

# **Ordinances & Regulations**

for

**The Degree of Doctor of Philosophy**

**(Updated upto 14<sup>th</sup> March 2007, Senate's 10<sup>th</sup> meeting)**

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Academic Section

**MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY**

Jaipur 302017



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## ORDINANCES & REGULATIONS FOR THE Ph.D. PROGRAMME

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## ORDINANCES & REGULATIONS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

### PREAMBLE

Malaviya National Institute of Technology (MNIT) Jaipur offers research programmes leading to the award of Ph.D. degree. The award of Ph.D. degree is in recognition of high academic achievements, independent research and application of knowledge to the solution of technical and scientific problems in Science, Technology, Management, Architecture and Humanities & Social Science. Promotion to creativity and productivity is the basic concept underlying the research work.

The academic programme leading to the Ph.D. degree is broad-based and involves a minimum course credit requirement and a research thesis. The Institute also encourages research in interdisciplinary areas through a system of joint supervision and provides excellent opportunities for such programmes. The Institute undertakes sponsored research and development projects from industries and other organizations of the public as well as private sector.

The degree of Doctor of Philosophy shall be abbreviated as Ph.D. The degree of Doctor of Philosophy is granted for research work in areas recognized by the academic departments of the Institute subject to the conditions and regulations contained hereinafter.

The research work shall be an original work characterized either by the discovery of facts, or by a fresh approach towards the interpretation and application of facts, or development of equipment making a distinct advancement in instrument technology. It shall evince the candidate's capacity for critical examination and sound judgment and shall represent original contribution to the existing knowledge.

The degree of Doctor of Philosophy (Ph.D.) of the Malaviya National Institute of Technology Jaipur shall be conferred on a candidate who fulfills all the requirements specified in the Ordinances and Regulations. The degree of Doctor of Philosophy (Ph.D.) will be awarded in the discipline of the department in which the candidate is registered.

## ORDINANCES

### O.1 DEFINITIONS

- (i) **"Applicant"** shall mean an individual who applies for admission to the Ph.D. programme of the Malaviya National Institute of Technology Jaipur on a prescribed Application Form.
- (ii) **"Candidate"** shall mean a person registered for the Ph.D. Degree and who has successfully completed the course requirement, the comprehensive examination and submitted an approved research plan; as per **R.11** of the Regulations.
- (iii) **"Caretaker Supervisor"** shall mean a member of the academic staff appointed to look after the candidate's research interests in the absence of the Supervisor and after the submission of thesis.
- (iv) **"Course Advisor"** shall mean a faculty member nominated by the Department to chalk out the programme of study of a student registered for the Ph.D. and to advise him on the courses to be taken by him. If a Supervisor(s) has already been appointed, he/she shall be the Course Advisor for that student.
- (v) **"Course Work"** shall mean courses of study prescribed by the Department through the Course Advisor to be undertaken by a student registered for the Ph.D. Degree.
- (vi) **"Dean, AA"** shall mean the Dean, Academic Affairs.
- (vii) **"Degree"** shall mean the Degree of Doctor of Philosophy (Ph.D.) of the Malaviya National Institute of Technology Jaipur.
- (viii) **"DFB"** shall mean Department Faculty Board of the respective Department.
- (ix) **"DGC"** shall mean Doctoral Guidance Committee for the student/candidate in the Department.
- (x) **"DRC"** shall mean Doctoral Research Committee of the Department.
- (xi) **"Educational Institution"** shall mean those colleges which offer Bachelors Degrees or higher.
- (xii) **"Full time Research Student/Candidate"** shall mean a person registered for the Ph.D. Degree devoting full time for completing the degree requirements.
- (xiii) **"Institute"** shall mean the Malaviya National Institute of Technology Jaipur.
- (xiv) **"Institute Student/Candidate"** shall mean a person registered for the Institute Ph.D. Degree as a full time research student/candidate.
- (xv) **"Joint Supervisor"** shall mean an additional supervisor approved by the Dean AA on the recommendation of Department to help the supervisor in the accomplishment of the research work of the student/candidate, as per R.8 of the Regulations. An external supervisor is a joint supervisor external to MNIT Jaipur.
- (xvi) **"Minimum Registration Period"** shall mean the minimum period for which a candidate must be registered, including the time spent as student before becoming a candidate, prior to submission of the thesis.

- (xvii) **"Part time Research Student/Candidate"** shall mean a person who is registered for the Ph.D. degree and will devote part of his/her time towards this pursuit and devote part of his/her time towards the discharge of his/her official obligations.
- (xviii) **"PG Board"** shall mean the Board of Postgraduate Studies of the Malaviya National Institute of Technology Jaipur as defined in the Senate Manual.
- (xix) **"Registration Period"** shall mean the length of time span commencing with the date of initial registration at the Institute till the completion of the programme.
- (xx) **"Residency"** shall mean the minimum period for which a student/candidate must attend the Institute on full time basis.
- (xxi) **"Sponsored Research Student/Candidate"** shall mean a full time research student/candidate except that he/she receives complete financial support from the sponsoring organization/his/her employer.
- (xxii) **"Student"** shall mean a person registered for the Ph.D. degree prior to becoming a candidate.
- (xxiii) **"Supervisor"** shall mean a member of the academic staff of the Institute approved by PG board on the recommendation of Department to guide/supervise the research/academic work of the student/candidate.

**Note:** 'He' & 'She' imply 'he' 'she' and 'his' 'her' respectively.

- O.2.1** The minimum qualifications for admission to the Ph.D. programme shall be
- (i) A Master's degree in Engineering/Technology/Science/Management/Architecture/Humanities and Social Sciences or any other equivalent qualification recognized by the Institute.
  - (ii) A Bachelor's degree in Engineering/Technology or any other equivalent qualification recognized by the Institute. The applicant must also have an excellent academic attainment in the relevant discipline.  
The minimum requirement of cumulative grade point average (CGPA) or percent marks in each category are laid down in the Regulation **(R.1)**.
- O.2.2** A candidate registered for the Ph.D. programme shall be required to satisfy a minimum registration period requirement, as laid down in the Regulations **(Refer R.13)**.
- O.2.3** A student/candidate shall be required to earn prescribed credits through courses and/or carry out his/her research work at the Institute, under the guidance of approved supervisor(s). In special circumstances, a full time student/candidate may be permitted by the PG Board on the recommendation of DGC/DRC to carry out part of his/her research outside the Institute, within India or abroad with no financial liability on the part of the institute.
- O.2.4** A candidate will be required to complete all requirements for the award of the degree within a period specified in the Regulations.
- O.2.5** The date of initial registration shall normally be the date on which the student formally registers for the first time in the beginning of a Semester for the Ph.D. Programme, which shall also be the date of his/her joining the programme for all intents and purposes. However, in exceptional cases, the date of registration may be advanced by a maximum of six calendar months by the PG Board if it is convinced that the student/candidate has spent adequate amount of time on relevant research earlier.
- O.2.6** For a student to become a candidate of the degree, he/she shall have to satisfy the requirements laid down in the Regulations, and be accepted by the PG Board on the recommendation of the DGC **(Refer R.11)**.
- O.2.7**
- (i) A full time candidate may be allowed by PG Board to convert his/her registration into part time registration on the recommendation of the DGC/DRC of the concerned department - only after completion of at least 2 years if the candidate is having M. Tech. qualification, and 3 years if the candidate is having non-M. Tech. qualification from initial registration or after submission of synopsis.
  - (ii) If full time Ph.D. scholars get employed in the Sponsored Projects at the Institute, they can be permitted to convert their registration from full time to part time after one year or after completion of the course work, whichever is later. Such conversion will be permissible only if he or she works in the Projects at the Institute, not for employment outside the institute.
- O.2.8** If a part-time Ph.D. registrant applies for conversion of his/her registration into full time registration, the Dean, AA on the recommendation of the DGC/DRC may allow him for the same with or without assistantship/scholarship based on the individual merits of each case provided:
- (a) the student had already completed the comprehensive examination and
  - (b) on the date of application the student has satisfied all conditions prescribed for admission as a full time student.

