



**CHANDIGARH  
UNIVERSITY**

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# **GUIDELINES FOR PREPARATION OF PH.D. THESIS**

<b>Issued By</b>	<b>Dean Research Office</b>
<b>Guidelines for</b>	<b>PhD Scholars</b>
<b>Version</b>	<b>June, 2025</b>

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## GUIDELINES FOR PREPARATION AND SUBMISSION OF PH.D. THESIS

### 1. Specification for Thesis Format

#### 1.1 Preparation of manuscript and number of copies

- Thesis must be written and printed in black text (color may be used for images, if necessary) using a high quality laser jet or ink jet printer.
- All content should be typed only in Times New Roman font.
- All the copies of thesis pages must be clear, sharp and even, with uniform size and uniformly spaced characters, lines and margins and typically weighs 80-85 GSM (gram per square meter) or more.
- Thesis should be free from typographical errors and a proper proof reading from supervisor and at least two peers should be done before final submission of thesis.
- Five or six copies (for candidate, supervisor(s), department, UCRD & library) of (maroon color hard cover binding) thesis along with a soft copy on a pen drive should be submitted to Department of Academic Research office through proper channel.
- Candidates should write the content of thesis as concisely as possible, with clear and adequate expression. A thesis should not exceed 100000 words (excluding prefacing materials of the thesis). Some tips to reduce the size of a thesis are given below.
  - a) Do not unnecessarily repeat definitions and texts.
  - b) Be precise in your description, conclusions and interpretations.
  - c) Do not leave blank space on a page after a table or a figure.
  - d) Scholars might consider including a compact disk (CD) for computer program(s) listing and just include the flow of the logic and its other distinguishing features in the text of the thesis.

#### 1.2 Paper size, font size and margins

- **Paper size:** The standard size of paper of a thesis is 21.5 cm (8.5 inches) wide and 28 (11 inches) long, commonly known as A4 sized paper. Oversized figures and tables if any should

be reduced appropriately to fit with the size of the paper, no other size of paper usage is permitted. Care should be taken not to compromise the clarity of the contents while reducing. If required, scholar may consider folding oversized papers to fit with the thesis size.

- **Double-sided printing:** The thesis should be printed in a double-sided format, ensuring a professional and efficient presentation. Special attention must be given to the quality and opaqueness of the paper to maintain good readability under normal lighting conditions. When printing double-sided, each new chapter must begin on an odd-numbered page to align with standard formatting conventions. To achieve this, efforts should be made to avoid ending a chapter on an odd-numbered page, thereby preventing unnecessary blank pages while ensuring a consistent layout. Proper attention to these details will enhance the overall readability and presentation of the thesis.

Suggested font sizes details	Font type	Font size	Spacing
Cover and title page – (see specimen A) for details	Times New Roman	18 pt. bold capitals	Centered
Chapter headings with chapter number on top	Times New Roman	16 pt. bold capitals	Centered
Section headings	Times New Roman	14 pt. bold	Left adjusted
Subsection headings	Times New Roman	12 pt. bold	Left adjusted
Body of thesis	Times New Roman	12 pt.	Justified adjusted with 1.5 spacing for text and double spacing for equations
Margins	A margin of 3.75 cm (1.5 inch) is to be given on the binding edge while on the other side it is to be 2.5 cm (1inch).		To accommodate binding area
	Top	2.54 cm	

	Bottom	2.54 cm	
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- A chapter can be divided into various sections, subsections and further sub sections so as to present different concepts separately. Sections and subsections can be numbered using decimal points, e.g. 2.2 for the second section in chapter 2 and 2.3.4 for the fourth subsection in third Section of chapter 2. The section and sub-section titles along with their numbers in 14 and 12 pt fonts, respectively, in bold face shall be placed to the left (not centered) with 15 mm space above and below these lines.

### 1.3 Page numbering

- Page numbers prior to chapter 1 should be numbered in Roman numerals (i, ii, iii, iv, v etc.). The first page of the first chapter onwards should be numbered in Arabic numerals (1, 2, 3, etc.). Page numbers should be inserted in the center and at the bottom of each page. The title page is considered to be page (i) but the number is not printed.

### 1.4 Line spacing

- The general text of the manuscript should be in 1.5-line spacing. Footnotes, multiline captions, long tables and references should be in single spacing. There should be a double spacing between two references and two equations.

### 1.5 Tables, figures and equations

- Figures and tables should be presented following their first mention in the text. Short tables and figures should be presented within the text, while large table and figures may be presented on separate pages. Good quality figures must be prepared using standard software in vector graphics format and must be scalable. The resolution of the images, photographs and other equivalent content must exceed 300dpi with 256 grayscales for monochrome images and 24 bit per pixel for colored images. Blurred images and unreadable images should be not placed, usage of Origin Pro software for graphing is suggested instead of excel graphs.
- Tables should be centrally aligned in the page and their number should be chapter wise like Table 1.1 \_\_ \_\_, Table 2.1 \_\_ \_\_, Table 3.1 \_\_ \_\_ and so on.

