

### Ordinance for Ph.D. Program

(Approved by University Research Degree Committee, held on March 12, 2019)

Effective from  
Academic Session 2019-2020



## INVERTIS UNIVERSITY, BAREILLY

Invertis University, Bareilly

Page 1 of 12

*Dr. Devendra*  
(Dr. Devendra)

*Praveen*  
16-10-19  
*Santosh*  
16/10/19

*(Prof. Y. D. S. Arora)*

*Wishu*  
(Prof. 109149 Shankar)  
Prof. 117 Kanchan

*(Prof. P. Singh)*

*(Prof. K. K. Shukla)*  
16/10/19

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**1. Categories of candidates for Admission to Ph.D. Programme:**

**1.1. Full-time candidates:** A full-time candidate shall be required to remain present in the campus for a minimum period of 24 months and has to work for minimum 6 hours per week of academic work as assigned by the Faculty in which, candidate is admitted for their Ph.D. programme.

**1.2. Off-Campus Candidates:** An Off-Campus candidate can be from Public Sector Undertakings/Research and Development Organizations/Private Industries/Educational Institutions where adequate infrastructure exists for carrying out research work. Candidate can also be full time student. He/She shall spend minimum of one semester in the concerned Faculty for carrying out requisite course work as per the courses prescribed by URDC, if required.

**2. Eligibility criteria for admission in Doctor of Philosophy (Ph.D.) programme:**

2.1. Candidates for admission to the Ph.D. programme shall have a Master's degree or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% (50% for SC/ST/OBC/DA) marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions.

OR

2.2. Bachelor's Degree in Engineering with first division ( $\geq 75\%$  aggregate marks) in appropriate field of Engineering/Technology/Architecture of the University or its equivalent.

OR

2.3. MCA Degree of a University or its equivalent with first division.

OR

2.4. Masters Degree in Law of a University with not less than 55%(50% for SC/ST/OBC/DA) in aggregate.

Notwithstanding anything contained in the above-mentioned rules 2.1 to 2.4, the eligibility criteria/guidelines prescribed and/or issued by UGC from time to time shall also be applicable for registration to Ph.D. Programme(s) of the University.

**Note:** University shall encourage inter-disciplinary research activity.

**3. Duration of the Programme:**

3.1. Ph.D. programme shall be for a minimum duration of three years, including course work and a maximum of five years.

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Prof. IIT Kanpur

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3.2. The maximum time allowed for submission of the thesis shall be 5 years from the date of registration. This period can be extended by one year by the Vice-Chancellor under very special and genuine circumstances. No further extension shall be granted and the registration to Ph.D. shall automatically be cancelled after the expiry of 6 years from the date of registration. Provided that Vice-Chancellor may permit a candidate to get re-registered on the same topic on payment of a re-registration fee as decided by the University from time to time, for a further period of two years and regular attendance shall not apply to such re-registered candidate. In such cases, candidates will apply to the University one month before the expiry of the last extension period. If the candidate is unable to submit his/ her thesis in the prescribed period of the re-registration, his/ her registration shall stand automatically cancelled, and the University would not be bound to inform the candidate about the cancellation.

3.2.1. Application for an extension shall be considered with the recommendations of the supervisor(s). Extension of period after five years is not automatic. Application for extension shall be considered if submitted to the office of the Dean of the concerned Faculty before 4-6 months from the date of expiry of five/six years, as the case may be.

3.2.2. This period of three years can at the most be reduced by 6 months by the Vice-Chancellor on the recommendations of the URDC if a candidate has published at least two research papers in National or International Journals of repute.

3.3. The women candidates and Persons with Disability (more than 40% disability) may be allowed a relaxation of two years for Ph.D. in the maximum duration. In addition, the women candidates may be provided Maternity Leave/Child Care Leave once in the entire duration of Ph.D. for up to 240 days.

#### 4. Procedure for admission:

4.1. Admission to the Ph.D. program would be through an entrance test followed by a personal interview. Candidates who have qualified UGC/CSIR (JRF) examination/ SLET/ GATE examination or have M. Phil. Degree will be exempted from the entrance examination. Exempted candidates are also required to be present in the personal interview.

4.2. Candidates appeared in the Entrance Test shall have to score a minimum of qualifying marks as 50%. The syllabus of the Entrance Test consist of 40% of research methodology and 60% shall be subject specific. The Entrance Test will be conducted at Invertis University, Bareilly.

4.3. In personal interview, discussion/questions will be based on the following: research interest/area, candidate possesses the competence for research, etc.

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4.4. Candidates, who qualifies the Entrance Test, will have to register in the Ph.D. programme within one year after the declaration of the entrance test result.

5. **Course Work:** duration, syllabus, minimum standards for completion:

5.1. The credit assigned to the Ph.D. course work shall be a minimum of 08 credits and a maximum of 16 credits.

5.2. The course work shall be treated as prerequisite for Ph.D. preparation. A minimum of four credits shall be assigned to one or more courses on Research Methodology which could cover areas such as quantitative methods, computer applications, research ethics and review of published research in the relevant field, training, field work, etc. Other courses shall be advanced level courses preparing the students for Ph.D. degree. The candidate has to undergo minimum of two courses as a pre-requisite for the Ph.D if he holds an M.Tech. or equivalent degree and three courses, if he holds a B.Tech. or Master degree. In both the cases one of the courses has to be on Research Methodology.

