**Annexure –VIII**

**THESIS FORMAT**

**[For Masters& Ph.D. Degree programmes as per**

**CAU (I) Academic Regulation-2016]**

****

**CENTRAL AGRICULTURAL UNIVERSITY**

**IMPHAL**

**Iroisemba, Imphal- 795004**

**Manipur, India**

**Planning and Design of Research**

**The research programme should be planned in such a way so as to address the set up hypothesis in a scientific and systematic manner and to provide scientific answers to the questions arising during the course of investigations.**

**FORM AND STYLE IN THESIS WRITING**

1. **Quality of paper:**

 All pages of thesis should be printed on A4 size Executive or equivalent white bond paper. Text printing should be done using **laser printer on both sides of the paper.**

For figures and photographs, glossy photo paper may be used on one side as per need.

2. **Typing instructions**:

1. Computer typing with clean sharp letters (**font size 11, Arial font**).
2. A **spacing of 1.5** shall be used between lines for all running material.
3. Between paragraph spacing: 6 points; First line of paragraph indent: 2.5 cm.
4. The following mirror margins shall be used:  **Inside: 4 cm, Outside: 2 cm, Top and Bottom: 2.5 cm each**. No border line or ornamentation of the text pages should be done.
5. All the pages should be assigned in Arabic number starting from Introduction to the chapter on Summary & Conclusion(s).
6. Arabic numbers shall be used in numbering figures and tables.
7. Simple error(s) in typing may be corrected using black Indian ink in the final draft. More than 10 corrections in the whole thesis would not be permitted.

3. **Style of writing:**

1. Should be written in the third person and in past tense or present perfect continuous tense
2. Consistency in style is to be observed throughout the text.
3. Only standard abbreviations accepted for scientific writing should be used. This is true for units of measurements, as well.
4. Greek and Latin words should be written in Italics.
5. Figure caption shall be placed at the bottom and table titles shall be placed at the top.

**TITLES AND HEADINGS:**

Chapter Title: 20 Points, Bold, with First Letter of Each Word in capitals

Headings: 14 points, bold, sentence case

All other sub-headings: 12 points, bold, sentence case

**THESIS FORMAT**

The Thesis shall have three main parts excluding cover page and the order of contents of each part shall be as follows:-

**A. The preliminary pages**

1. Title page
2. Dedication (if any)
3. Certificates
4. Declaration by student
5. Acknowledgment(s)
6. Table of Contents
7. List of Tables
8. List of figures
9. List of Symbols/Abbreviations
10. Abstract (with key words)

**B. The text.**

1. Introduction
2. Review of Literature
3. Materials and Methods
4. Results
5. Discussions
6. Summary & Conclusion(s)

**C. The reference matter**

1. Bibliography
2. Appendices (Optional)
3. Vita (for Ph. D only)

**A. PRELIMINARY PAGES**

**1) Title Page**

 The first page of the typed thesis is the title page. It includes the title of thesis, degree, name of the student, registration number, name of the department and the College to which the student belongs, and the month and year of submission. All scientific names should be in italics and in sentence case. A sample title page is given in **Annexure - IV.**

**2) Dedication**

 Dedication (if any) should be avoided if possible. If given, it should be dedicated to any individual and not to an organization

**3) Certificates**

 The certificates (I and II) are required to be incorporated in each thesis and must be printed as per the prescribed format given in **Appendix – VIIA and VIIB,** respectively. In the name column, no salutations or degree should be mentioned.

*Example* (B. P. Pal) and not (Dr. B. P. Pal).

**4) Declaration by student with date and place should be given as per the prescribed format given in Annexure – V.**

**5) Acknowledgement(s)**

 Acknowledgement(s) should be a brief note (not exceeding 2 pages) of appreciation for assistance received by the student in his/her research work and preparation of thesis from individuals and organizations. Any financial assistance received by the student from any source should be duly acknowledged. Acknowledgement(s) should be given only in English. Student should sign at the bottom right side of last page of acknowledgement(s).

**6) Table of Contents**

 There shall be a table of contents showing principal divisions/ chapters /headings and subheadings of the matter in the thesis. The sample table of contents is shown in **Annexure – VI.**

**7) List of Tables**

 A list of tables should be given for the convenience of the reader.All tables should be numbered. Sample list of tables is shown in **Annexure – VII.**

**8) List of Figures**

This would include graphs/photographs/ plates. No separate list of plates should be given. It should be similar to the list of tables and should be presented in the same from. Each figure in the thesis should have a caption or title, which shall appear in the list of figures/plates exactly as in the text.