- Similarly, figures should be numbered chapter wise like Figure 1.1\_ \_ \_ , Figure 2.1\_ \_ \_ , Figure 3.1\_ \_ \_ and so on.
- Table caption should be above the table and figure caption should be below the figure and a colon immediately after the figure number and table number followed by a space and centrally aligned. Font size for figure and table numbers will be 10 bold and for the figure and table caption 10.
- Also, equations should be chapter wise like Eq. (1.1), Eq. (1.2) ....and so on. There should be double spacing between the two equations. Short equations are centered within the thesis margins. All equations are set off from preceding and following text by a double space. Spacing must be uniform and consistent. In general, equations should be numbered at the right margin of the manuscript with the number either in brackets or parentheses.

## 1.6 Binding

- Acceptance of the pre submission thesis seminar, the final Maroon colored hard bound copies should be submitted in prescribed format and numbers. **These hardbound copies should include name of scholar, abbreviated title and year of submission on the binding side.** The copies of thesis may be in spiral bound for pre submission thesis seminar.

## 1.7 Lettering

- All lettering shall be embossed in gold.

## 1.8 Bound back

- The degree, the name of the candidate and the year of submission shall also be embossed on the bound (side) in gold.

## 1.9 Blank sheets

- One white sheet should be put at the beginning and end of the thesis.

## 1.10 Starting of chapter

- A chapter should not begin directly with a subtopic. For instance, in the literature review chapter, it should not start abruptly with a citation like "Thomas *et al.* proposed...". Instead, the chapter should begin with a general introduction or background that provides context for the reader. The introduction should consist of one or two paragraphs that outline the significance, scope, or historical development of the topic. This helps in establishing a logical flow and ensures coherence in the thesis. After setting the background, subtopics can be introduced sequentially. This approach enhances readability, maintains structural integrity, and allows the reader to grasp the broader perspective before delving into specific details.

## **2.Style of Writing**

Scientific writing requires a good knowledge of standard language and the command of a formal style of writing. The grammatical and the orthographical rules of the language must be followed. Scientific language is unambiguous and precise and discards vague expressions like "several studies show that...", with no valid reference to an example. An English text does not use contracted forms like "doesn't" or "can't". All standardized forms of English are accepted but they must not be mixed. A characteristic feature of the scientific style is the use of special concepts and terms, which must be defined when they first occur in the text. In the academic community, the use of the first-person pronouns "I" or "we" is a source of some disagreement. Usage of either American or British English throughout the text is suggested without mixing up of content.

## **3.Paraphrasing**

Plagiarizing another author's text without correct reference to the original source is a serious offence, so the referencing technique should be adopted right at the beginning of the thesis writing process. In addition, it is of vital importance to realize that the original texts must not be used unprocessed; they need to be paraphrased. Paraphrasing is restating what someone else has said in your own words. You should introduce the essential issues for your own thesis in adequate extent and correctly. The aim is to crystallize the central issues of the original text, however, at the same time, you should present your own observations, opinions and conclusions. All ethical norms of preparing and submitting a thesis should be adhered and its responsibility of the supervisor to verify the content integrity before final submission.

## **4. Illustrating the Text**

A thesis often comprises elements supporting and illustrating the text, such as tables, figures and mathematical formulas. All illustrative material is closely linked to the text, however, all tables and figures should be composed in such a way that the reader is able to understand them without reading the text. The text presents the essential observations and conclusions based on the tables and figures, not repeating the individual numerical information (i.e. single figures) reported in them. Tables, figures and mathematical formulas are numbered consecutively, each as an independent series. They are placed as near as possible to the section of text where they are first referred to.

## **5. Tips for Good Writing**

### **5.1 Continuity of ideas**

- It is very important that there is a continuity of idea in your synopsis/ manuscript. Few suggestions in this regard are mentioned below: A particular paragraph should elaborate only one theme/idea. If there is a need to emphasize multiple themes, then it is suggested to name them in a single paragraph and subsequently discuss them in separate paragraphs. There should be a smooth transition from one paragraph to the next paragraph. In order to do so, the first paragraph mentions the theme of the next paragraph.

### **5.2 Proper usage of verbs and tenses**

- In order to have continuity, it is essential to use verb tenses judiciously and properly. Following suggestions may be useful in this context:
  - a) Past tense (e.g., “Bergman showed ...”) or present tense (e.g., “Newton has shown . . .”) is appropriate for the literature review. This usage of verb tense may be applied for discussion on the past events.
  - b) Results are best described by using past tense, e.g., “Expenditure increased at the rate of 10% per year.”).
  - c) In order to discuss results and draw conclusions, it is apt to use present tense, e.g., “The results of the experiment indicate ...”



### 5.3 Mathematical symbols

- Mathematical expressions must italicize all symbols used in them. A distinct look (to the mathematical expression) may be imparted by separating them from the text (both preceding and following it) by larger line spacing and an indentation should be given. Each equation must appear only after it has been referenced in the text. Usage of one single equation editor throughout the text is suggested.

