# GUIDELINES FOR PREPARATION OF M.E. / M.C.E. / M.PHIL. / Ph.D. THESIS

### 1. GENERAL

The thesis should be divided into three portions:

Portion 1	Main body (text) of the thesis consisting of various chapters,		
	sections and sub-sections, including the chapter of Conclusions		
	and Suggestions, Tables, Figures, Charts and References.		

Portion 2 Preliminary pages placed before the text.

Portion 3 Appendices placed after the text.

#### 2. SIZE AND QUALITY OF PAPER

The thesis should be prepared on standard A4 size (210 mm x 297 mm) good quality white paper (at least 80 gm.). The same paper should also be used for Figures, Tables, Charts etc. and for mounting Photographs if any.

#### 3. SPELLINGS

Either the American or British English spellings should be used throughout the thesis.

### 4. TYPING AND PRINTING

- i. The entire thesis must be computer-typed and printed through laser or ink-jet printer with black ink on plain paper without any borderlines, logos, insignia, monograms etc.
- ii. The main text of the thesis must be typed double-spaced with font Times New Roman, size 12, unless specified otherwise, or any other font and / or size as approved by the ASRB from time to time.
- iii. Each chapter must start on a new page and be typed continuously with sections and sub-sections on successive pages.

iv. The chapter number and heading should be typed centered on the page in <u>bold</u> capitals and <u>underlined with font size 14</u>. The chapter heading should be placed below the chapter number. The chapter number should be in Arabic numerals, e.g.,

### **CHAPTER 4**

#### **DISCUSSION OF EXPERIMENTAL RESULTS**

v. The section number and heading must be typed from the left margin in capitals in bold letters without underlining. The section number must consist of the chapter number followed by a number, both in Arabic numerals, e.g.,

#### 4.1 TEST RESULTS

vi. The sub-section numbers and headings must be typed from the left margin in bold lower case characters with the first character of the first word in capital without underlining. The sub-section must consist of the chapter number followed by section number and one additional number representing the subsection, all in Arabic numerals, e.g.,

#### 4.1.1 Frequency results

vii. Any further sub-section numbering, if needed, must be done with additional Arabic numerals without bold letters, e.g.,

4.1.1.2 Comparison of frequency results

#### 5. MARGINS

Margins of 1 1/2 inch must be left at the top and left side, and 1 inch on the right side and bottom of the paper.

#### 6. TABLES

i. Each table must be typed following the place where it is referred first, preferably on the same page, or if it cannot be accommodated in the remaining space on the same page then on the following page, with single, one-and-a-half or double line spacing as is found convenient to accommodate the table on one page within the specified margins.

- ii. A long table which cannot be accommodated on one page, even with single line spacing and / or reduced to an easily legible size, may be continued on the next page under the same table number with proper indication at the bottom of the page, e.g., "continued on the next page".
- iii. The heading of the table must be in bold lower case letters with the first character of the first word in capital without underlining. The number and heading of the table should be typed above the table itself.
- iv. All the tables belonging to each chapter must be numbered in the same way as the sections of the chapter, the first number indicating the chapter number and the second the table number in sequence, both in Arabic numerals, e.g.,

#### Table 4.1: Comparison of theoretical and experimental results

v. If any table is referred on a page other than that where it is placed, it should be referred with its number and the page where it is placed, e.g., Table 4.1 on p. 36.

#### 7. FIGURES

- i. Each figure must be drawn and placed within the specified margins following the place where it is referred first, preferably on the same page, or if it cannot be accommodated in the remaining space on the same page then on the following page.
- ii. The number and caption of each figure should be typed under it with bold letters in the same way as the headings of tables described above, e.g.,

#### Fig. 4.1: Stress-stress relationship

iii. If any figure is referred on a page other than that where it is placed, it should be referred with its number and the page where it is placed, e.g., Fig. 4.1 on p.43.

#### 8. PHOTOGRAPHS / PLATES

i. Each photograph / plate, colored or black and white, must be placed within the specified margins following the place where it is referred first, preferably on the same page, or if it cannot be accommodated in the remaining space on the same page then on the following page.

ii. The number and caption of each photograph / plate should be typed under it with bold letters in the same way as for figures, e.g.,

#### Plate 4.1: Velocity measurement apparatus

iii. If any photograph is referred on a page other than that where it is placed, it should be referred with its number and the page where it is placed, e.g. Plate 4.1 on p.54.

iv. The photographs should be mounted using non-liquid stick glue on the same size and quality of paper as that of the thesis.