**9) List of symbols/abbreviations.**

 If the thesis contains symbols/abbreviations/acronyms, it is desirable to give a list.

**10) Abstract**

 Abstracts should be a very concise write up of thesis limited to one page only. This should provide a glimpse of the problem, materials & methods, results and conclusion. No references should be given in this section. Line spacing shall be reduced to 1 in the abstract. Key words (maximum-6) should be given at the bottom of the abstract.

**B. THE TEXT**

 The text forms the main body of the thesis. In this part, the research topic should be clearly stated, the relevance of other scientific investigations to the research topic be mentioned, investigation techniques/methodologies used be fully described, observations and data are to be presented, results obtained, and their interpretations and conclusions drawn are to be included. The suggested break-up of this section is as below:-

1. Introduction

2. Review of literature

3. Materials & Methods

4. Results\*

5. Discussions\*

6. Summary & Conclusion(s)

**\* 4 and 5 may be combined as per requirement.**

**1) INTRODUCTION**

Introduction should be brief, precise and pertinent to the research work undertaken. It should include the purpose and scope of the study and its limitations leading to the justification for research objectives, which should be stated precisely at the end of introduction.

**2) REVIEW OF LITERATURE**

It is essential to review all relevant information, which has a bearing on the topic. Brief history and present status of the research topic as evidenced by documented literature on similar or closely related problems should be included in this part. It is necessary to show how the problem under investigation is viewed in the context to previous research studies. The findings of various investigations should be critically examined, interpreted in the light of objectives set forth and presented with proper references.

**3) MATERIALS AND METHODS**

This part of the thesis must present appropriate methods or techniques adopted to study a particular problem under investigation. The details of techniques and equipment employed in the investigation must be clearly stated. It should be written in the past tense. In case of special experimental set up, their assembly and component details should be described. Statistical techniques applied are to be detailed out in this section.

**4) RESULTS**

The data from different experiments/investigations/study should be presented in compiled tabulated form and supported by graphical presentation of specific trend or behavior of different variables or important observation made. In presenting the results, care should be taken to avoid repetition. Only outstanding points which are important in the table or graph should be indicated and discussed.

**5) DISCUSSION**

This is the most important section of the thesis. The finding should be discussed in the context of the objectives set out for the study. In the discussion all rational explanation for an observation should be given based on the data generated and the hypothesis proved by the student. No wild guesses and assumptions should be made without supporting evidence from the students work or corroborating findings from related work of other scientists. Care should be taken particularly to ensure that the chapter is not a repetition of the section on results.

**6) SUMMARY & CONCLUSION(S)**

The summary should emphasize the significant aspects of the investigation and the important findings in relation to the objectives of the investigations. The conclusion should leave the reader with the impression of completeness and positive gain. All experimental findings are concluded in this section in brief. A brief mention may be made on the scope and need for future research in the area of research undertaken.

**C. The Reference section**

**1) BIBLIOGRAPHY**

 The bibliography follows the body of the text and is a separate section of the thesis. It is preceded by a division sheet containing the single capitalized word BIBLIOGRAPHY. This should include all references cited in the text, arranged in alphabetical order by authors’ surname.

**Typing style of Reference**

Paragraph first line hanging (0.5 inch)

Line space : 1

Font size: 10

Space between paragraphs: 6 points

**Example of references**

**For research Articles/Journal Article** :

 Name(s) of author(s) (Year of publication of the article). Title of the article. Name of the journal (in italics), volume no. (Issue no.): page(s). The name of the journal should be abbreviated according to International Standards Organization rules as given below:

Panda, D., Sharma, S.G., and Sarkar, R.K. (2007). Chlorophyll fluorescence transient analysis and its association with submergence tolerance in rice (*Oryza sativa*). *Indian J. Agric. Sci.,* **77**(3): 344-348.

 Ideally, the names of all authors should be provided, but the usage of “*et al*” in references having more than 10 authors will also be accepted:

Smith, J., Jones, M. Jr, Houghton, L. *et al.* (1999). Future of health insurance. *N. Engl. J. Med.,* **965**:325–329.