### 5.4 Common mistakes

- Some words and expressions, commonly misspelled by the scholars, are the following:

Correct	Incorrect	Remarks
i.e.	ie, i.e, ie.	(Use "i.e." with proper punctuation; it stands for id est.)
e.g.	eg, e.g, eg.	(Use "e.g." with proper punctuation; it stands for exempli gratia.)
<i>et al.</i>	et.al., etal, et al	(The correct form is "et al." short for et alia.)
Whereas	where as	(One word, not two.)
Literature	Literatures	(Literature is an uncountable noun.)
Equipment	Equipments	(Equipment is uncountable.)
Data	Datas	(Data is plural; "datum" is singular.)
kWh	KWH, KWh	("k" stands for kilo, not Kelvin.)
million tons (10 <sup>6</sup> )	MT	("M" stands for Mega, which is ambiguous.)
10 kg	10kg	(A space separates the value from the unit of measurement.)
ppm	PPM, ppM	(Use lowercase "ppm" as per SI convention.)
µm	um, Um	("µ" stands for micro.)
25°C	25 °C, 25C	(A space should be placed between the number and the unit, but not between the degree symbol and "C".)
Figure 1	Fig.1, fig1, Fig-1	(Use "Figure 1" or "Fig. 1" with a space after the period.)
Equation (1)	Eq.(1), eq 1	(Use "Equation (1)" or "Eq. (1)" with a space.)
Table 2	Table-2, table2	(Use "Table 2" with a space.)
meters per second (m/s)	mps, MPS, m/sec	("m/s" is the correct SI unit.)
Watt (W)	w, watt, Watts	("W" is the correct symbol, and "Watt" is capitalized when written in full.)
$5 \times 10^3$	5*10^3, 5x10^3	(Use the proper multiplication symbol "×".)

References	Reference	(In research papers, "References" is plural unless referring to a single citation.)
vs.	vs, versus	("vs." is the correct abbreviation in technical writing.)
1st, 2nd, 3rd	1st., 2nd., 3rd.	(Do not use a period after ordinal numbers.)

### 5.5 Common errors in writing

- Writing a dissertation could be cumbersome and its tedious to manage content flow. This may lead to loss of attention that may lead you to common errors in writing. The following write up gives you an idea about some of these common errors. Keeping them in mind will make your work impressive.
- In most writing, common mistakes include:
  - a) Incorrect use of punctuation, including commas, semicolons, colons, and dashes, etc.
  - b) Misusing articles and prepositions
  - c) Mistaking one word for another (envelope and envelop, stationary and stationery, affect and effect, complement and compliment). The spell-checker won't detect these errors.
  - d) You may want to keep your sentences small.
  - e) Confusing "then" and "than," "its" and "it's," "affect " and "effect," and "lay" and "lie"
  - f) Advice versus Advise:
 

Advice is a noun, something that you give. It is a thing. Say, "Please give me some advice."

Advise is a verb, something that you do. It is some action. Say, "Please advise me." (7)

Affect and Effect:
  - g) As verbs, they differ. To affect some thing is to have some influence upon it. To effect some action is to cause it to happen. As nouns, they also differ. Affect is like affection, related to emotion. Effect is a result.
  - h) Apart and a Part:
 

One is a single word; the other includes two words. "Apart" means two things are separate or away from each other. A "part" means one thing is a portion or an element of another. A wall is usually seen as a "part" of a house, for example, while a fence is seen as "apart" from the house.
  - i) Complement and Compliment:

The change from an "e" to an "i" makes a big difference in these two words. The word "complement" is related to the word "complete." If one thing complements another, then the two together make a whole. In contrast, the word "compliment" is an observation of some good quality in a person. It is considered more sincere than flattery.

j) In Spite:

There is no such word as "inspite." Make sure you use the two words separately, "in" and "spite."

k) Isn't it?

When you make a statement, then immediately ask if it is not true, you can use "isn't it" only if the question used the verb "to be" (ie "is" or one of its forms), the original question was positive, and if the subject of the sentence is third person singular (it). It is correct to say, for example, "It is coming, isn't it?"

l) Loose and Lose:

The two words, "loose" and "lose," look similar, especially to those who speak English as a second language. It is easy to mix them up. The word, "loose," means something is not tight or securely fastened down. It might easily fall apart or fall off. The word "lose," in contrast, means to have something go away and become lost.

m) Passive Voice:

Using the passive voice is a common way to say less than people want to read or hear. In the passive voice you say, "The orange was eaten." That way you hide the subject and so do not reveal who ate the orange. If you use the active voice, you must reveal the subject. "Aziz ate the orange." The active voice is simpler, and it always identifies the subject, i.e. who did the action. Nothing is hidden.