5.3. All courses prescribed for Ph.D. course work shall be in conformity with the credit hour instructional requirement and shall specify content, instructional and assessment methods. They shall be duly approved by the authorized academic bodies.

5.4. The Faculty/Department where the scholar pursues his/her research shall prescribe the course(s) to him/her based on the recommendations of the BOS.

5.5. All candidates admitted to the Ph.D. programme shall be required to complete the course work prescribed by the Faculty/Department during the initial one or two semesters.

5.6. Candidates already holding M.Phil. degree and admitted to the Ph.D. programme will be exempted by the Department from the Ph.D. course work. All other candidates admitted to the Ph.D. programme shall be required to complete the Ph.D. course work prescribed by the Department.

5.7. Candidate has to obtain a minimum of 55% of marks (in each paper) in the course work examination, in order to be eligible to continue in the programme.

6. **Allocation of Research Supervisor:** Eligibility criteria to be a Research Supervisor, Co-Supervisor, Number of Ph.D. scholars permissible per Supervisor, etc.

6.1. Any regular Professor of the University/faculty with at least five research publications in refereed journals and any regular Associate/Assistant Professor of the university/faculty with a Ph.D. degree and at least two research publications in refereed journals may be recognized as Research Supervisor.

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6.2. Only a full time regular teacher of the concerned University/faculty can act as a supervisor. The external supervisors are not allowed. However, Co-Supervisor can be allowed in inter-disciplinary areas from other departments of the same institute or from other related institutions with the approval of the URDC.

6.3. The allocation of Research Supervisor for a selected research scholar shall be decided by the faculty concerned depending on the number of scholars per Research Supervisor, the available specialization among the Supervisors and research interests of the scholars as indicated by them at the time of interview/viva voce.

6.4. In case of topics which are of inter-disciplinary nature where the Department concerned feels that the expertise in the Department has to be supplemented from outside, the Department may appoint a Research Supervisor from the Department itself, who shall be known as the Research Supervisor, and a Co-Supervisor from outside the Department/ Faculty on such terms and conditions as may be specified and agreed upon by the consenting faculties.

6.5. A Research Supervisor/Co-supervisor who is a Professor, at any given point of time, cannot guide more than eight (8) Ph.D. scholars. An Associate Professor as Research Supervisor can guide up to a maximum of six (6) Ph.D. scholars and an Assistant Professor as Research Supervisor can guide up to a maximum of four (4) Ph.D. scholars.

6.6. In case of relocation of a Ph.D. woman scholar due to marriage or otherwise, the research data shall be allowed to be transferred to the University to which the scholar intends to relocate provided all the other conditions in these regulations are followed in letter and spirit and the research work does not pertain to the project secured by the parent institution/ supervisor from any funding agency. The scholar will however give due credit to the parent supervisor and the institution for the part of research already done.

Note: Close relative of the candidate cannot be appointed as Supervisor/ Co-Supervisor.

6.7. Change of Supervisor(s)/Co-Supervisor: The Vice-Chancellor on the recommendations of URDC can permit the change of Supervisor(s)/Co-Supervisor. Vice-Chancellor, on the recommendations of the URDC may permit the Supervisor, who has left the University or retired, to continue as the supervisor. In case of the death or non-availability of the Supervisor for any reason, the Vice-Chancellor, on the recommendations of the URDC, can either permit another Supervisor or allow the candidate to work and submit the thesis under the Co-Supervisor alone, if already exists.

## 7. University Research Degree Committee and its functions:

7.1. The University Research Degree Committee shall consist of the following members: Vice Chancellor (Chairman), Deans of various faculties (Members), Two external Professors of

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*Prof. Kripa Shankar*  
Prof. IIT, Kanpur

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10.5. All the recommendations of Research Monitoring Committee are subject to the approval by URDC.

**11. Cancellation of Registration:** The registration of a candidate to Ph. D. shall be cancelled, if:

11.1. Automatically on the expiry of the period of extension granted by the Vice-Chancellor or the maximum time allowed under clause 3, 3.2. & 3.3. as the case may be, in case the extension has not been sought from the Vice-Chancellor.

11.2. As mentioned in clause 10.2. & 10.3.

11.3. If a candidate is found involved in an act of indiscipline, unlawful activity, involved in an act of ragging, plagiarism and any other such activity which may endanger the peace in the University.

**12. Submission of Thesis:**

12.1. Based upon the research work done and after minimum one research publications in National or International Journals of repute and make two paper presentations in conferences / seminars before the submission of the thesis for adjudication, and produce evidence for the same in the form of presentation certificates and/or reprints, the candidate shall submit the modified synopsis (if required) before three months from the submission of thesis and shall present it to the Research Monitoring Committee for approval. Candidate will make a presentation before the committee on the work carried out by him. Only after Committee approves the work, the candidate can submit the thesis to the University.