- O.2.9** If a student/candidate withdraws from his/her Ph.D. programme or his/her registration is terminated, his/her student/candidate status shall cease. If such a candidate is readmitted, he/she may be given weightage to the credits acquired during the previous registration on the recommendation of the DGC/DRC except in the case of termination on disciplinary grounds.
- O.2.10** The award of the Ph.D. degree to an eligible candidate shall be made in accordance with the Regulations of the Institute.

## REGULATIONS

The following regulations shall apply to all categories of students/candidates pursuing course of study and research leading to the Ph.D. degree:

### R.1 ADMISSION ELIGIBILITY

#### R.1.1 Full-Time Scholars

An applicant possessing any one of the following qualifications shall be eligible to apply for admission to a Ph.D. programme of the Institute.

- (a) Masters degree in Engineering/Technology/Sciences/Humanities and Social Sciences/Management/Architecture or equivalent with a minimum cumulative grade point average (CGPA) of 6.75 on a 10 point scale or equivalent as determined by the Institutes wherever letter grades are awarded or 60% marks in aggregate where marks are awarded.
- (b) In exceptional cases, applicants with B.Tech. Degree or equivalent in respective discipline with excellent academic record with a minimum cumulative grade point average (CGPA) of 6.75 on a 10 point scale or equivalent as determined by the Institutes wherever letter grades are awarded or 60% marks in aggregate where marks are awarded may be considered eligible for admission.
- (c) If an applicant has been awarded research fellowship by any National / International funding agency such as UGC/CSIR/AICTE etc.
- (d) An employee sponsored by his/her employer may be considered for admission as a sponsored full time Scholar provided he/she possesses minimum entry qualification in the relevant discipline and has a minimum of 2 years experience and is treated by the employer as on duty with normal salary and allowances and is relieved for the period of study. In such cases he/she should produce sponsorship certificate from the parent organization along with the application for admission to the programme.

**R.1.2** An employee of a Public Sector Undertaking, a Government Department, a Research/Development Organization, a private industry or an Educational Institution, with a minimum relevant working experience of two years may be considered for admission as a sponsored part-time Research Scholar. In case of private industry the same should be approved by the PG Board. Sponsored applicants will be eligible for admission provided that they are treated by their employers as on duty with their normal salary and allowances and are fully relieved for the period of study. **Part time scholars** will be eligible provided that:

- (a) The applicant must possess the minimum entry qualifications in the relevant discipline for the admission to Ph.D. programme as given in R.1.1;
- (b) The candidate must prove to the satisfaction of the Departmental Research Committee (DRC)/PG Board that his/her official duties permit him to devote sufficient time for research. The candidate must submit a "No objection certificate" from his/her Head of the Institution/organization along with the application.
- (c) Facilities for pursuing research are available at the applicant's parent organization/ place of work in the chosen field of research. Such candidate, after completion of comprehensive examination may carry out research work in his/her parent organization with an external supervisor from his/her parent organization apart from an internal Institute supervisor. Such candidate will be treated as external candidate.

- (d) He/she will be required to reside at the Institute for a period not less than a semester during his/her registration for the degree. If the course credits recommended by the Dept. are not completed within 6 months, the residency requirement for part time Ph.D. students working in the organization outside Jaipur may be more than 6 months till he/she completes his/her credits requirement. (This condition of minimum residence will be automatically waived off for candidates who are working in Jaipur or in organizations/institutions located within a distance of 75 km from the Institute).
- (e) College teachers not fulfilling conditions in Para R. 1.2 (c), should satisfy following.
- (i) External supervisor is optional. If required, external supervisor may be appointed as suggested by supervisor, and recommended by DRC.
  - (ii) Candidates should be available to the supervisor during weekends, holidays and vacations. This requirement is in addition to R. 1.2 (d).
  - (iii) Hostel accommodation will be provided as per availability.
- (f) No self-sponsored candidate will be admitted to part-time Ph.D. programme.

**R.1.3** Permanent academic staff of the Institute with **one year** experience can be considered for admission to Ph.D. programme on part-time basis provided he/she has been given administrative clearance by the Director of the Institute. Such applicants need not clear GATE or equivalent national examination even if they do not have a M. Tech. Degree.

**R.1.4** A member of the non-academic staff of the Institute who satisfied eligibility qualifications may be considered for admission to Ph.D. programme on part time basis provided he/she has been given administrative clearance by the Director of the Institute and possess minimum **two years** of relevant working experience.

**R.1.5** Temporary and contract academic staff of the Institute as well as staff of schemes/ sponsored projects may be given administrative clearance by the Director, to seek admission to Ph.D. programme on part-time basis at any time after joining service subject to recommendations of concerned Department for Institute employees and Principal Investigator in case of scheme/sponsored project employees.

## **R.2 RESERVATION/RELAXATION**

**R.2.1** 15% (Fifteen percent) seats shall be reserved for Scheduled Caste applicants and 7.5% (Seven point Five percent) for Scheduled Tribe applicants in each of the categories of the Research Scholars. A total of 3% (Three percent) seats over and above the sanctioned strength will be reserved for physically handicapped applicants in all the Ph.D. programmes of the Institute put together.

**R.2.2** For candidates belonging to SC/ST/PH (Physically Handicapped) category, the minimum requirement of percentage of marks may be relaxed to 55% in aggregate or CGPA to 6.25 on a 10-point scale or equivalent as determined by the Institutes, where letter grade are awarded. The reserve category candidates must submit the required certificate from the competent authority.

Reservation in admission to Ph.D. programme for SC/ST/OBC/PH and other categories shall be as per the Government of India norms.

## **R.3 CATEGORIES**

The applicant for admission to the Ph.D. programme shall be classified under any one of the following categories, which will be decided and recommended by the DGC/DRC of the concerned department.

**R.3.1 Full-time Research Students/ Candidates:****(a) Institute Research Students/Candidates**

Institute Research Students/ Candidates getting Institutional fellowship.

**(b) Govt./Semi Govt. Fellowship Awardees (QIP, CSIR, UGC, DAE, DST, DBT, AICTE etc.)**

These research scholars receive their fellowship and contingency grants from supporting organizations such as Council for Scientific and Industrial Research (CSIR), University Grants Commission (UGC), MHRD-Quality Improvement Programme (QIP), Department of Atomic Energy (DAE), Department of Science and Technology (DST), Department of Biotechnology (DBT), Indian Council of Medical Research (ICMR), DRDO, AICTE and other similar organizations.