Always use the active voice in writing an academic paper or dissertation.

n) Subject-Verb Agreement Errors

- i. Incorrect: *The data is clear.*
- ii. Correct: *The data are clear.* (Data is plural.)

o) Misplaced or Dangling Modifiers

- i. Incorrect: *Running down the street, the backpack fell off.*
- ii. Correct: *Running down the street, I dropped my backpack.*

p) Redundant Phrasing

- i. Incorrect: *The reason why is because...*
- ii. Correct: *The reason is that...*

q) Unclear Pronoun References

- i. Incorrect: *John told Mark that he needed help. (Who needs help?)*
- ii. Correct: *John told Mark, "I need help."*

r) Improper Use of "Which" and "That"

- i. Incorrect: *The book which I borrowed was interesting.*
- ii. Correct: *The book that I borrowed was interesting. ("That" is restrictive.)*

(This is compiled from various sources).

## 6. Guidelines for Structuring Contents

### 6.1 Cover page

- The title of the thesis, author, school/department, month and year of submission along with the logo of the university will be included on the first cover.
- It is important that a standard format should be followed to prepare the content of the thesis which is being submitted in partial fulfillment of the requirements of the respective degree. (See specimen A)

### 6.2 Sequence of contents

- The thesis consists of following parts and the below sequence for the thesis organization should be followed:
  - a) Preliminary part
    - i. Title page (Specimen A)
    - ii. Declaration by the author (Specimen B)
    - iii. Certificate from supervisor (Specimen C)
    - iv. Acknowledgement

- v. Abstract (max. 1000 words)
- vi. Table of contents
- vii. List of figures
- viii. List of tables
- ix. List of acronyms / abbreviations (Specimen D)
- x. List of symbols etc. (wherever applicable)

b) Body of Thesis

- i. Introduction (chapter 1)
- ii. Text of thesis (chapter 2,3,4 etc.)
- iii. Summary and conclusions
- iv. Appendices
- v. List of references, Bibliography
- vi. Publications by the candidate

• **Preliminary part**

- a) Title page: Title page is same as that of cover page. This could be like: Title/Author/ A thesis submitted for the degree of Doctor of philosophy in the school of \_ \_ \_ along with the year and month of submission.
- b) Declaration by the author: (see specimen B) the wording required is as follows:

I hereby declare that this submission is my own work and where others ideas or words have been included; I have adequately cited and referenced the original sources. I also declare that I have adhered to all principals of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea / data / fact / source in any submission. I understand that any violation of the above will be cause for disciplinary action by the institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

(Signature/name/date)

c) Certificate from supervisor(s) – (see specimen C)

This is to certify that the thesis entitled <title> submitted by <name> to school of \_ \_ \_  
\_ \_ for the award of the degree of Doctor of philosophy is a bonafide record of the research  
work carried out by him/her under my (own) supervision and guidance. The content of  
the thesis in full or parts have not been submitted to any other institute or university for  
the award of any other degree or diploma.

Signed by research supervisor(s)

With name(S) and date

Place:

Date:

- d) Acknowledgements: the acknowledgements by the candidate can be included here.
- e) Table of contents: the contents should list the chapter headings, sections and subsections of the different chapters along with page numbers.
- f) List of figures: list the number and captions of the figures with page numbers.
- g) List of tables: list the number and titles of the tables with page numbers.
- h) List of abbreviations: it should be arranged in alphabetic order.
- i) List of symbols: list the Greek symbols first next English letters in this order.

- **Body of thesis**

- a) Introduction: Introduction shall be the first chapter of the thesis. It should outline the aim and scope of the work presented in the thesis. It shall justify and highlight the

problem posed.

- b) Text of thesis: this includes all other chapters inclusive of headings, subheadings, tables, figures, etc.
- c) Summary and conclusions: this usually forms the last chapter of the text. ‘Scope for future work’ may be followed after this chapter.

- **Appendices**

- a) Supplementary illustrative material, lengthy derivations, raw experimental observations, computer programs, tables of raw data, questionnaires, letters, original historical source material, data files that are too large to be represented simply in the results, chapter are included here and represented as APPENDIX A, APPENDIX B etc.

Each appendix with its title should be listed separately in the table of contents. Likewise, tables and figures contained in the appendices are to be included in the list of tables and figures respectively.

- **List of references**

- a) For Departments coming under Science, Health & Life sciences and Engineering Branch**

- i. References can be numbered as [1], [2], [3] etc. in the order in which they are referred to in the body of the thesis will appear “as stated in [53] or in [54]-[58]” etc. as in IEEE format. e.g.:

[53] Langelaar G.C., Setyawan I., Lagendijk R.L., “Watermarking Digital Image and Video Data”, *IEEE Signal Processing Magazine*, vol. 17, pp. 20-43, Sep. 2000.

- ii. An alternative way as mentioned in some journals is to arrange the references in the alphabetical order of the names of authors in which case the reference in the body of the thesis looks like” as mentioned in (Chao and Zhen 1970)”. However, for

uniformity, first method (IEEE journals) is to be used.

**b) For Departments of THM, BM, Mass.com, Education, Economics, Commerce & Life Sciences**

- i. American psychological association (APA) citation style can also be followed as it is the standard across the researcher community across world.

e.g. Yurog, X., Yen, D. C., Lin, B. and Chou, D.C., (2002), Adopting Customer Relationship Management Technology. *Industrial Management & Data Systems*, 102(8), 442-52.