12.2. The candidate shall submit the five copies of softbound typed (on one side) Ph.D. thesis to the University in the prescribed format (Annexure IV). The thesis shall include:

- Declaration by the Candidate (Annexure V)
- Certificate from the Supervisor (Annexure VI)
- Appendix in the end of the thesis containing reprints of the research papers already published.
- Self-attested photocopies of the acceptance letters of the research papers accepted for publication.
- List of communicated research papers along with author(s) name(s), name of the Journal to which the paper(s) has been communicated and the date of communication.
- Bibliography at the end of the summary.

12.3. In addition to the thesis candidate will have to submit the following:

- Five copies of the Synopsis.
- Summary of the work done (in about 5000 words)
- Receipt of examination fee, as prescribed by the University.

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**13. Evaluation and Assessment Methods, minimum standards for award of the degree:**

13.1. Upon satisfactory completion of course work, and obtaining the marks/grade prescribed in clause and sub-clauses of 3, 5 and 12, as the case may be, the Ph.D. scholar shall be required to undertake research work and produce a draft thesis within a reasonable time after the written consent of the supervisor.

13.2. Prior to the submission of the thesis, the scholar shall make a presentation in the Department/faculty before the Research Monitoring Committee which shall also be open to all faculty members and other research scholars. The feedback and comments obtained from them may be suitably incorporated into the draft dissertation/thesis in consultation with the supervisor.

13.3. Ph.D. scholars must publish at least two research paper in refereed journal and make one paper presentations in conferences/seminars before the submission of the thesis for adjudication, and produce evidence for the same in the form of presentation certificates and/or reprints.

13.4. While submitting for evaluation, the thesis shall have an undertaking from the research scholar and a certificate from the Research Supervisor attesting to the originality of the work, a report of plagiarism check from University authorised personnel with permission of Vice Chancellor for acceptance of the report.

13.5. The Ph.D. thesis submitted by a research scholar shall be evaluated by at least three external examiners, who are not in employment of the university, of whom one examiner may be from outside the country. The viva-voce examination, based among other things, on the critiques given in the evaluation report, shall be conducted by the Research Supervisor and at least one of the three external examiners, and shall be open to be attended by Members of the Research Monitoring Committee, all faculty members of the Department, other research scholars and other interested experts/researchers.

13.6. The public viva-voce of the research scholar to defend the thesis shall be conducted only if the evaluation report(s) of the external examiner(s) on the thesis is/are satisfactory (Annexure VII) and include a specific recommendation for conducting the viva-voce examination. If any one of the examiners rejects the thesis with specific reasons, the Institution shall send the thesis to another external examiner out of the approved panel of examiners and the viva-voce examination shall be held only if the report of the latest examiner is satisfactory. If the report of the latest examiner is also unsatisfactory, the thesis shall be rejected and the research scholar shall be declared ineligible for the award of the degree.

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13.7. If any two of the examiners recommend and one examiner suggests modifications, or one examiner recommends and the other two suggest modifications, or all the three examiners suggest modifications, then the candidate shall be asked to re-submit the thesis after revising it in the light of modifications suggested by the examiner(s). Revised thesis will be sent to the examiner(s) who suggested modifications and accepted to re-evaluate the thesis, for his/ her/ their final opinion. Alternate examiner(s) may be substituted for the examiner(s) who have suggested major changes but not accepted to re-evaluate the thesis, for recommendations on the revised thesis. If any one of them still rejects the thesis, the thesis will stand rejected.

13.8. Examiners for thesis evaluation: Supervisor of the candidate will furnish the names of eight examiners, not below the rank of Assistant Professor, in the research area of the candidate. Note: Close relative of the candidate and also of the supervisors shall not be included in the panel of examiners.

13.8.1 From this panel, the Vice-Chancellor shall appoint three examiners for thesis evaluation. The Vice-Chancellor may include any new name.

13.8.2. Examiners would be requested to submit the evaluation report within three months of the receipt of thesis. In case of undue delay by any examiner, Vice-Chancellor may appoint alternate examiner(s) after due intimation to the existing examiner(s).

13.9. In case the thesis is approved, an open viva-voce examination of the candidate shall be held by the Board of Examiners (Viva-voce Board) comprising of one of the thesis examiners (nominated by the Vice-Chancellor), Dean of the concerned faculty, Supervisor(s), Head of the department, Subject Expert (nominated by the Vice-Chancellor). The date, time and place of viva-voce examination shall be notified by the Registrar on the University Notice Board at least a week in advance. At the time of viva-voce examination the Board of Examiners shall be provided a copy of the reports of the examiners, which shall be returned along with the report of viva-voce examination to the Registrar. In case the Vice-Chancellor observes any anomaly in the reports of external examiners regarding the standard of the work, he or his nominee may be present in the viva-voce examination as the Chairman of the Board.