#### 9. LARGE SIZE DRAWINGS, CHARTS, FIGURES, AND TABLES

Any drawing, chart, figure or table, which cannot be accommodated with clarity on the normal size of the thesis page, even with easily legible reduced size, may be prepared on a larger size paper / sheet, which should be folded and enclosed in a special pocket attached permanently inside of the bound back of the thesis.

#### 10. EQUATIONS

All equations belonging to a chapter in the text should be numbered in the same way as the figures and tables. Each equation should start on a separate line with a larger than the normal spacing between the equation and the text above and below it, e.g.,

 $Ax + By = C \tag{4.1}$ 

The equation should be referred to in the text as Eq. (4.1)

#### 11. PAGINATION OF TEXT

The pages in the text should be numbered in Arabic numerals, consecutively, starting from the page where the first chapter begins. The starting page of each chapter should have the page number printed centrally at bottom of the page. All the other pages should have page numbers typed at the top right corner.

#### 12. PRELIMINARY PAGES

The following pages are to be placed in the order given below before the text of the thesis. These pages should be numbered in lower Roman numerals, consecutively, starting (i) form the title page and the numbers should be placed centrally at bottom of each page.

### i. Title Page (1)

The title page should describe the exact title of the thesis, full name of the candidate, the ststement "submitted in partial fulfillment of the requirement for the degree", field of study, concerned department / institute, faculty and the month and year of approval. A specimen of the title page is given in Appendix 1.

# ii. Dedication Page (11)

If a candidate desires to dedicate his / her thesis to any person or organization, it should be so stated on this page. Alternatively, a relevant verse from the Holy Quraan, preferably related to the topic of the thesis, as selected by the candidate, may be put on this page. A specimen of this page is given in Appendix 2.

# iii. Certificate Page (*ìii*)

A certificate signed by the thesis examiners, including the candidate's Supervisor, Director of the concerned Institute / Chairman of the concerned Department / Director Postgraduate Studies, and Dean of the concerned Faculty, indicating the approval of the thesis, should be put on this page. A specimen of the certificate page is given in Appendix 3.

#### iv. Acknowledgments

A brief acknowledgment, in just one page, only to those persons and organizations who have assisted the candidate in his / her thesis work, or provided relevant data / information / laboratory or research facilities and tools etc. should be given on this page.

(iv)

#### v. Table of Contents

It should contain the numbers and headings of all the preliminary pages following the Table of Contents, chapters, sections and subsections of the text, including references and appendices, described consecutively, and should indicate the page where the item starts. It should be typed with single line spacing, and with the same font and size of both the capital and lower case characters / letters as followed in the text of the thesis. A specimen of the Table of Contents page is given in Appendix 4.

#### vi. List of Notations

All standard notations in English or Greek characters appearing frequently in the text should be described in the list of notations in alphabetical order with the notations in capitals preceding those in lower case characters. All other notations appearing only once in the text need not be given in this list but should be defined at the place where they appear in the text. This list should be typed with single line spacing. A specimen of this list is given in Appendix 5.

#### vii. List of Abbreviations

This list should contain all the abbreviations used in the thesis and should be typed with single line spacing. The abbreviations must be listed in the alphabetical order. A specimen of this list is given in Appendix 6.

#### viii. List of Tables

The number and heading of each table, including the page number where it appears in the text, should be provided, consecutively and chapter-wise, in this list and should be typed with single line spacing.

#### ix. List of Figures

The number and caption of each figure, including the page number where it is located in the text, should be provided, consecutively and chapter-wise, in this list and should be typed with single line spacing.

#### x. List of Photographs / Plates

The number and caption of each photograph / plate, including the page number where it is located in the text, should be provided, consecutively and chapter-wise, in this list and should be typed with single line spacing.

#### xi. List of Appendices

The number and title of each appendix including the page number where it is located should be provided, consecutively, in this list and should be typed with single line spacing.