**Article by Digital Object Identifier (DOI)**

 Name(s) of author(s). (Year of publication of the article). Title of the article. Name of the journal (in italics):doi number.

Slifka, M.K. and Whitton, J.L. (2000). Clinical implications of deregulated cytokine production. *J. Mol. Med*. doi: s**10.1007**/s001090000086.

**Book**

 Name(s) of author(s).(Year of publication). Title of the book. Volume no.(in case of multivolume book), Edition no. (if it is later than I edition). Place of publication, Publisher’s name. Pagination (when a particular page of the book is cited then ‘p’ should be mentioned before page number cited: pp following the page number means total number of pages contained in the document).

South, J. and Blass, B. (2001). The future of modern genomics. Blackwell, London.

**Book chapter**

 Name(s) of author(s).(Year of publication). Title of the contribution. Connecting word ‘In’: and the following items of the host document: Name(s) of author(s). Title of the book. Volume no. (in case of multivolume book), Edition no, (if it is later than I edition). Place of publication, Publisher’s name. Pagination (‘pp’ should be used before writing plural pages).

Brown, B. and Aaron, M. (2001). The politics of nature. In: Smith, J. (ed) The rise of modern genomics, 3rd edn. Wiley, New York, pp. 230-257.

**Online document**

 Name(s) of author(s). (Year of publication). Name of the website. Date of visit to the website

Cartwright, J. (2007). Big stars have weather too. IOP Publishing PhysicsWeb. http://physicsweb.org/articles/news/11/6/16/1. Accessed 26 June 2007.

**Thesis**

 Name of author.(Year of submission). Title of thesis. Name of the degree, The word Thesis. Submitted to Name of the University, Place, Pagination.

Trent, J.W. (1975). Experimental acute renal failure. Ph. D. Thesis, Submitted to University of California, (full address of the University) USA.

**Symposium:-**

 Name(s) of author(s).(Year of publication). Title of contribution. Proceddings of name of the symposium. Pagination, Date(s) of the Symposium, Place

Devegowda, G., Raju, M.V.L.N., Afzali, N. and Swamy, H.V.L.N. (1998). Mycotoxins picture World wide : Novel solutions for their counteraction. Proceeding of 14th Alltach’s Annual Symposium on Biotechnology in the Feed Industry. pp. 241- 55, May 5, 1998. Bangalore, India

 Always use standard abbreviation of a journal’s name according to the ISSN List of Title Word Abbreviations, see

* [www.issn.org/2-22661-LTWA-online.php](http://www.issn.org/2-22661-LTWA-online.php)

**2) Appendices**

 Appendix is a useful device to make available the material related to the text but not

suitable for inclusion in it. In case there are more than one appendices, each should be given a separate number (Appendix –I, Appendix -II etc.).

 A copy of any published research paper that is the product of thesis research work (with student as the first author) should be attached as annexure.

**3) Vita (for PhD thesis only)**

 Vita is biographical sketch of about 150 words. It should be written in third person, it should be presented in paragraph form & should include a short biography of the student including his/her date and place of birth, educational institutions attended, qualifications, professional experience and achievements including honours, number of papers published and any other pertinent information.

**OTHER INSTRUCTIONS:**

**1 Pagination**

The title page certificates I and II of approval, acknowledgements and abstract should not be given any page number. The first page of the table of contents should be numbered vi. For the text, Arabic numerals should be used beginning with the first page of the text and continued throughout the rest of the thesis/dissertation including the figures, tables and references. Suppress the page number in the first page of each chapter.

 The pages on which the corrections have been suggested by the external examiner suggest adding new material. This would disturb the paging of the thesis and is therefore required to be corrected accordingly. Numbering the pages like 15a,15b, 15c etc. is not permitted.

**2 Research seminar**

The student, before preparing the rough draft of the thesis/dissertation analysis, before the members of his/her advisory committee along with the faculty members and PG students of the department/college. All relevant changes suggested during the discussions in the seminar by members of the advisory committee or faculty of the department/college for making improvements in expression of research data, should be thoroughly taken care while writing the draft of thesis/dissertation.

**3 Submission of rough draft**

Copies of the rough draft of thesis/dissertation complete in all aspects shall be submitted to the chairperson and all members of the advisory committee, at least 15 days before the intended date of final submission.\

**4 Submission of the final thesis/dissertation**

The members of the advisory committee shall return the rough draft of the thesis/dissertation along with their suggestions and remarks within 10 days of its receipt.