**(c) Sponsored Students/ Candidates**

These students/candidates are employees of a Public Sector Undertaking, a Government Department, a Research & Development organization, or a private industry (approved by the concerned DFB/PG Board on the recommendation of DRC), or an Educational Institution, or be a Defence Sponsored Officer.

**(d) Self financed (Indian/Foreign)/ Study Leave**

(i) **Indian:** This category refers to scholars admitted along with the regular research students through the usual admission procedure but they would not get any financial support from the Institute.

(ii) **Foreign:** These students are admitted through Embassy of the respective Govt. after getting approval from the Ministry of External affairs and no objection certificate from the Ministry of Human Resources Development, Department of Education, Govt. of India or admitted under an MOU.

(iii) **Study Leave:** This category refers to persons who are relieved from governmental or educational institutions on study leave for a period of not less than three years for pursuing Ph.D. programme.

**(e) ICCR Awardees (Foreign Students)**

These students are sponsored by their Governments and awarded scholarship by ICCR, Govt. of India. They should apply for admission through Indian Embassy in their country.

**R.3.2 Part time Research Student/ Candidate:****(a) Institute Faculty/ Staff**

This category refers to scholars who are permanent employees of the Institute with one/two year(s) of service experience (**Refer R.1.3 & R.1.4**). They are expected to work for their Ph.D. programme after fulfilling their normal duties. A faculty member who has opted for supervisor(s) outside their department shall have an option to register in either the main supervisor's department or their own department subject to the recommendation of his/her supervisor(s).

**(b) Project Staff**

This category refers to scholars who are working on various Projects undertaken by the Institute. They are expected to work for their Ph.D. Programme after fulfilling their normal duties (**Refer R.1.5**).

**(c) External Candidates (Sponsored)**

This category refers to scholars, after completion of comprehensive examination- the DGC/DRC may allow the scholar to register for Ph.D. in joint supervision from the Institute (internal) and parent organization (External) where he/she will be doing the research work. They shall produce sponsorship certificate from the parent organization along with the application for admission.

**(d) Scholars from Academic Institutions/Public Sector Undertaking/ Government Department/Research & Development Organization/private industry etc.**

This category refers to scholars belonging to Academic Institutions/ Public Sector Undertaking/ Government Department /Research & Development Organization/ private industry etc. (as stipulated in R.1.2).

**R.4 SHORT LISTING**

- (a) The short-listing of applications for the purpose of admission will be done by the DRC of the concerned department.
- (b) If considered necessary, the DRC of the concerned department may set the short listing criteria higher than the minimum eligibility defined above and take prior approval of Dean, AA before admission/selection process is initiated.

**R.5 FINANCIAL ASSISTANCE****R.5.1 Institute Assistantship**

Financial assistance can be considered for full time scholars on the basis of merit. Duration of the assistantship will normally be up to 4 years, but can be extended for another year under special circumstances on case-to-case basis. The Dean, AA/PG Board shall recommend regulations for monitoring the progress and continuation of assistantship. A student receiving assistantship will be required to devote at least eight hours per week towards the departmental or Institutional work assigned to him/her.

If assistantship from the Institute is not available, students can be admitted on self-finance basis. It is to be noted that admission to the programme and award of fellowship are not linked. Admission to any programme does not guarantee the award of fellowship. Those who are not awarded fellowship can continue with the programmes as a self-financing student.

The assistantship for full time research scholars will be as under:

| Duration  | Amount of Assistantship                        |  |
|---|--|--|
|   | With M. Tech./M.E. or equivalent qualification | With B. Tech./B. E./M. Sc. or equivalent qualification |
| For first two years                                       | Rs.9500/- per month                            | Rs.8000/- per month                                    |
| For next 2 (3) years after reviewing the progress of work | Rs.10000/- per month                           | Rs.9000/- per month                                    |

Those receiving fellowships from sponsored projects or from any other funding agencies such as the Council of Scientific & Industrial Research (CSIR), Department of Atomic Energy (DAE), University Grants Commission, etc. will not be eligible for the Institute assistantship.

Contingency grant will be admissible to the full time research scholars who have been awarded the Institute assistantship. The contingency will be operated through supervisor. However, the amount of contingency will be decided by the PG board and approved by Dean AA/Director.

**R.5.2** The faculty of academic Institutes/Colleges may be considered for the award of Institute assistantship for pursuing Ph.D. Programme at MNIT, Jaipur subject to the following terms and conditions:

- (i) The concerned faculty members from academic Institutes must be sponsored by their respective Institutions to pursue the Ph.D. Programme at MNIT, Jaipur.
- (ii) The sponsored faculty must be eligible for Institute Assistantship, otherwise.
- (iii) The number of assistantships should be within the sanctioned limit of a particular Department.
- (iv) The DRC should examine each case on merit before making recommendations to the Dean, AA for award of Institute Assistantship.
- (v) On admission to the Ph.D. Programme they will be entitled to assistantship, as applicable to other regular Institute scholars if they are not getting salary from their Colleges/Institutes.

**R.5.3 Tuition Fee Waiver to Ph.D. Scholars**

- (a) Following categories of research scholars are eligible for 50% (Fifty percent) tuition fee waivers:
  - (i) The full-time Institute research scholars who obtain scholarship through MHRD, CSIR, UGC and AICTE, including QIP.
  - (ii) The Institute project-staff pursuing Ph.D. at the Institute including those getting assistantship from projects.
  - (iii) Research scholars admitted to Ph.D. programme from DST, CSIR and other Government Organizations /Institutions.
- (b) The Institute faculty/staff pursuing Ph.D. at the Institute will have to pay only the tuition fee. The tuition fee waiver is 75% (Seventy five percent). On successful completion of Ph.D. programme, 25% (Twenty five percent) fee deposited by a faculty/staff member of the Institute shall also be reimbursed.

**R.6 REGISTRATION**

**R.6.1** Every student/candidate will be required to renew his/her registration every semester till the submission of the thesis. The renewal of registration every semester shall be subjected to the completion of the specified number of credits/courses and/or satisfactory progress of his/her research work certified by the supervisor and as recommended by the DGC/DRC.

**R.6.2** A student/candidate who fails to register or renew his/her registration as the case may be will cease to be a student/candidate with immediate effect.

**R.7 COURSE WORK/CREDIT REQUIREMENTS**

**R.7.1** All students of Ph.D. programme are required to earn course-credits as prescribed by the supervisor(s) and approved by the DGC/DRC. All students shall complete credit requirements through course work as specified in **Table 1**.

**Table 1: COURSE CREDIT REQUIREMENTS**

| S. No. | Candidate Having Qualification  | Credit Requirements |
|--------|---|---------------------|
| 1      | M. Tech. or Equivalent;<br>OR M.B.A. with B. Tech. (for management only); | 08 credits          |
| 2      | B.Tech./M. Sc./MCA/MBA/M.A. or equivalent                                 | 16 Credits          |

- R.7.2** In addition, a candidate shall be required to audit a course on "Communication Skills". However, a student, on recommendations of his/her supervisor, can be exempted by the DGC/DRC from the requirement of auditing the Communication Skills course if it is convinced that the student already has adequate knowledge/exposure of Communication Skills. The DRC is the terminal authority to grant this exemption and a communication in this regard from the Chairman, DRC would be treated as sufficient by the academic section to record the exemption.
- R.7.3** It is expected that full time and part time students will complete their course credit requirements in two and three semesters respectively. It is further expected that they will qualify the comprehensive examination (**R.10**) soon after completing the course/credit requirements but in no case beyond the time as stipulated in **R.10.5**.
- R.7.4** Each student will be required to take course work as prescribed by the Supervisor(s) and approved by the DGC/DRC to complete the credit requirements as given in **R.7.1**. The courses shall be identified at the beginning of the first semester.