- c) All the Thesis coming under the department of Law / Legal studies will follow the ILI (Indian Law Institute) Citation format. (Refer to **Annexure 1**).

- d) You can employ tools like Endnote, Zotero, Mendeley for the purpose of citation and referencing.

- **Publications by the candidate**

- a) Articles, technical notes on the topic of the thesis published by the candidate may be separately listed and may also include reprints of his/her publication after the literature citation. Only publications which are published need to be listed. The first page of the publications and the certificate for the presentations if any should be duly attached with the same. Use American Psychological Association(APA) format for providing the list of scholars publication. In all the papers the first author should be the scholar, second author should be the supervisor and remaining author can be collaborators who are officially recognized and approved.



(Specimen A)

**A  
Thesis  
on  
Title**

**Size: 18  
Bold and Center Aligned  
Title in Capital**

**Size: 14  
Italics, Center  
Aligned**

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

**DOCTOR OF PHILOSOPHY**

**in**

**(Subject)**

**Size: 16  
Bold, Center  
Aligned**

**Submitted By**

**Name.....**

**Size: 14  
Bold and Center  
aligned**

**UID.....**

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Bold & Center  
Aligned**

**Supervisor Name**

**Designation, Affiliation**

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Bold and Center  
aligned**

**Size:12  
Bold & Center  
Aligned**



**Size: 14, All Capital  
Bold & Center Aligned**

**DEPARTMENT Name  
CHANDIGARH UNIVERSITY  
GHARUAN, MOHALI, PUNJAB, INDIA-140413**

**Month, Year**

**Size: 14  
Bold and Center  
aligned**

(Specimen B)

**A**

**Thesis**

**on**

**Title**

Size: 18  
Bold and Center Aligned  
Title in Capital

Size: 14  
Italics, Center  
Aligned

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

*of*

**DOCTOR OF PHILOSOPHY**

**in**

(Subject)

Size: 16  
Bold, Center  
Aligned

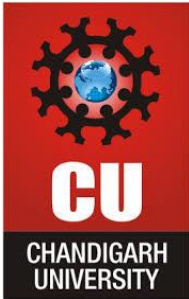
**Submitted By**

**Name.....**

Size: 14  
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**UID.....**

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Bold & Center  
Aligned



Size:12  
Bold

**Supervisor  
Name  
Designation, Affiliation**

**Co-Supervisor  
Name  
Designation, Affiliation**

Size: 14, All  
Capital  
Bold & Center

**DEPARTMENT Name  
CHANDIGARH UNIVERSITY  
GHARUAN, MOHALI, PUNJAB, INDIA-140413**

Month, Year

## CANDIDATE'S DECLARATION

Size: 14  
Bold and Center  
aligned

I hereby declare that the work which is being presented in the dissertation, entitled “**Title**”, in partial fulfillment of the requirements for the award of the degree of **Doctor of Philosophy in Electronics & Communication Engineering** and submitted to **Chandigarh University, Gharuan, Mohali** is an original piece of research work carried out by me during the period from XXXXXX to XXXXXX under the supervision of XXXX (Name of Supervisor & Designation), Name of the Department, Chandigarh University, Gharuan and XXXXX, (Name of Co-supervisor, designation and Affiliation).

The matter embodied in this thesis has not been submitted by me for the award of any other degree of any other University/Institute.

XXXXXX

**Candidate Name & Signature**

The thesis entitled <title> submitted by <name> to school of \_ \_ \_ for the award of the degree of Doctor of philosophy is a bonafide record of the research work carried out by him/her under my supervision and guidance. This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

Name of Supervisor  
Designation,  
Department,

Name of Co-Supervisor  
Designation,  
Department,

Chandigarh University

Affiliated University

(Specimen C)

**7. CERTIFICATE (14 Bold, Center)**

The Final Ph.D. Thesis Viva-Voce examination of **XXXXXXXXXXXX**, UID **XXXXXXXXXX** has been held on \_\_\_\_\_ and his case is recommended for the award of Doctor of Philosophy in Computer Science Engineering Degree.

**Signature of Examiner(s)**

**Signature of Supervisor**

**Signature of Co-Supervisor**

**Signature of DRC Members**

**Signature of DRC Chairman**

Place:

Date:

## **ACKNOWLEDGMENT (14 Bold, Center)**

**ABSTRACT (14 Bold, Center)**

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**\*Chapter 2 and chapter 3 may be clubbed together**



**Chapter 5:**

100

:

:

:

:

**Chapter (Second Last) Should Focus on Results and Discussion/Analysis**

**Chapter (Last): Conclusions and Scope for Future Work**

**APPENDIX-A (if any)**

:

:

**REFERENCES**

## **LIST OF FIGURES (14 Bold, Center)**

## **LIST OF TABLES (14 Bold, Center)**

(Specimen D)