The chairperson will ensure that the suggested changes, if may, have been incorporated in the final draft by the student.

 Five copies of the thesis/dissertation should be submitted after oral examination of the student. The chairperson must ensure that all the suggestions or errors pointed out by the external examiner have thoroughly been taken care in the final draft of thesis before submission for declaration of result.

 A Ph. D. degree student must submit three research articles along with their dissertation , of which at least two have been accepted/published (as per ICAR guidelines) in any ISBN journal from his/her study as per approved synopses of research.

 ‘The masters’ degree student must submit copy of the draft of one research article submitted to any ISBN journal along with the thesis or submit a certificate from his/her chairperson that at least one paper from the thesis has been submitted or will be submitted as a part of comprehensive paper for which further research is needed.

**Important note:** The postgraduate students can publish their research article (s) based upon their research data of thesis/dissertation before submission of thesis /dissertation.

**5 Resubmission of thesis/dissertation**

If a thesis/dissertation is not accepted, the candidate may be allowed to resubmit if after making modifications in the light of remarks of the examination committee. Resubmission is allowed after a lapse of not less than one full semester. Resubmission will be processed in the same manner as the original submission.

**Note:** In order to understand the corrections to be made in the text, the standard “Punctuation Marks” and abbreviations for weights/measure/Calendar should be used as given in **Annexure-VIII and IX** respectively.

**6 Including references in the text:**

Examples:

Modified CTAB method (Murray and Thompson, 1980) was used.

CTAB method as modified by Murray and Thompson (1980) was used.

….hampers the growth of plants and reduces productivity (Kasuga *et al*., 1999; Karim *et al*., 2007).

….has also been reported (Barman *et al*., 2007 and 2012)

….has also been reported (Barman *et al*., 2007, 2009 and 2012)

**7 Tables and figures:**

Font size can be reduced to 10 if needed.

1. Figures may include graphs, diagrams, flowcharts, photographs, etc.
2. Use of photographs that do not add to the data should be avoided.
3. Figures should have a short caption at the bottom, followed by precise legend explaining the content(s) of the figure.

Example: Fig. 1 Schematic representation of data collection method in four districts of Meghalaya

1. Tables should have a caption at the top and footnotes, if any, at the bottom

Example: Table 1 Mean sum of squares values for yield contributing traits

1. Figures and tables should appear in the thesis after their first reference in the text.

Example: …. Per cent increase was observed (Fig. 1)

 ….. per cent increase was observed (Table 2)

**8 Thesis binding:**

Rough submission: Spiral bound.

Final submission: Hard Clothbound; transparent unprinted HDPE jacket.

Print : Gold.

Text: Same as the title page

Spine: Printed in gold.

MSc (Ag) Thesis Name of Student Year of submission College abbreviation, CAU

**Cover colour proposed for different colleges:**

 **Black** for CoPGS, Barapani, Meghalaya (for both Master & Ph.D)

 **Sky Blue** for CoFish, Lembucherra, Tripura (for both Master & Ph.D)

 **Blue** for CoVety. Sc. & AH, Aizawl (for both Master & Ph.D.)

 **Dark Green** for CoA, Imphal (for both Master & Ph.D.)

Colleges may choose one colour each. However, uniformity of shade should be maintained.

**Annexure –IX**

**PROFORMA FOR TEMPORARY WITHDRAWAL ON ACCOUNT OF EMPLOYMENT**

NAME :

ADMISSION NO :

NAME OF ADVISOR :

NUMBER OF SEMESTERS COMPLETED :

LIST OF FORMS ALREADY APPROVED :

NUMBER OF THESIS CREDIT HOURS UNDERTAKEN :

NAME AND ADDRESS OF THE EMPLOYER :

POST FOR WHICH SELECTED :

**DECLARATION**

 I have read the guidelines for temporary withdrawal and undertake to follow them. I may kindly be allowed to withdraw temporarily.

Signature of the student

 Status report and recommendation of Chairman, Advisory Committee (in not less than 100 words)

Signature of Advisor

Recommended and forwarded by:

HoD/School In-charge

Recommended and forwarded by:

Dean

Approved by:

Director of Instruction