#### 13. REFERENCES

- i. All the references quoted in the entire thesis must be placed at the end of the text and listed author-wise in the alphabetical order of the family / last name of the first author. The year of publication, in round brackets, should follow the full name(s) of the author(s). The standard method of describing the publications referred in the text should be followed. The specimens of describing various types of publications are given in Appendix 7.
- ii. The publications should be referred in the text by the last name of the first author followed by the year of publication in round brackets. A dual-authored publication should be referred by the last names of the two authors, while a multi-authored publication should be referred by the last name of the first author followed by the words 'et al'. In the case of more than one publication of the same author(s) in one year, the year of publication should be followed by the letter 'a', 'b' and so on. The examples of the referrals are given below:
  - Single author publication by H.M. Memon should be referred as: Memon (1993) tested specimens of various sizes-----
  - Dual-authored publication by A.A. Junejo and M.R. Sabhayo should be referred as: Junejo and Sabhayo (1993) tested specimens of various sizes

Multi-authored publication by A.A. Abro, A.K. Ansari, S. Chandio, and A.Z.K. Pathan should be referred as:

Abro et al (1993) tested specimens of various sizes ------

#### 14. SUBMISSION OF THESIS

- i. Three copies of the draft of the thesis on an ordinary white A4 size paper should be submitted to the Controller of Examinations through the candidate's thesis Supervisor in a lose form / folder / ring file for evaluation by the thesis examiners. After successful defense of the thesis in the thesis examination, and after incorporating the changes / corrections recommended by the thesis examiners to their satisfaction, the certificate page should be got signed by the examiners and the concerned university officers. The thesis should then be bound and submitted to the Controller of Examinations in sufficient number for distribution as under:
- One copy to be retained by the Controller of Examinations.
- One copy to be sent to the library.
- One copy to be sent to the concerned Director of the Institute or Director of Post-graduate Studies as the case may be.
- One copy to be sent to each of the thesis examiners through the Controller of Examinations.
- ii. Only the powder photocopies of the thesis on the same size and quality of paper as described at 2 above will be accepted for submittal of the thesis in the final form.

#### 15. BINDING OF THE THESIS

The thesis should be hard bound in dark blue color, as per specimen available with the Director, Post-Graduate Studies & Research / Director of the concerned Institute / Chairman of the concerned Department. The title of the thesis, author's name, title of the degree, year of award of the degree and Mehran University of Engineering and Technology should be printed in gold letters on the front of the cover. The back of the cover should not have any thing printed on it. The author's name, title of the degree and year of award should be printed in gold letters on the bound edge. Appendix 8 shows the specimen of these writings.

# SCOURING BELOW HYDRAULIC STRUCTURES

A thesis submitted by

## Allah Wasayo Bhatti

In partial fulfillment of the requirement for the degree of

Master of Engineering

Hydraulies and Irrigation

in

Department of Civil Engineering

Faculty of Engineering

Mehran University of Engineering & Technology Jamshoro

2

March 1981

Dedicated to my parents

# <u>APPENDIX 2</u> <u>Alternative</u>

سعيمه سير الله الرَّحمن الرَّحيم

فَمَآ أُوْتِينُتُمُ مِنْ شَىءٍ فَمَتَاعُ الْحَيَاةِ الدُّنِيا وَ مَاعِنُدَ اللَّهِ خِبُر وَأَبْعَى لِلَّذِينَ آمَنُوا وَعَلَى رَبِهِمْ يَتَوَكَّلُوُنَ

Now whatever ye have been given is but a passing comfort for the life of the world, and that which Allah hath is better and more lasting for those who believe and put their trust in their Lord:

Quraan, Ch. 25, Sura 42, Ayah 36.

11

# MEHRAN UNIVERSITY OF ENGINEERING & TECHNOLOGY JAMSHORO

This thesis, written by Mr. Allah Wasayo Bhatti under the direction of his supervisor, and approved by all the members of the thesis committee, has been presented to and accepted by the Dean, Faculty of Engineering, in partial fulfillment of the requirements of the degree of Master of Engineering in Hydraulics and Irrigation.