**R.7.5 Pattern of Courses and Credits**

The courses offered for the Ph.D. Programmes may be Lecture Courses, Laboratory Courses, Design Courses, Self-Study Courses and Minor Project(s).

- (a) The credits for all the available courses are indicated in the Courses of Study Bulletin.
- (b) Students registered for Ph. D programmes in departments not offering/running Postgraduate programmes or relevant courses are not available as per his/her research area, shall be allowed to complete the course/credit requirements, through one of the following methods on the recommendation of supervisor and approved by DGC:
- (i) Relevant courses at pre Ph.D./M. Tech. level available outside the department in the Institute,
  - (ii) Self-study courses,
  - (iii) Relevant Final-year U.G. courses.
- (c) Self-study Courses shall satisfy the following conditions:
- (i) A self-study course should be preferably outside the courses listed in the Courses of Study.
  - (ii) A course listed in Courses of Study but not offered in a semester may be offered as a self-study course in that semester.
  - (iii) A course already running in a semester shall not be offered as a self-study course.
  - (iv) The DGC shall examine such proposals for self-study courses along with the course contents, textbooks, mode of assessment and name(s) of the instructor(s) and shall intimate to Dean, AA.
  - (v) All self-study courses shall carry a maximum of four credits.
  - (vi) A student shall not take more than one self-study course per semester and not more than two during the entire Ph.D. programme.
- (d) Minor project(s) shall satisfy the following conditions:
- (i) Each minor project shall carry four credits.
  - (ii) The topic/area, project-coordinator (if supervisor is not willing to act as project coordinator), and panel of examiners shall be approved by the DGC/DRC on the recommendation of the supervisor. The panel of examiner would consist of (i) supervisor and (ii) project coordinator/one faculty member.

**R.7.6** The minimum CGPA requirement shall be 7.50 on a 10-point scale for admission to the candidacy of Ph.D. degree. If the CGPA of any student is below 7.00 at the end of any semester, his/her registration will be terminated with immediate effect. However, if his/her CGPA is above 7.00 but less than 7.50, he/she may be asked to take more courses in order to enhance his/her CGPA to 7.50 or above, subject to the condition that this should be achieved within one semester.

**R.8 APPOINTMENT OF THESIS SUPERVISOR(S)**

**R.8.1** Every admitted student as per his/her preference shall be assigned a Research Supervisor(s) by the Head of the Department on the recommendation of DRC, subject to approval of Dean, AA. For this purpose, a form given in *Annexure-A* will have to be completed and processed during first semester of the student's joining.

**R.8.2** A Supervisor(s) can be any regular faculty member of the Institute with a Ph.D. Degree.

**R.8.3** (i) The Dean AA, on the recommendations of the DRC, may appoint joint supervisor(s) not exceeding a total of three to supervise the student/candidate. These may be from inside or outside the Institute and normally, there can be two supervisors at the most from within the Institute and one can be from outside the Institute, within India or abroad. Appointment of any joint supervisor(s) would not be made after 6 months from the date student/candidate apply for candidacy for Ph. D.

(ii) An external supervisor should belong to academic/research/industrial organization or others engaged in research and development activities. He should be active in research. Retired Professors, and Scientists and Engineers from industries with research experience, may also become external supervisors.

**R.8.4** The following shall be the minimum qualifications of the External joint supervisor:

(i) B. E./B. Tech. or equivalent and

(ii) 10 years Industrial experience in case of industries along-with established research credentials such as publications in research journals or patents; Otherwise Ph.D. in relevant field.

**R.8.5 Appointment of Supervisor(s)/Joint Supervisor(s)/Caretaker Supervisor (When original supervisor is not available)**

A faculty member appointed as a Ph.D. supervisor is normally expected to be available to a research student/candidate in the Institute till the thesis is submitted. However, under unavoidable circumstances, such as long leave; resignation; retirement; or death; a supervisor may not be available to the student/scholar. In such special cases, appointment of supervisor(s) will be regulated as under.

**(A) Supervisor proceeds on long leave for less than 12 months**

The supervisor proceeding on long leave for less than 12 months can continue to be supervisor/joint supervisor. However, on his/her recommendation, DRC may appoint a caretaker/joint-supervisor.

**(B) Supervisor proceeds on long leave of more than 12 months**

**(I) Where joint-supervisor (internal) exists**

The supervisor proceeding on long leave for more than 12 months can continue to be a joint-supervisor provided the DRC is convinced of effective supervision by him. DRC

may appoint joint supervisor as supervisor or a new supervisor/joint supervisor on the recommendation of joint-supervisor.

**(II) Where joint supervisor (internal) does not exist:**

- (a) The supervisor proceeding on long leave for more than 12 months can continue to be a joint supervisor, provided the DRC is convinced of effective supervision by him. A supervisor/joint supervisor will be appointed by DRC.
- (b) In case, the student has completed a period of more than 24 months but has not submitted synopsis for final submission of thesis, a joint-supervisor will be appointed by DRC and the original supervisor will continue.

**(III) Synopsis of the thesis/thesis is submitted**

- (a) Provided, if the synopsis of the thesis has been submitted before the supervisor proceeds on leave, he/she will continue to be the supervisor and only a caretaker supervisor will be appointed by the DRC.
- (b) The thesis has been submitted before the supervisor proceeds on leave, he/she will continue to be the supervisor and only a caretaker supervisor will be appointed by DRC.
- (c) Further, if a major revision becomes necessary, and the sole supervisor is on leave, he/she should be asked to specifically state whether he/she would effectively help the student carrying out the major revisions within a reasonable time. In case the sole supervisor expresses his/her inability due to one reason or the other, the caretaker supervisor, if he/she provides the required help in carrying out the major revision, will automatically be treated as joint-supervisor of the candidate.

**(IV) Supervisor extends Leave**

Provided further, if a supervisor proceeds on leave for a period less than 12 months initially, but later extends his/her leave beyond 12 months, the above procedure will be followed. The extension granting authority will inform the Dean, AA accordingly.

**(C) A Supervisor retires**

A faculty member who is due to retire within the next two years can be appointed as a Joint-Supervisor and can continue to be the Joint-Supervisor even after his/her retirement provided the DRC is convinced of his/her availability/continued guidance to the student. In other cases, a faculty member on retirement may continue as (i) a Supervisor, if reemployed or appointed Emeritus Fellow; (ii) a Joint-Supervisor, if the synopsis of the thesis has been submitted. Appointment of another Supervisor, if necessary, will be as per **R.8.5(B)**

**(D) A Supervisor Resigns**

A Supervisor/joint-supervisor/caretaker supervisor will be appointed, if necessary, as per **R.8.5(B)**.

**(E) A Supervisor Dies**

A new Supervisor will be appointed, if necessary, on the recommendation of DRC.

**R.8.6** The Chairman DRC/Head of the Department should send the recommendation for the appointment a new Supervisor/Joint-Supervisor/Caretaker supervisor to Dean, AA for approval within maximum period of two months after the supervisor proceeds on leave.