13.10. The candidate shall present the work embodied in the thesis before the Board of Examiners, members of faculty, research scholars and other interested persons. After the presentation of the research work, the Board shall ask questions together with those questions, which have been given along with examiner's reports. Others in the audience can also ask questions and the candidate shall reply only those questions which are permitted by the external examiner. The viva-voce Board shall give a final decision and a clear verdict whether the candidate be awarded Ph.D. degree or be asked to re-appear for viva-voce. In case of the second verdict, the candidate shall be required to re-appear for viva-voce preferably before the same Board, on a date to be decided by the University.

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13.11. If the candidate is required to revise the thesis, the Research Monitoring Committee may permit the candidate to revise his/ her thesis in a period not earlier than six months and not later than one year from the date of communication to the candidate. The candidate shall have to pay an additional examination fee as prescribed by the University.

13.12. The thesis shall be published only with the permission of the University and such publication shall state on the title page itself that this was a thesis approved for the award of the Ph. D. degree of the University.

**14. Award of Ph.D. Degree:**

14.1. After successfully clearing the viva-voce examination and subsequent approval of URDC, the candidate shall be awarded Ph.D. degree after recommendation by the Academic Council to the Executive Council, on the basis of the reports of the examiners and the viva-voce Examination Board.

14.2. The award of Ph. D. degree can be withdrawn in case the thesis submitted by the candidate is found to be a duplication of an old work or pirated research work on recommendations by URDC to the Academic Council which further recommends its withdrawal to the Executive Council.

14.3. Provisional Degree: The candidate may be awarded a completion certificate after successfully defense in viva-voce examination and a Provisional Degree Certificate may be given to the student after the Vice-Chancellor approves the recommendation of the viva-voce Board.

**15. Treatment of Ph.D. through Distance Mode/Part-time:**

15.1. No faculty is allowed to conduct Ph.D. Programme through distance education mode.

15.2. Part-time Ph.D. will be allowed provided all the conditions mentioned to the extent Ph.D. Regulations are met.

**16. Depository with INFLIBNET:**

16.1. Following the successful completion of the evaluation process and before the announcement of the award of the Ph.D. degree(s), the Institution concerned shall submit an electronic copy of the Ph.D. thesis to the INFLIBNET, for hosting the same so as to make it accessible to all Institutions/Colleges.

16.2. Prior to the actual award of the degree, the degree awarding Institution shall issue a provisional Certificate to the effect that the Degree has been awarded in accordance with the provisions of these UGC Regulations, 2016.

16. Notwithstanding anything contained in the Ordinance, both categories of candidates/ research scholars will be governed by the rules and procedures framed/ approved by the Academic Council and in force from time to time. Notwithstanding anything stated in this Ordinance, for

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any unforeseen issues arising, and not covered by this Ordinance, or in the event of differences of interpretation, the Vice-Chancellor may take a decision, after obtaining if necessary the opinion/advice of Research Monitoring Committee. The decision of the Vice-Chancellor will be final.

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## “TITLE OF THE RESEARCH PROPOSAL”

*Synopsis for the Degree of*

### DOCTOR OF PHILOSOPHY

by

**NAME OF THE RESEARCH SCHOLAR**

(Enrolment No. XXXXXXXX)

Under the Supervision of

Supervisor	Co-supervisor
Designation of the Supervisor	Designation of the Co-supervisor
Affiliation of the Supervisor	Affiliation of the Co-supervisor
Address of the Supervisor _____ -----	Address of the Co-supervisor _____ -----

Submitted to:

Faculty of \_\_\_\_\_

## INVERTIS UNIVERSITY

Invertis Village, Bareilly - Lucknow National Highway, NH-24, Bareilly,

Uttar Pradesh - 243123

MONTH - YEAR

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preparation).

5. Author 1, A.B.; Author 2, C. Title of Unpublished Work. *Abbreviated Journal Name* stage of publication (under review; accepted; in press).

6. Author 1, A.B. (University, City, State, Country); Author 2, C. (Institute, City, State, Country). Personal communication, Year.

☑ **Conference Proceedings:**

7. Author 1, A.B.; Author 2, C.D.; Author 3, E.F. Title of Presentation. In *Title of the Collected Work* (if available), Proceedings of the Name of the Conference, Location of Conference, Country, Date of Conference; Editor 1, Editor 2, Eds. (if available); Publisher: City, Country, Year (if available); Abstract Number (optional), Pagination (optional).

☑ **Thesis:**

8. Author 1, A.B. Title of Thesis. Level of Thesis, Degree-Granting University, Location of University, Date of Completion.

☑ **Websites:**

9. Title of Site. Available online: URL (accessed on Day Month Year).

**Papers published by the candidate**

**Note:**

Except title page the whole synopsis should be typed as follows:

- Font: Times New Roman
- Font Size: 14 for main headings (Bold and Upper Case), 12 for sub headings (Bold and Lower Case) and 12 for running text.
- Line spacing 1.5 and normal margins i.e. 1" all side
- All the images and tables should be numbered and tightly packed in the running text where it will be cited (if any).

