<<Name of the HOD>>	<<Name of the Supervisor>>
Professor and Head	<<Academic Designation of Supervisor>>

Submitted to the Viva voce Examination held on _____

INTERNAL EXAMINER **EXTERNAL EXAMINER**

APPENDIX – 2 B: (A typical Specimen of Bonafide Certificate for Thesis (Phase II))

<Font Style Times New Roman >

Muffakham Jah College of Engineering and Technology

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(UGC Autonomous Institution)

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Accredited by NAAC 'A+' grade

<Font Style Times New Roman–size-18>

BONAFIDE CERTIFICATE

<Font Style Times New Roman – Size-16>

<Font Style Times New Roman – Size-13>

Certified that this Thesis titled "**TITLE OF THE PROJECT**" is the bonafide work of **NAME OF THE CANDIDATE (Roll No.....)** who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported here in does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

<<Signature of the HOD with date>>	<<Signature of the Supervisor with date>>
<<Name of the HOD>>	<<Name of the Supervisor>>
Professor and Head	<<Academic Designation of Supervisor>>

Submitted to the Viva voce Examination held on _____

INTERNAL EXAMINER **EXTERNAL EXAMINER**

APPENDIX 3*(A typical specimen of table of contents)*

<Font Style Times New Roman>

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PRELIMINARIES **PAGE No.**

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ACKNOWLEDGEMENTS ii
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1.1 Statement of the problem
1.2 Importance
1.3 Background
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2.0 ASSOCIATED THEORY AND LITERATURE SURVEY
2.1 Associated Theory
2.2 Review of Previous work

Chapter 3
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3.1
3.2
3.3

Chapter 4
4.0 RESULT AND DISCUSSIONS
4.1
4.2
4.3

Chapter 5
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APPENDIX – 6: (A typical Sample of List of Symbols and Abbreviations)

Nomenclature

[C]	-Capacitance Matrix
h	-Convective heat transfer coefficient (w/m2 k)
k	-Thermal conductivity(w/m k)
[K]	-Conductivity matrix
Kz	-Thermal conductivity of metal in Z direction
L	-Latent Heat (KJ/Kg K)
Ni	-Shape Function
n	- unit vector outward normal to the casting
Qg	-Heat generation (W/m3)
T	-Temperature (k)
[T]	-Temperature matrix
$T\infty$	-Ambient temperature
t	-time (sec.)
Δt	-Time Step
Δx	-Conducting length of the element in the region over which largest temperature gradient acts.
ρ	-Density (m3/Sec.)
$\propto$	-Thermal diffusivity (m2/Sec)