**R.8.7** If the supervisor cancels his/her long leave before his/her candidate(s) has been assigned to new supervisor, he/she will continue to be the supervisor.

**R.8.8** The maximum number of slots for full-time/part-time students, which can be supervised by a faculty member at any time, will normally be four. For faculty members acting as supervisor/joint supervisors of a full time/part-time student, the slot would be counted as half for each one of the supervisors. However, number of slots will be decided by the Senate from time to time.

## **R.9 CONSTITUTION OF DRC & DGC**

### **R.9.1 CONSTITUTION OF DRC**

Each Department will constitute the DRC as per following:

|     |  |           |
|-----|--|-----------|
| (a) | HOD or a senior faculty member   | Chairman  |
| (b) | HOD, if not Chairman   | Member    |
| (c) | All Supervisors within the Department                                  | Members   |
| (d) | Institute faculty expert(s) from outside the Department, if necessary. | Member(s) |

### **R.9.2 CONSTITUTION OF DGC**

For each student, a Doctoral Guidance Committee will be formed by DRC on the recommendation of supervisor(s), which will be constituted as follows.

|     |  |           |
|-----|--|-----------|
| (a) | Supervisor   | Convener  |
| (b) | Joint-Supervisor <sup>#</sup> (s) (if any) OR one expert in the field from the Department                                | Member(s) |
| (c) | One Institute faculty expert, preferably in the concerned area, from outside the Department to which the student belongs | Member    |
| (d) | ADRC nominee   | Member    |

<sup>#</sup>A joint supervisor external to MNIT Jaipur, would be an observer member of DGC.

## **R.10 COMPREHENSIVE EXAMINATION**

**R.10.1** Each student will be required to take a comprehensive examination, which will test students' comprehension of his/her broad field of research and his/her academic preparation and potential to carry out the proposed research plan. The comprehensive examination should be a combination of written and oral examination and should be separately conducted before evaluation of the research proposal. The examination will be conducted by concerned DGC.

**R.10.2** The following procedures are to be uniformly followed by all the Departments in conducting the comprehensive examination for Ph.D. Scholars.

- (a) A student should first clear the requisite Ph.D. course work.
- (b) The written examination should then be conducted by concern DGC of the student within the guidelines laid down by the respective DRC.
- (c) The examination will consist of one written paper on the specific area chosen by the candidate and will be of 3 hours duration.
- (d) The result of the written examination should be declared within two weeks.
- (e) After the student has passed the written examination, the oral examination should be conducted by concern DGC for evaluation of the research proposal submitted by the candidate within one month.

**R.10.3** The DGC on the basis of the performance of the student in the examination will make one of the following recommendations to the concern Chairman DRC in the approved form (*Annexure-B*):

- (a) The Examination
  - (i) Passed
  - (ii) To reappear in the examination after a defined period of time specified by the DGC.
  - (iii) To re-submit the research plan keeping in view suggestions of the Committee and to be evaluated after a defined period of time.
  - (iv) Failed
- (b) Research Plan
  - (i) Approved
  - (ii) Not approved

The above recommendations shall be forwarded to the Dean AA by the Chairman DRC.

**R.10.4** A student will be provided a maximum of two attempts to pass the comprehensive examination.

**R.10.5** A Full-time and part-time student must clear the comprehensive examination within 18 and 30 months respectively from his/her date of joining the programme, failing which his/her registration will be cancelled.

#### **R.11 ELIGIBILITY FOR THE CANDIDACY FOR THE DEGREE**

**R.11.1** Application for the candidacy for the Ph.D. Degree shall be made by the student to the Dean AA on the approved form (*Annexure-C*) soon after having passed the comprehensive examination.

**R.11.2** A student shall be formally registered as a candidate for the Ph.D. Degree after he/she has complied with the following:

- (i) has completed his/her course work with a minimum CGPA as stipulated in R.7.5,
- (ii) has passed the comprehensive examination, and
- (iii) has submitted a research plan duly recommended by supervisor(s) and approved by DGC.

#### **R.12 PERFORMANCE MONITORING**

**R.12.1** The academic/research progress of each student/candidate will be monitored by DGC. For this purpose, each student/candidate will be asked to submit a progress report at the end of each semester to his supervisor(s). On receipt of the progress report, the supervisor(s) shall arrange with DGC for a review.

**R.12.2** The supervisor(s)/DGC will evaluate the progress report of the student every semester.

**R.12.3** The DRC Chairman in the department will be coordinating collection of progress reports written and signed by the scholars and forwarded by the supervisor(s)/DGC every semester. The progress report will be sent to Dean AA at the end of each semester.

**R.12.4** 'S' grade is to be awarded during that semester if the progress is 'satisfactory'.

**R.12.5** If progress is 'unsatisfactory', 'U' grade is to be awarded and appropriate action will be taken. For the first appearance of 'U' grade, a warning would be issued to the candidate. Subsequently, the fellowship, (in case of regular scholar) of the candidate would be withheld.

**R.12.6** If there are two consecutive 'U's, the registration will stand terminated.

- R.12.7** Submission of progress report should continue till submission of thesis.
- R.12.8** The terms for the research work be as follows: I Term: July to December; II Term: January to June.
- R.12.9** The academic calendar will include the following dates for the submission of progress reports.
- |                        |  |
|------------------------|--|
| <b>I Semester</b>      | 1st November (issue of blank progress forms by Academic Section to respective departments) |
| <b>(Odd Semester)</b>  | 15 December (submission of progress reports by students to concern departments)            |
| <b>II Semester</b>     | 1st May (issue of blank progress forms by Academic Section to respective departments)      |
| <b>(Even Semester)</b> | 10 June (submission of progress reports by students to concern departments)                |

**R.13 TIME PERIOD REQUIRED FOR THESIS SUBMISSION**

- R.13.1** A candidate who has a B. Tech./M.Sc./M.A. degree or its equivalent shall be required to be registered for the degree for a period of not less than three calendar years (36 months) from the date of his/her initial registration. In exceptional cases, the minimum period of registration may be reduced to two calendar years (24 months) with the approval of the Senate. For a candidate who has an M. Tech. Degree or its equivalent the minimum period of registration shall be two calendar years (24 months).
- R.13.2** The candidate of all categories shall normally submit their thesis within a period of five years from the date of their initial registration for the Ph.D. Programme. However, as a special case, this limit may be extended on yearly basis to a maximum of **seven years** by the Dean, Academic Affair on the recommendation of DGC/DRC after which the registration shall stand cancelled automatically.

**R.14 PRE-SYNOPSIS SEMINAR/SYNOPSIS/PANEL OF EXAMINERS**

- R.14.1** Holding of Pre-Synopsis (Ph.D.) seminar is an essential requirement before the DGC considers the synopsis of a Ph.D. scholar. On completion of the research work, the candidate shall submit to DGC through supervisor(s), 8 copies of the synopsis including bibliography of research work. The DGC shall assess the work, if satisfied about the quality of the work for submission as a Ph.D. thesis may ask the candidate to submit the same or revised synopsis to DGC otherwise.