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**INVERTIS UNIVERSITY, BAREILLY**

Allotment of Supervisor / co-supervisor to the Ph.D. Student

<b>1. Name of the Ph.D. Scholar</b> : .....	<b>Enrollment No.</b> .....
<b>Student's ID</b> : .....	<b>Minimum Duration</b> : 3 Years
<b>Degree Type</b> : Full Time / Off Campus	
<b>2. Subject</b> : .....	
<b>3. Proposed Research Topic</b> : .....	
<b>4. I wish to work for my Ph.D. Degree under the supervision of the following:</b> a. Name of the Supervisor: .....	
b. Name of the Co-supervisor : .....	
<b>Signature of Ph.D. Scholar</b>	
<b>5. I agree to guide Mr. / Ms. .... leading to a Ph.D. degree of Invertis University.</b>	
<b>Signature of the Supervisor</b>	<b>Signature of the Co-supervisor</b>
Affiliation : .....	.....
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.....	.....
Broad Area of .....	.....
Specialization .....	.....

The guide is approved.

Vice-Chancellor

Enclosures: CV of Ph. D. Supervisors / Guides and CV of Ph.D. scholar (if not approved earlier).



**INVERTIS UNIVERSITY, BAREILLY, U.P**  
**SIX MONTHLY PH.D PROGRESS REPORT**

**PART A: TO BE COMPLETED BY THE CANDIDATE (ALL ENTRIES MUST BE FILLED)**

Progress Report No. \_\_\_\_\_ Date of Presentation: \_\_\_\_\_

Subject: \_\_\_\_\_ Date of URDC: \_\_\_\_\_

Name of Candidate: \_\_\_\_\_ Enrollment No. \_\_\_\_\_

Research Topic \_\_\_\_\_

Research Place : \_\_\_\_\_

Supervisor 1 : \_\_\_\_\_

Supervisor 2 : \_\_\_\_\_

Ph.D. REREARCH PROGRESS REPORT (Attach Annexure for Detailed Report): \_\_\_\_\_

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References of research/review articles published from research work (attach reprints): \_\_\_\_\_

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Signature of Supervisor/Co-supervisor

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Signature of Student

*[Signature]* *Santosh*  
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## GUIDELINES FOR THESIS PREPARATION

This document, herein after referred to as **Specification guidelines Regarding the Preparation of Thesis**, specific requirements governing thesis writing including guidelines for structuring and content.

### 1. SUBMISSION OF THESIS

Required number of copies of the thesis and the abstracts are to be submitted to the Secretary URDC along with the checklist as per the details given below. Thesis will be submitted only after all other requirements has been completed successfully.

#### 1.1 Pre-Ph.D. Submission

One copy soft bound thesis (spiral) and one copy of thesis summary of about 5000 words required to be submitted fifteen days in advance of the submission of the thesis for Pre-submission viva.

#### 1.2 After Pre-PhD Submission

Upon intimation from PhD Coordinator office three softbound (spiral bound) copies of the thesis and summary should be submitted. In addition, a soft copy of the thesis, split chapter-wise, and Summary in PDF format should also be submitted along with the thesis.

#### 1.3 Before Oral presentation final PhD Thesis submission

Once thesis are evaluated by examiner/s, candidate need to submit final thesis with recommended changes. Five copies of the final thesis need to be submitted along with soft copy in PDF format in CD to be submitted for the Oral presentation.

### 2. SPECIFICATIONS FOR THESIS FORMAT

#### 2.1. Preparation of Manuscript and Copies

The thesis needs to be prepared using a standard text processing software and must be printed on both sides of the paper in black text (color for images, if necessary using a laser printer in Times New Roman with font size 12 pt. Text of the thesis must be in single column on each page. All copies of thesis must be clear, sharp and even, with uniform size and uniformly spaced characters, lines, paragraphs and margins on every page of good quality white paper of 75 gsm or more. Every chapter has to begin on a new page.

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## 2.2. Size and Margins:

- 2.2.1. The thesis must be printed only on A4 size white paper. The top and bottom margins should be 25 mm, whereas the left side margins of odd pages and right side margins of even pages should be 35 mm for both textual and non-textual (e.g., figures, tables) pages (if MS word is used "mirror margin" option can be adopted for this purpose).
- 2.2.2 Content should not extend beyond the bottom margin except for completing a footnote, last line of chapter/subdivision, or figure caption.
- 2.2.3 A sub-head at the bottom of the page should have at least two full lines of content below it. If the sub-head is too short to allow this, it should begin on the next page.
- 2.2.4 All tables and figures should conform to the same requirements as text. Color may be used for figures. If tables and figures are large, they may be reduced to the standard size (provided the reduced area is not less than 50% of the original) and/or folded just once to flush with the thesis margin. In figures, the tick marks on the axes of the graph and the symbols used in the graph should be distinct and bold enough even after the necessary reduction.
- 2.2.5 After the thesis is recommended by the nominated examiners for the award of Ph.D. degree, the student shall submit five copies of the final thesis in hard bound form, in which all the recommendations given by the examiner should be incorporated.
- 2.2.6 Students shall submit the final thesis in soft form in a CD for storage and archival on "Shodhganga" of UGC.

## 2.3. Page Numbering

- 2.3.1. Beginning with the first page of the text in the thesis (chapter 1), all pages should be numbered consecutively and consistently in Arabic numerals through the appendices. On the first page of each chapter the page numbers need not be printed.
- 2.3.2. Page numbers prior to Chapter 1 should be in lower case Roman numerals. The title page is considered to be page (i) but the number is not printed.