## **LIST OF ACRONYMS & ABBREVIATIONS**

**(14 bold, Center)**

**(Alphabetically)**

**CC** – Correlation Coefficient (12)  
**CDMA** – Code Division Multiple Access  
**DCT** – Discrete Cosine Transform  
**DFT** – Discrete Fourier Transform  
**DPCM** – Differential Pulse Code Modulation  
**DWT** – Discrete Wavelet Transform  
**EBCOT** – Embedded Block Coding with Optimized Truncation  
**EZW** – Embedded Zero-tree Wavelet  
**FFT** – Fast Fourier Transform  
**HH** – High-High Band of DWT  
**HL** – High-Low Band of DWT  
**HVS** – Human Visual System  
**ICA** – Independent Component Analysis  
**ICAR** – Inherently Collusion Attack Resistant  
**IPR** – Intellectual Property Right  
**JND** – Just Noticeable Distortion  
**JPEG** – Joint Photographic Expert Group  
**LH** – Low-High Band of DWT  
**LL** – Low-Low Band of DWT

## **LIST OF SYMBOLS (14 Bold, Center)**

## **CHAPTER 1**

### **INTRODUCTION (14 Bold, Center)**

#### **Annexure 1**

#### **Citation Style**

The Institute has formulated a set pattern of footnoting, which is followed in The Journal of Indian Law Institute, Annual Survey of Indian Law and various other publications of the Institute. Contributors of articles, notes and comments are required to follow this pattern.

#### **Mode of Citation**

- **For an authored book**

- a) **By a single author:** Name of the author, Title of the book p.no. (if referring to specific page or pages)

(Publisher, Place of publication, edition/year of publication).

**E.g.** M.P. Jain, Indian Constitutional Law 98 (Kamal Law House, Calcutta, 5th edn., 1998).

- b) **By two authors:** Name of the authors, Title of the book p.no. (if referring to specific page or pages)

(Publisher, Place of publication, edition/year of publication).

**E.g.** M.P. Jain and S.N. Jain, Principles of Administrative Law 38 (Wadhawa, Nagpur, 2001).

- c) **By multiple authors (more than two):** Name of the first two authors, et.al., Title of the book p.no. (if referring to specific page or pages) (Publisher, Place of publication, edition/year of publication).

**E.g.** Jerry L. Mashaw, Richard A. Merrill, et.al., The American Public Law System – Cases and Materials 50 (West Group, St. Paul, MN, 1992).

- d) **Books with volume no.:** Name of the author(s), Volume no. Title of the book p.no. (if referring to specific page or pages) (Publisher, Place of publication, edition/year of publication).

**E.g.** Charles Robert Norberg, III General Introduction to Inter-American Commercial

Arbitration Year Book- Commercial Arbitration 30 (1978)

- **For edited books**

- a) **By a single editor:** Name of the editor (ed.), Title of the book p.no. (if referring to specific page or pages)

(Publisher, Place of publication, edn/year).

**E.g.** Susan A. Bandes (ed.), The Passions of Law 180 (New York University Press, New York, 1999).

- b) **By two editors:** Name of the editors (eds.), Title of the book p.no. (if referring to specific page or pages) (Publisher, Place of publication, edn/year).

**E.g.** S.K. Verma and Raman Mittal (eds.), Intellectual Property Rights: A Global Vision 38-42 (ILI, Delhi, 2004).

- c) **By more than two editors:** Name of the editors, the first two only, et.al. (eds.), Title of the book p.no. (if referring to specific page or pages) (Publisher, Place of publication, edn/year).

**E.g.** Chatrapati Singh, P.K. Coudhary, et.al. (eds.), Towards Energy Conservation Law 78 (ILI, Delhi, 1989).

- **By, or an auspices of, an organization/institution:**

- a) Indian Law Institute, Index to Indian Legal Periodicals (ILI, Delhi, 2002).

- **Mode of citation for articles/essays/online sources**

- a) **Citation of a paper published in a journal/periodical:** Name of author of the article, title of the essay within inverted commas, volume number of journal Name of the journal page number (year).  
**E.g.** Upendra Baxi, “On how not to judge the judges: Notes towards evaluation of the Judicial Role” 25 Journal of Indian Law Institute 211 (1983).
- b) **Citation of a paper published in a case reporter:** P.K. Thakur, “Permissibility of Probation in Offences Punishable with Minimum Imprisonment” 2 SCJ 26-38 (2002).
- c) **Citation of an essay/chapter published in an edited book:** Name of author(s) of the essay, title of the essay within inverted commas, in Name of the editor(s), title of the edited book page number (publisher, edition/year).  
**E.g.** Jutta Brunnee, “Enforcement Mechanisms in International Law and International Environmental Law”, in Ulrich Beyerlin, Peter-Tobias Stoll, et.al. (eds.), Ensuring
- d) **Compliance with multilateral environmental agreements:** A dialogue between practitioners and academia 1-24 (Martinus Nijhoff Publishers, 2006).
- e) **Citation of an essay published as a part of a survey of law (e.g. Annual survey of Indian law, an annual publication of the Indian Law Institute, New Delhi):** Name of author of the essay, title of the essay within inverted commas, volume number name of the survey, page number (Name of the institute, year).  
**E.g.** B.B. Pande, “Criminal Law” XLI Annual Survey Indian Law 171-198 (Indian Law Institute, 2005).
- f) **Citation of a write-up published in a newspaper/periodical:** Name of the writer, Title of the write-up within inverted commas, Name of the newspaper, date (month. date, year)  
**E.g.** Robert I. Freidman, “India’s Shame: Sexual Slavery and Political Corruption are Leading to an AIDS Catastrophe” The Nation, Apr. 8, 1996.