**R.14.2 Synopsis of the Thesis**

- The synopsis of the thesis should be submitted normally within 2 month after the presentation of pre-synopsis seminar. In case the synopsis is not submitted in the specified period, the student may be asked to present another pre-synopsis seminar.
- On completion of the research work the candidate shall submit to DGC through supervisor(s), 8 copies of the synopsis (*Annexure-F*). The DGC will forward the synopsis with its recommendations to the Dean, AA, through Chairman DRC.
- The students shall submit the synopsis of his/her work normally at least one month before submitting the thesis.
- There is no bar to the inclusion of name of supervisor(s)/list of publications arising out of

**R.14.3** The candidate shall be required to submit fresh synopsis if he/she fails to submit his/her thesis within 9 months from the submission of the earlier synopsis. However, in case a candidate fails to submit his/her thesis within the stipulated time and has suitable justification for the same, the Dean, AA may on the recommendations made by the DGC through Chairman DRC and on individual merits of each case grant him extension in time by not more than one month i.e. the candidate may be allowed to submit his/her thesis within a period not exceeding 10 months from the date of the submission of the synopsis.

**R.14.4 Panel of Examiners for Ph. D. Thesis**

A panel of at least eight experts in the area of the Ph.D. thesis would be suggested by the Supervisor(s) and recommended by DRC while forwarding the title and synopsis of the thesis to Dean, AA. The panel would include at least 50% of the examiners from outside India.

**R.15 BOARD OF EXAMINERS**

**R.15.1** On receipt of the title and synopsis of the thesis, the Dean AA will appoint a Board of Examiners for each candidate. The Board will consist of internal examiners, normally the Supervisor(s), and two external examiners; one from within India and the other from abroad who shall be experts in the subject of the thesis. These external examiners shall be chosen normally from the panel of examiners recommended by the DGC through Chairman DRC as stipulated in **R.14.4**. A person working in the same laboratory(ies)/Institution(s) where Research Scholar is employed cannot, however, be appointed as External Examiner for evaluating the Thesis of that Research Scholar. Further no person can be appointed as External Examiner from Laboratory/Institution to which the Joint-supervisor(s) of the Research Scholar belongs.

**R.15.2** There is no bar to the appointment of ex-student of the guide on the Board of Examiners provided the concerned ex-student had received Ph.D. Degree of the Institute under his/her guidance at least 5 years earlier.

**R.16 THESIS SUBMISSION**

The thesis should bear evidence of the candidate's capacity for analysis and judgement as well as his/her ability to carry out independent investigation, design or development. A thesis may be supplemented by published work, if necessary. No part of the thesis or supplementary published work shall have been submitted for the award of any other degree or diploma.

**R.16.1** The thesis shall be written in English or Hindi/other regional language in the specific format (*Annexure-D*) and shall contain a critical account of the candidate's research. It should be characterized by discovery of facts or fresh approach towards interpretation of facts and theories or significant contribution to knowledge of development or a combination of these. It should bear the evidence of the candidate's capacity for analysis and judgement as well as his/her ability to carry out independent investigation, design or development.

**R.16.2** A candidate may submit his/her thesis within the time period as stipulated in **R.13**, provided that:

- (i) he/she has completed the minimum period of registration as provided in **R.13.1**.
- (ii) he/she has become a candidate for the award of Ph.D. degree as provided in **R.11.2**.
- (iii) he/she has submitted the title and synopsis of the thesis at least two months prior to the submission of the thesis.

**R.16.3** The candidate for the degree shall submit three copies of the thesis with a soft cover. In case of joint supervision four/five copies of thesis shall be submitted by the candidate.

**R.17 THESIS EVALUATION**

**R.17.1** Each examiner will be requested to submit a detailed assessment report and his/her recommendations on the prescribed proforma to the Dean, AA within six weeks from the date of receiving the thesis.

**R.17.2** (i) The examiner will be required to give his/her opinion about candidate's capacity for critical examination and sound judgment. The internal examiners shall be submitting one report. All examiners will submit the reports on the prescribed form clearly stating that:

- (a) The thesis is recommended for the award of Ph.D., or
- (b) The thesis is recommended for the award of Ph.D. Degree subject to, the candidate giving satisfactory answers to queries specifically mentioned in the report, at the time Viva-voce examination or
- (c) The candidate be allowed to resubmit his/her thesis in the revised form, or
- (d) The thesis be rejected.

(ii) (a) If all the three examiners recommend acceptance of the thesis, their recommendations shall be accepted.

(b) If two of the three examiners recommend rejection, their decisions would be accepted. The candidate may, however, be allowed to submit the thesis normally after one year, provided the title of the thesis remains unchanged. Normal procedure will be followed for the evaluation of the revised thesis with fresh examiners.

(c) If one of the examiners recommends rejection, the thesis shall be sent to a fourth examiner for evaluation.

(d) In case one examiner recommends revision of the thesis, the thesis would be revised normally within one year, if the candidate so desires. The revised version of the thesis would be sent to the concerned examiner (who recommended for revision) for his/her recommendations.

If the candidate does not agree for revision, he/she may ask for appointment of the fourth examiner under sub-clause (e) below.

(e) The new examiner appointed, shall be Indian or Foreign depending on whether the thesis was asked to be revised by an Indian or a foreign examiner in the first instance. The reports of all the examiners will be sent to him/her without revealing the identity of the examiners, along with the response of the candidate, if any, to these. The thesis shall be deemed to be acceptable, if three out of four examiners recommend acceptance.

If the fourth examiner recommends revision, the thesis would be suitably revised and resubmitted normally after 3 months and sent for examination to all the examiners except to the one in whose place the fourth examiner was appointed.

In case the fourth examiner recommends rejection or his/her recommendations for revision is not accepted by the candidate, the thesis would be rejected. The candidate may then avail the benefit of sub-clause (b) above.

(f) If two of the three examiners recommend revision of the thesis, the candidate may revise the thesis accordingly and resubmit it normally within a period of one year for the evaluation by the same set of examiners.

- (g) The correspondence regarding (c), (d), and (e) above will be done by the Dean, AA.
  - (h) If one examiner recommends rejection and other examiner recommends revision of the thesis the candidate may revise the thesis and resubmit it normally within a period of one year, for evaluation by a fourth examiner in place of the examiner who recommended rejection and the original examiners who recommended revision. Clause (e) will be applicable now.
  - (iii) Any doubt, arising out of the procedure laid down in R.17.2 (ii) above, shall be referred to the Director for a decision.
  - (iv) In case of ambiguous recommendations by the examiner, Dean, AA will approach the examiner for a clear recommendation. In case clear recommendation is not forthcoming, the matter may be referred to the Director for his/her decision.
- R.17.3** In the event that the thesis report is not received from an examiner within a period of three months, the Dean, AA may appoint another examiner in his/her place for evaluating the thesis.
- R.17.4** In the event of disagreement between the external examiners, the Dean, AA may as a special case, appoint another external examiner, if the merit of the case so demands. This examiner will report independently to the Dean, AA.
- R.17.5** In the event of the candidate being required to submit a revised thesis, he/she shall in the normal circumstances, submit the same within a period of one year from date of communication in this regard from the Dean, AA. However, in exceptional circumstances this period may be extended by the PG Board by another one year, the total revision time irrespective of the number of the revisions allowed, will not exceed a period of two years.
- R.18 THESIS RESUBMISSION**
- (a) In case of resubmission of the thesis, a fresh fee for the examination shall be paid by the candidate.
  - (b) No candidate shall be allowed to resubmit the same thesis more than once.
- R.19 VIVA-VOCE EXAMINATION**
- R.19.1** If the thesis is recommended for the award of degree, the candidate shall be required to defend his/her work/thesis orally (viva-voce examination) before a duly constituted committee, hereinafter referred to as the Oral Defence Committee (ODC). Details of the viva-voce shall be adequately notified so as to enable interested staff members and students to attend it. Audience other than the examiners will not be allowed to ask questions.
- R.19.2** The ODC shall consist of Supervisor(s) (internal examiners), and one Indian external examiner. The internal examiner shall arrange the viva-voce examination of the candidate.
- R.19.3**
- (i) In case of non-availability of the Indian External Examiner(s) in conducting the viva-voce examination, the Director may appoint another examiner to conduct the viva-voce examination from the existing panel.
  - (ii) The viva-voce examiners shall be provided with the comments made by the examiners before the viva-voce examination.
  - (iii) If there is a difference of opinion among the viva-voce examiners, the recommendations of the Viva-voce Board will be put up to the Director for a decision who may either direct that a fresh viva be held or recommend acceptance or otherwise to the Senate.