## 2.4. Multi-Volume Thesis

A thesis may be in two or more volumes, if required. The volume separation should come at the end(s) of major division(s). The preliminary pages prior to Chapter 1 are contained only in Volume I, except the title page, which should be present on all the volumes.

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## 2.5. Line Spacing

The general text of the manuscript should be in 1.5 line spacing. Long tables, quotations, footnotes, multi-line captions, references and bibliographic entries should be in single spacing.

## 2.6. Tables, Figures and Equations

2.6.1 All Tables (tabulated data) and Figures (charts, graphs, maps, images, diagrams, etc.) should be prepared, wherever possible, on the same paper as used to type the text and conform to the specifications outlined earlier. They should be inserted as close to the textual reference as possible.

2.6.2 Tables, Figures and Equations should be numbered sequentially Chapter-wise using Arabic numerals. They are referred to in the body of the text capitalizing the first letter of the word and number, as for instance, Table 5.3, Figure 3.11, Equation (4.16), etc. where the first number before decimal indicates the Chapter.

2.6.3 If Tables and Figures are of only half a page or less, they may appear on the same page as text but separated above and below by triple line spacing. Font size for text of the Table and Figure captions should be the same as for the general text.

2.6.4 Good quality Line Drawings/Figures must be drawn using standard software that provides vector rather than bit-map graphics. Figures must be clear in print version with respect to legends, symbols and tick marks etc.

2.6.5 Images, Photographs, etc. must be scanned in resolution exceeding 200 dpi with 256 grayscales for the monochrome images and with pixel size at least 24 bit per pixel for the color images.

## 2.7. Binding

The student should submit the copies of the thesis in Hard Bound form with cover for Ph.D. The front cover of the bound copy should be the same as the title page of the thesis. The front cover should have printing on the spine to include the author's name, abbreviated thesis title (optional), degree, department, and the year. Colour of the title Page is saffron and content will be in Brown.

*Dr. Jain*  
*Dr. Kishor*  
*Dr. Anil*  
*Dr. Rakesh*  
*Dr. Santosh*  
16/10/19



**3.3. The Text of the Thesis:** The text of the thesis contains the following:

- Introduction
- The Body of the Thesis
- Summary and Conclusion

**3.3.1. Introduction:** Introduction forms the first Chapter or its first major division. In either case, it should contain a brief statement of the problem investigated. It should outline the objectives and scope, general character of the research and a review of the investigations already carried out in the field the thesis.

**3.3.2. The body of Thesis:** This is the substance of the thesis inclusive of all divisions, subdivisions, Tables, Figures, etc.

**3.3.3. Summary and conclusions:** This forms the last Chapter of the thesis. A brief summary of the work followed by the salient findings are given here. A further subdivision titled "Scope for Further Work" may follow.

**3.4. Reference and Bibliography**

The list of references should appear as a consolidated list with references listed either alphabetically or sequentially as they appear in the text of the thesis under the subheading "References". If pertinent works have been consulted but not specifically cited, they should be listed under the subheading "Bibliography". Spacing and font size should be consistent inside a single reference, and there should be one and half spacing between two different references.

Formats to be used for various categories of referencing are given below:

- Referencing an article in a scientific journal:** The suggested format should contain authors, title of the paper, name of journal, volume number, page numbers and year.
- Referencing an article published in proceedings of a conference:** The suggested format should contain authors, title of the paper, name of proceedings, publisher's details, page numbers and year.
- Referencing an article published in a book:** The suggested format should contain authors, the title of the book, editors, publishers if any, year, page number of the article in the book being referred to.
- Referencing a thesis:** The suggested format should contain author, the title of

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thesis, where thesis was submitted or awarded, year.

A few examples of formats of references are given below and the student should be consistent in following the style.

### **Journals**

H.E. Exner, "Physical and Chemical Nature of Cemented Carbides," *International Metals Review*, 1979, v. 24, pp. 149-173. OR 24(1979)149-173 [ if referencing is done on the name of first author in the body of the Thesis, then these references should appear in alphabetical order]

G.E. Spriggs, "The Importance of Atmosphere Control in Hard Metal Production," *Powder Metallurgy*, 1970, v. 13, n. 26, pp. 369-393. OR (26),13(1970)369-393  
web references in specific cases are permitted.

### **Conference Proceedings**

H.F. Fischmeister, "Development and Present Status of the Science and Technology of Hard Materials," *Science of Hard Materials*, R.K. Viswanadham, D.J. Rowcliffe, and J. Gurland (eds.), Plenum Press, New York, NY, USA, 1982, pp. 1-45.

W.H. Baek, M.H. Hong, S. Lee, and D.T. Chung, "A Study on the Shear Localization Behavior of Tungsten Heavy Alloy," *Tungsten and Refractory Metals 2*, A. Bose and R.J. Dowding (eds.), Metal Powder Industries Federation, Princeton, NJ, USA, 1995, pp. 463-471.