- g) **Citation of an editorial from a newspaper:** Editorial, Title of the Editorial within inverted commas, Name of the newspaper, date.

**E.g.** Editorial, “Short-circuited” The Times of India, Aug. 2, 2004.

- h) **Citing a reference from encyclopaedia:**

**E.g.** Edwin R.A. Seligman (ed.), XV Encyclopaedia of the Social Sciences (The Macmillan Co., NY, 1957).

- i) **Websites**

The author must indicate the date of visiting the website.

**E.g.** Information Technology Act 2000, India, available at:

<http://www.mit.gov.in/itbill.asp> (last visited on July 29, 2003).

- j) **Unpublished works**

**Unpublished research work (E. g., Dissertation/Thesis):** Name of the Researcher, Title of the dissertation/thesis (Year) (Unpublished Ph.D. thesis, Name of the University/organization).

**E.g.** Sahil Kumar, Corporate Governance: Regulatory Mechanism With Special Emphasis On

Corporate Social Responsibility (2017) (Unpublished LL.M dissertation, Indian Law

Institute).

- k) **Interviews:**

**E.g.** Interview with M. Veerappa Moily, Law Minister, The Hindu, July 25, 2004.

- l) **Forthcoming publication of a book:**

**E.g.** G. Gann Xu, Information for Corporate IP Management (In Press, 2015).

- m) **Forthcoming publication of an article:**

**E.g.** P. Leelakrishnan, V. R. Jayadevan, “Concept of Common but Differentiated Responsibility in Climate Negotiations” 61 Journal of Indian Law Institute 47 (In Press, 2019).

**n) Mode of citation of case law**

Where the case title is written in the body of the text, only the name of the case shall be in the text **e.g.** Kesavananda Bharati v. State of Kerala and the citation is written in the footnote as AIR 1973 SC 1461. If the name and citation are to be written in the footnote itself: Kesavananda Bharati v. State of Kerala, AIR 1962 SC 933.

If parties to a case are numerous, for e.g. State of Punjab v. Union of India and others; this case is to be cited as: State of Punjab v. Union of India (1977) 3 SCC 592.

Foreign Cases to be cited in the same manner as Indian cases, according to the rules mentioned above.

**o) Acts/ Constitution**

The Complete name of statute/act, year (citation) The Information Technology Act, 2000 (Act 21 of 2000).

**Constitution to be cited as:** The Constitution of India.

**Section(s) in a statute/constitution**

The complete name of the statute (citation), section/articles in abbreviation (s./art.)

**E.g.**

The Information Technology Act, 2000 (Act 21 of 2000), s. 30.

The Information Technology Act, 2000 (Act 21 of 2000), ss. 30, 32.

The Constitution of India, art. 14.

The Constitution of India, arts. 14, 15, 16.

The Indian Penal Code, 1860 (Act 45 of 1860), s.300.

**p) Foreign legislations (Constitution/Acts/Codes)**

The complete name of the statute (citation), section/articles in abbreviation (s./art)

**E.g.**

The United Kingdom Sovereign Immunity Act, 1978, art. 4

National Parks of Canada Fishing Regulations, 1978, s. 10.

The constitutions to be cited in the same manner as the Constitution of India, however, where the official citation mentions the particular form of citation or title, the same must be mentioned.

**e.g.**

The Commonwealth of Australia Constitution Act, 1900, s. 9.

The Constitution of the People's Republic of China, 1982, art.124.

The Constitution Acts for certain state constitutions in federal countries:

Constitution Act, Year (name of the particular province or state), pinpoint reference.

**e.g.** Citation for the constitution of the State of New South Wales, Australia: Constitution Act, 1962 (NSW), s 5.

**q) Reports**

Institution/Author, "title of the Report within inverted commas" page number (Year of publication).

**e.g.** Law Commission of India, "144th Report on Conflicting Judicial Decisions Pertaining to the Code of Civil Procedure, 1908" (April, 1992).

**e.g.** Government of India, "Report of the Committee on Reforms of Criminal Justice System" (Ministry of Home Affairs, 2003).

Constituent Assembly Debates and Parliamentary Debates  
Volume no., Constituent Assembly Debates, page number

**e.g.** VIII, Constituent Assembly Debates, 31,32.

Constituent assembly debates available online

**e.g.** Constituent Assembly Debates on April 29, 1947 available at:  
<http://parliamentofindia.nic.in/ls/debates/vol3p2.html> (last visited on May 30, 2008).