- (iv) Internal examiner(s) shall arrange for the viva-voce examination of the candidate as early as possible and normally within two months from the date of communication to the Internal Examiner for holding the viva-voce examination.
- (v) In case of the inability of the internal examiner(s) to have the viva-voce examination conducted due to any reason whatsoever, the Director may appoint another Internal Examiner(s) from amongst the faculty of the department concerned who belongs to the particular field in consultation with Dean, AA, and Head of the Department concerned to conduct the viva-voce examination. In such cases also, the Ph.D. work will be deemed to have been carried out under the guidance of the supervisor(s) only.
- (vi) Any other matter not explicitly provided herein or of an exceptional nature, may be referred to the Director for his/her decision.

## **R.20 AWARD OF Ph. D. DEGREE**

**R.20.1** On the completion of all stages of examination, the Oral Defence Committee shall recommend to the Dean, AA, one of the following courses of action:

- (a) that the degree be awarded;
- (b) that the candidate be re-examined at a later specified time in a specified manner;
- (c) that the degree shall not be awarded;

In case of (a) and (b), the Oral Defence Committee shall also provide to the candidate a list of all corrections and modifications in the thesis (if required)

including suggestions made by the examiners during the thesis evaluation. The re-examination may usually be held before lapse of one month.

**R.20.2** The Degree shall be awarded by the Senate, provided that:

- (a) the Oral Defense Committee so recommends;
- (b) the candidate produces a 'No Dues Certificate' in the prescribed form and gets it forwarded along with the report of ODC, and
- (c) the candidate has submitted two hard cover copies of the thesis; one for the Department's/Center's Library and one for the Central Library. Thesis should incorporate all necessary/corrections/modifications.
- (d) the hard bound copies of the Ph.D. thesis, submitted after the viva-voce examination, must contain the following copyright certificate in the beginning of the thesis, on the left side of cover page:

© MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR, 200...

**ALL RIGHTS RESERVED**

## **R.21 ATTENDANCE & LEAVE**

A student/candidate will be entitled to avail leave as per Leave Rules/Attendance Rules formulated and amended from time to time by the Senate. Presently these Rules are as under:

### **ATTENDANCE**

A Ph.D. student irrespective of the source of research assistantship including self financing student not drawing any Assistantship and sponsored student, while pursuing course work,

must attend at least 75% of classes in each course in which he/she is registered. In case his/her attendance falls below 75% in any course during a month he/she will not be paid Assistantship for that month. Further, if his/her attendance again falls short of 75% in any course in any subsequent month in that semester his/her studentship and assistantship will be terminated. A research scholar after having completed the course work must attend to his/her research work on all the working days and mark attendance except when he/she is on duly sanctioned leave. The requirement of 75% attendance will apply as above on daily attendance except in the cases where longer leave has been duly sanctioned within the leave entitlement of the student. For the above purpose, if 75% works out to be a number which is not a whole number, the immediate lower whole number will be treated as the required 75% attendance.

#### LEAVE

- (a) **During Course work:** A full-time Ph.D. student, during his/her stay at the Institute will be entitled to leave for 30 days including leave on medical grounds, per academic year. He/she will not be entitled to mid-semester breaks, summer and winter vacation at the end of semesters.
- (b) **After Completing the Course Work**
- A full-time Ph.D. scholar during his/her stay at the Institute, will be entitled to leave for 30 days per academic year. He/she will not be entitled to mid-semester breaks, summer and winter vacations. In addition, a Ph.D. scholar who has completed his/her course work may be granted leave on medical grounds up to 10 days per academic year.
- The women research scholars will be eligible for Maternity Leave with Assistantship for a period not exceeding 135 days once during the tenure of the award of degree.
- (c) Leave beyond 30 days in an academic year may be granted to a Research Scholar in exceptional cases, by the Head of the Department, subject to the following conditions:
- (i) the leave beyond 30 days will be without Assistantship/Scholarship; and
  - (ii) such an extension of upto additional 30 days will be granted only once during the programme of the Scholar.
  - (iii) the leave may be subject to the approval of the Head of Department/Centre/ Programme Coordinator concerned on the recommendation of the Supervisor; and a proper leave account of each scholar shall be maintained by the Department/Centre/Programme Coordinator concerned.

#### R.22 WITHDRAWAL FROM SEMESTER/COURSES

- R.22.1** A student/candidate may be permitted to withdraw by the Dean, AA from all the courses registered by him or the entire semester, on medical grounds supported by a medical certificate from the Institute Medical Officer. The medical certificate issued by a registered Medical Practitioner will also be acceptable in those cases where the scholar has valid reasons for his/her absence from the Institute. Withdrawal may also be granted by the Dean, AA provided he/she is convinced that the scholar cannot pursue his/her studies for the reasons beyond his/her control.
- R.22.2** Under no circumstances will a request for withdrawal be entertained after the end term examinations have begun. Student/Candidate should present the medical certificate in support of his/her absence on health reasons within two days of his/her rejoining the Institute, if not produced already. Withdrawal will not be granted retrospectively.

**R.22.3** The period of authorized absence in the semester should not be less than eight weeks of contact period for Semester withdrawal to be granted. Regularly in attending the classes and satisfactory performance in the midterm examination(s) if any, held prior to the date of application for withdrawal are the factors, which would be taken into account while recommending/granting withdrawal.

**R.22.4** Any semester withdrawal will count towards the maximum limit of **seven years** as stipulated in R.13.2. However, withdrawal will not count towards the maximum limit of time period to pass the comprehensive examination as stipulated in **R.10.5**.

### **R.23 CANCELLATION OF REGISTRATION**

**R.23.1** Registration of a student/candidate shall be cancelled in any one of the following eventualities, after due approval of Dean AA.

- (i) if he/she absents himself for a continuous period of four weeks without prior intimation/sanction of leave.
- (ii) if he/she resigns from the Ph.D. Programme and the resignation is duly recommended by the DRC.
- (iii) if he/she fails to renew his/her registration in any semester subject to the provisions contained in these Ordinances & Regulations.
- (iv) if he/she does not clear the comprehensive examination as stipulated in **R.10**.
- (v) if his/her academic progress is found unsatisfactory in terms of **R.12.6**.
- (vi) if his/her CGPA is below 7.00 at any time while doing course work.
- (vii) if he/she is found involved in an act of misconduct and/or indiscipline and termination is recommended by a competent authority.