### **Books**

R.M. German, *Powder Injection Molding*, Metal Powder Industries Federation, Princeton, NJ, USA, 1990.

### **Thesis**

J.L. Johnson, "Densification, Microstructural Evolution, and Thermal Properties of Liquid Phase Sintered Composites," Ph.D. Thesis, The Pennsylvania State University, University Park, PA, USA, 1994.

### **Technical Reports**

E.G. Zukas, P.S.Z. Rogers, and R.S. Rogers, "Experimental Evidence for Spheroid Growth Mechanisms in the Liquid Phase Sintered Tungsten Based Composites," Informal Report: Los Alamos Scientific laboratory, USA, 1976, pp. 1-35.

### **Patents**

V. Oenning and I. S. R. Clark, U. S. Patent No. 4988386, 1991.

Handwritten signatures and dates in blue ink at the bottom of the page. From left to right: a signature, "Santosh", "16/10/19", "Paul", "16/10/19", and another signature.



**3.5. Sequencing the references:** References should be appropriately cited in the text in square brackets either by continuous numbering in sequence starting from 1 or by using the first author's name. When sequencing is used for referencing references with continuous numbers, only the first and the last referenced numbers should appear in the square bracket.

### 3.6. Appendices

3.6.1. Supplementary illustrative materials, original data, and quotations too lengthy for inclusion in the text or which is not immediately essential to an understanding of the subject can be presented in Appendix or Appendices.

3.6.2. 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 lists of tables and figures, respectively. They may be numbered as Fig. A.11 for Appendix – A or Table B.15 for a Table in Appendix - B.

3.6.3. List of publications that arose out of the Thesis work.

**4. CONCLUDING REMARKS:** Guidelines are only the basic requirements for preparing the thesis. Over and above the aforementioned points, a thesis should be reader-friendly in both its appearance and presentation. Several aspects of thesis preparation, particularly style of writing and presentation, have not been discussed in great detail. Presentation & style of writing should be impersonal voice (i.e. to be in third person).

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[Signature]  
Paul  
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FORMAT FOR THE OUTER COVER AND INNER TITLE PAGE OF THE THESIS

"TITLE OF THE THESIS"



*Thesis submitted in partial fulfillment for the Award of Degree  
Doctor of Philosophy*

*in*

*"Subject Name"*

**by**

*"NAME OF THE STUDENT"*

*Enrolment No. 000000*

**Under the Supervision of**

**Supervisor**

Designation of the Supervisor

Affiliation of the Supervisor

Address of the Supervisor \_\_\_\_\_  
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**Co-supervisor**

Designation of the Co-supervisor

Affiliation of the Co-supervisor

Address of the Co-supervisor \_\_\_\_\_  
-----

Submitted to:

**Faculty of** \_\_\_\_\_

**INVERTIS UNIVERSITY**

Invertis Village, Bareilly - Lucknow National Highway, NH-24, Bareilly,

Uttar Pradesh - 243123

MONTH - YEAR

*Ms. Anshu*  
*Anshu*

*[Signature]*

*[Signature]*

*[Signature]*  
*[Signature]*

*Santosh*  
*16/10/19*

*16/10/19*

**FOR SUBMISSION OF PH.D. THESIS  
PERSONAL DETAILS**

Name of Student : \_\_\_\_\_

Enrolment No. : \_\_\_\_\_ Date of URDC : \_\_\_\_\_

Category of Registration : Full Time / Off Campus \_\_\_\_\_

Completed the minimum duration of as per norms: 5 Semesters / 6 Semesters / \_\_\_ Semesters

(Pl. tick) Supervisor /Co-Supervisor \_\_\_\_\_

Faculty of \_\_\_\_\_

Title of Thesis \_\_\_\_\_

**ATTENTION**

**NOTE :** Before submission of Thesis by a student, the following be verified & completed by the Department/School concerned.

- |  |        |
|--|--------|
| Minimum Residence Period completed : 5 Sem./6 Sem./___ Sem.  | YES/NO |
| Course Credit requirements fulfilled   | YES/NO |
| Thesis Credits requirements fulfilled  | YES/NO |
| Passed the Comprehensive Examination   | YES/NO |
| FIVE copies of the thesis duly forwarded by the Supervisor & HoD<br>(Roll No. of the candidate should be mentioned on each copy) | YES/NO |
| At least One Research Publications in reputed Journals (Published/accepted)  | YES/NO |
| Two conferences attended during Ph.D. tenure   | YES/NO |
| Two copies of SUMMARY of the thesis in about 5000 words  | YES/NO |