Parliamentary Debates

**e.g.** Lok Sabha Debates on July 06, 2019 available at:  
<http://164.100.47.194/Loksabha/Debates/debatelok.aspx> (last visited on Aug. 01, 2019).

**r) International documents**

**i. International conventions and/or treaties**

The complete name of the convention or treaty, section/article number

**E.g.** The United Nations Convention on the Law of the Sea, 1982, art. 12.

ii. **Constitutive and basic documents of international organisations**

The complete name of the statute/charter, article number (art.) or section number (s.)

**E.g.** The United Nations Charter, art. 12

The Statute of the International Court of Justice, art. 24

Official United Nations (UN) Documents (Resolutions, Decisions, Committee Reports)

iii. **The citation of the United Nations documents should include the following elements in the given order:**

Author (either an individual or an organ)

Title of the document in italics

Resolution or decision number

Official Records

General Assembly Official Records – UN GAOR

Security Council official Records – UN SCOR

Economic and Social Council- UN ESCOR

Trusteeship Council Official Records- UN TCOR

UN document number

Full date (both date of adopting, and date of entering into force)

Pinpoint reference (preamble/para./p.no. /art./s./pt./annex.)

Examples of the commonly cited types of UN documents:

Author (individual followed by designation/institution), Title of the document, Resolution or decision number, Official records, UN document number (full date),

pinpoint reference.

General Assembly resolution to be cited as:

UN General Assembly, Prevention of armed conflict, GA Res 57/337, GAOR, UN Doc A/Res/57/337 (July 18, 2003).

Security Council resolution to be cited as:

UN Security Council, SC Res 827, SCOR, UN Doc S/Res/827 (May 25, 1993).

Economic and Social Council Decision to be cited as:

UN Economic and Social Council, Basic Programme of Work of the Economic and Social Council for 2001, ESC Dec 2001/203, UN ESCOR, UN Doc E/2000/99 (Feb. 4, 2000).

Report of a UN Organ to be cited as:

UN General Assembly, Report of the Economic and Social Council for 2005, UN GAOR, UN Doc A/60/3/Rev.1 (July 11, 2007).

Report of the UN Treaty Body:

Conference of the Parties, United Nations Framework Convention on Climate Change, Report of the Conference of Parties in its Fifteenth Session, Held in Copenhagen from 7 to 19 December 2009- Addendum-Part 2: Action Taken by the Conference of the Parties at Fifteenth Session, UN Doc FCCC/CP/2009/11/Add.1 (March 30, 2010).

Secretary General's Report to be cited as:

UN Secretary General, In Larger Freedom: Towards Development, Security and Human Rights for All- Report of the Secretary General, UN Doc A/59/2005 (March 21, 2005).

**s) Supranational cases**

**i. International court of justice cases:**

Name of the case (Name of the Parties) (Phase) [Year] Report series, pinpoint reference.

Phases:

(Provisional Measures)

(Preliminary Objections)

(Jurisdiction)

(Merits)

(Judgment)

**E.g.**

LaGrand Case (Germany v. United States of America) (Judgment) [2001] ICJ

Rep. 466.

Right of Passage over Indian Territory (Portugal v. India) (Preliminary Objections) [1957] ICJ Rep 125.

European Court of Human Rights Cases/ International Criminal Court Cases  
(and other supranational courts)

Name of the Parties (Year) Report Series, pinpoint reference.

**E.g.**

Campbell v United Kingdom (1992) 233 ECHR.

**t) Electronic sources**

Electronic Newspapers to be cited as (where an identical print version is not available)

Name of the author, "Title of the article", Name of the Newspaper in italics, full date, available at <URL> (last visited on)

Audiovisual Sources/Documentaries

Name of the Studio/Production Company, Title in italics, Year, available at <URL>

Speeches/Interviews/ Papers presented at Seminars available at websites:

Name of the author, Title of the Paper, name of the conference/workshop, Held on (Place and date), available at <URL> (last visited on)

**u) Referencing**

Supra/ Infra

Supra (Latin: „above“) is used to refer to a prior footnote.

If a different page number is to be indicated in a source referred to in a prior footnote

E.g. Supra note 5 at 34.

If referring to a section/article in a source referred

e.g. Supra note 5, s.40.

Supra note 6, art.14.

Avoid the use of Infra (below).

Ibid./ Id.

Ibid. (meaning „in the same place“) is used to refer to an authority in the footnote

immediately preceding the current footnote and the same page/ place is being referred

to.

Id. (meaning „the same“) is used if the authority is the same but the page or place of

reference is different.

e.g. Id. at 30.

If referring to a section / article in the same authority

e.g. Id., art. 14.

**v) Abbreviations for pinpoint references:**

Article- art.

Section- s.

Point- pt.

Schedule- sch.

Annexure- annex.

Paragraph- para.

Page number- p.no.

Clause- cl.