(Supervisor)

Date:

(Internal Examiner)

(External Examiner)

(Director, Institute of Irrigation and Drainage Engineering) (Dean, Faculty of Engineering)

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1.1.2	
Chapter 2	= factor for depth of compression block
2.1	
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### LIST OF NOTATIONS

- A = Area
- B = Breadth
- E = Modulus of Elasticity
- a = shear span
- b = width of section

w = watt

- $\alpha$  = factor for modified frequency
- $\beta$  = factor for depth of compression block
- $\chi$  = unit weight of sand

# VERENDIX

# **APPENDIX 6**

# and stored to note LIST OF ABBREVIATIONS and beauta at A landa

		Journal, V. Set, No. L. Jan-Reb 1987, pp. 55-63
ACI		American Concrete Institute
ASME	=	American Society of Mechanical Engineers
HDA	-	Hyderabad Development Authority C SOTING MID 192
KESC	=	Karachi Electric Supply Corporation
KMC	-	Karachi Metropolitan Corporation
IEP		Institute of Engineers Pakistan
MUET	= qa	Mehran University of Engineering and Technology
РСАТР	-	Pakistan Council for Architects and Town Planners
PEC	17510010	Pakistan Engineering Council and a contained and a contained a con
WAPDA	=	Water and Power Development Authority

#### SPECIMEN FULL DESCRIPTING A THESIS

Mastehuidto M. (1982) "Optimization of Concrete Mix Design for Datability in the Eastern Province of Saudi, Arabia," MS Thesis, Department of Civil Engineering: King Fuld University of Petrolitum and Minerals, Diminan, Saudi Arabia

#### SPECIMENTOR DESCRIBING A PAPER PUBLISHED IN CONFERENCE PROCESSINGS

M. Amoudi, Q.S. Annijadiani, A.A.; Khan, M.M., and Masichuddia, M. (1995). Effect of thir Weather on the compressive Strength of Plan and Blended Cament Monturs," *Proceedings of the Fourth Soudi Engineering Conference*. King Abdulaziz University, V. H. Jeddah, on 193-199.

#### SPECIMEN FOR DESCRIBING A PUBLICATION IN A RESEARCH JOURNAL

Abbasi, A. F.; Ahmad, M.; and Wasim, M. (1987), "Optimization of Concrete Mix Proportioning Using Reduced Factorial Experimental Technique," *ACI Materials Journal*, V. 84, No.1, Jan-Feb 1987, pp. 55-63.

#### SPECIMEN FOR DESCRIBING A BOOK PUBLISHED BY A PUBLISHING COMPANY

Neville, A.M. (1991), Properties of Concrete, 4th edition, ELBS, London, pp. . . .

#### SPECIMEN FOR DESCRIBING A REPORT PUBLISHED BY AN ORGANIZATION

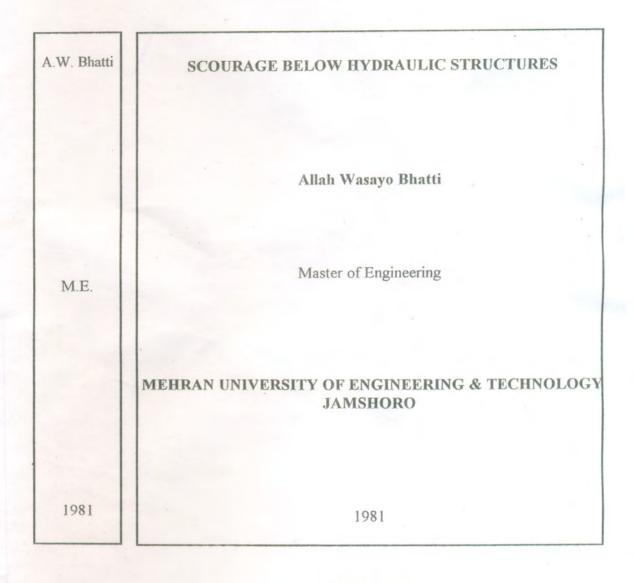
ACI Committee 308, (1992) "Recommended Practice for Hot Weather Concreting," American Concrete Institute, Detroit, Part 2, pp.

#### SPECIMEN FOR DESCRIBING A THESIS

Maslehuddin, M. (1982), "Optimization of Concrete Mix Design for Durability in the Eastern Province of Saudi Arabia," MS Thesis, Department of Civil Engineering, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia.

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Edge

Front Cover