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*[Signature]*

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*Santosh*  
*16/10/19*

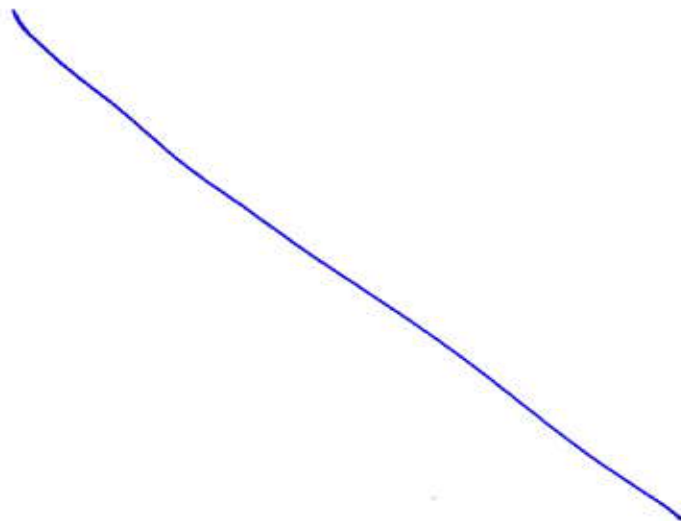
*16/10/19*

- | ONE CD containing SUMMARY YES/NO
- | ONE CD containing Thesis with Chapter wise pdf files YES/NO
- | Undertaking from the student duly forwarded by the Supervisor :
  - To the effect that the Thesis has been prepared without resorting to plagiarism YES/NO
  - To the effect that the Thesis has not been submitted elsewhere for a Degree YES/NO
  - To the effect that Sources used have been cited appropriately YES/NO
- | Certificate from the Supervisor concerned : YES/NO
- | To the effect that Specifications regarding thesis format have been followed YES/NO

Name and Signature  
(Ph.D. Scholar)

Name and Signature  
Supervisor

Name and Signature  
Co-supervisor



*Ms. Anil K. Verma*  
*Anil*

*[Signature]*

*[Signature]*

*[Signature]*  
*16/10/19*

*Santosh*  
*16/10/19*



**CERTIFICATE**

This is to certify that the thesis entitled "....."  
....." submitted by ..... for the award of Degree of Doctor  
of Philosophy in the Faculty of ..... of Invertis University, Bareilly is a record of  
authentic work carried out by him / her under my / our supervision.

The matter embodied in this thesis is the original work of the candidate and has not been  
submitted for the award of any other Degree or diploma.

It is further certified that he/ she has worked with me/ us for the required period in the Faculty  
of ....., Invertis University, Bareilly.

**Supervisor**

Designation of the Supervisor

Affiliation of the Supervisor

**Co-Supervisor**

Designation of the Co-supervisor

Affiliation of the Co-supervisor

*ms. Anil Kumar*  
*Anil Kumar*

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*Anil Kumar*

*Anil Kumar*  
*Anil Kumar*  
16/10/19

*Santosh*  
16/10/19

**Report of the Thesis Examiner for the award of Ph.D. Degree**

1. Name of the Student : .....

2. Title of the Ph.D. thesis : .....

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3. Name of the Department : .....

4. Date of Submission : .....

5. Revised Submission (if any) : .....

6. Recommendation of the Examiner: .....

.....

.....

.....

If required use separate sheets for detailed report/suggestions/recommendations.  
Detailed remarks corresponding to the recommendations as per options A, B, C, or D have been given in the following pages.  
(Tick any one of the four options and strike out the remaining three)

**Signature of Examiner**

*Dr. Anil Kumar*  
*[Signature]*  
*[Signature]*  
*[Signature]*  
*Santosh*  
*16/10/19*

## EXAMINER'S REPORT

(Please give your report as per your recommendation. Use additional sheets, if necessary).

**'A'**

I recommend the award of Ph.D. degree to the candidate. My comments are as follows:

.....  
.....

**'B'**

I recommend the award of Ph.D. degree to the candidate subject to satisfactory clarification of the queries / comments during his / her viva-voce exam:

.....  
.....

**'C'**

I recommend that the candidate be allowed to resubmit his thesis in a revised form in the light of the following suggestions.

.....  
.....

**'D'**

I recommend that the thesis may not be accepted for award of Ph.D. degree to the candidate for the following reasons.

.....  
.....

Signature of Examiner

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Prakash  
Amit  
Prakash  
Amit  
Santosh  
16/10/17  
16/10/14



**Remuneration / Evaluation Bill (for External Examiner)**

Name of Examination : .....

Student Name : .....

Name of the Examiner (*in capital letter*): .....

Designation & Address : .....

.....

Telephone No. / Mobile No. : .....

Account Number : .....

Bank Name : .....

IFSC Code : .....

**Particulars of Examination** :

Remuneration / Evolution of	No.	Rate	Amount	Remarks
i. Ph.D. thesis evaluation				I hereby certify that I have completed the work in time which was assigned to me and there was no delay.
ii. Viva Voce Examine				
(A). Total Amount of Remuneration / Evaluation Rs. ....				Signature of Examiner

Payments of other bills, such as T.A., or Other bills, if so (B)..... Rs. ....

Any other bill, if applicable (bill/s attached) (C).....Rs. ....

Total of (A+B+C) = Rs. ....

Net Payment claimed Rs. (in words) . .....

The examiner has completed the work assigned to him/her. The above particulars/ statements are correct as per assignment of work /as per records of the examination and hence recommended for payment.

Rs.....are recommended for payment to the examiner.

*Handwritten signature*  
Prakash

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16/10/19

Signature  
(Secretary URDC)

*Handwritten signature*  
Santosh  
16/10/19