### **R.24 GENERAL**

Notwithstanding anything contained in these Ordinances & Regulations, all categories of the students/candidates shall be governed by the rules and procedures framed by the Senate in this behalf, and in force from time to time.

### **R.25 INTERPRETATION**

**R.25.1** Any doubt or dispute arising about the interpretation of these Ordinances and Regulations shall be referred to the Chairman, Senate whose decisions shall be final and binding.

**R.26** Eligibility for admission to Ph.D. programmes in different disciplines is summarized in *Annexure-E*. This may be reviewed from time to time by the concern department and approved by the Senate.

Annexure-A

**MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR**  
(Deemed University)  
**APPLICATION FORM FOR APPOINTMENT OF SUPERVISOR (S)**

- A. 1. Name of the student \_\_\_\_\_  
 2. ID. No. \_\_\_\_\_  
 3. Date of joining \_\_\_\_\_ 4. Department \_\_\_\_\_  
 5. Status:full-time/part-time \_\_\_\_\_ 6. Total no of credits to be completed \_\_\_\_\_

Date:

Signature of Student

B.

|   |                                |
|---|--------------------------------|
| 1. Proposed area of research _____              |                                |
| 2. Particulars of proposed supervisor (s) _____ |                                |
| <b>Name &amp; Designation</b>                   | <b>Department Signature(s)</b> |
|   |                                |

Date:

Signature of Supervisor

**C. Doctoral guidance committee (DGC)**

|     |  |           |
|-----|--|-----------|
| (a) | Supervisor   | Convener  |
| (b) | Joint-Supervisor <sup>#</sup> (s) (if any) OR one expert in the field from the Department                                | Member(s) |
| (c) | One Institute faculty expert, preferably in the concerned area, from outside the Department to which the student belongs | Member    |
| (d) | ADRC nominee   | Member    |

<sup>#</sup>External supervisor would be observer member of DGC**D. Recommendation of the Departmental Research Committee (DRC)**

The DRC recommends the registration of Mr./Ms. \_\_\_\_\_ as a full-time /part-time student with effect from \_\_\_\_\_ and also recommends the appointment of supervisor(s) and formation of DGC as indicated above.

Date \_\_\_\_\_

Signature of Chairman, DRC

AR (Academics)

*(For Use Of Academic Section Only)*

Particulars of the student have been verified. Submitted for approval of the Dean, Academic Affairs.

SO/AR (Academics)

Signature of Dean (Academics Affairs)

Annexure-B

**MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR**  
(Deemed University)

**Comprehensive Examination and Approval of Research Plan**

**Department of** \_\_\_\_\_

**Part A**

The Doctoral Guidance Committee (DGC) conducted the comprehensive Examination of

Mr./Ms \_\_\_\_\_ ID No. \_\_\_\_\_ as per the details given below.

Date of written test

Attempt 1 \_\_\_\_\_

Attempt 2 (if applicable) \_\_\_\_\_

Date of oral test

Attempt 1 \_\_\_\_\_

Attempt 2 (if applicable) \_\_\_\_\_

On the basis of the performance of the student in the examination (both written and oral), DGC recommends award of 'PASS/FAIL' grade to the student in the Comprehensive Examination: \_\_\_\_\_.

**Part B** (Applicable only if 'Pass' grade is recommended in the Comprehensive Examination).

The student submitted and presented a research plan entitled,

\_\_\_\_\_

Based on his/her presentation, the DGC recommends that:

- (i) The research plan is **approved** and that the Date of approval of Research Plan be taken as \_\_\_\_\_.
- (ii) The student be asked to re-submit a research plan latest by \_\_\_\_\_ (date) keeping in view the modifications suggested by DGC (as per details enclosed).
- (iii) The research plan is **not approved**.

**Supervisor(s)**

**Member, DGC**

**Member, DGC**

**(DRC nominee)**

**(Chairman DRC)**

Annexure-C

**MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR**  
(Deemed University)  
**APPLICATION FORM FOR REGISTRATION AS a Ph. D. CANDIDATE**

**Use Capital Letters**

1. NAME IN FULL \_\_\_\_\_
2. ID NO. \_\_\_\_\_
3. DATE OF INITIAL REGISTRATION \_\_\_\_\_
4. DEPARTMENT \_\_\_\_\_
5. REGISTRATION STATUS: FULL TIME/PART-TIME \_\_\_\_\_
6. COURSE WORK COMPLETED: \_\_\_\_\_

| SEMESTER | SESSION | COURSE CODE & TITLE | CREDIT | GRADE |
|----------|---------|---------------------|--------|-------|
|          |         |                     |        |       |
|          |         |                     |        |       |
|          |         |                     |        |       |
|          |         |                     |        |       |

7. TOPIC OF RESEARCH \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

DATE: \_\_\_\_\_

SIGNATURE OF STUDENT

8. DATE OF APPROVAL OF RESEARCH PLAN BY DGC: \_\_\_\_\_
9. RESEARCH PLAN SUBMITTED BY THE STUDENT AND DULY APPROVED BY THE DGC IS ATTACHED HEREWITH FOR DRC APPROVAL.

SIGNATURE (S) OF SUPERVISOR (S)

10. RECOMMENDATIONS OF THE DEPARTMENTAL RESEARCH COMMITTEE (DRC)
  - (I) CERTIFIED THAT THE STUDENT HAS QUALIFIED THE COMPREHENSIVE EXAMINATION
  - (II) THE RESEARCH PLAN ATTACHED HEREWITH IS APPROVED.
  - (III) IT IS RECOMMENDED THAT MR./MS. \_\_\_\_\_ BE REGISTERED AS A CANDIDATE FOR Ph.D. PROGRAMME.

DATE:.....

SIGNATURE OF THE CHAIRMAN, DRC

(FOR USE OF ACADEMIC SECTION ONLY)

PARTICULARS OF THE STUDENT HAVE BEEN VERIFIED. THE COMPREHENSIVE EXAMINATION HAS BEEN COMPLETED WITHIN THE PERMISSIBLE TIME LIMIT. SUBMITTED FOR APPROVAL OF THE DEAN, ACADEMIC AFFAIRS.

SO/ A R (ACADEMICS)

SIGNATURE OF DEAN, ACADEMIC AFFAIRS

Annexure-D

**Guidelines for Preparation of Ph.D. Thesis**

1. Thesis should be type-written on both sides of good quarto-size/A-4 size paper in double space with sufficient margins with multi-plastic ring binding.
2. Suitable reproduction of Indian-ink diagrams should be used. Photographs should be suitably mounted on the same quality paper as the thesis.
3. Reference should be given in a style in the text consistent with a standard journal in the field.
4. Three copies of thesis in multi-plastic spiral binding must be submitted for evaluation. In case of student being supervised by more than one supervisor, appropriate number of additional copies must be submitted.
5. The cover should have the following printed on it in block letters:
  - (a) the title at the top (b) authors name in the middle (c) Name of the Department and Malaviya National Institute of Technology Jaipur at the bottom.
6. After the Viva-Voce Examination, two copies of thesis in hard maroon-colour-cover must be submitted. The cover should have the material indicated in item 5 above. Besides, the following should be printed on the spine of the thesis:
  - (a) the year of publication at the top (b) the author's last name in the middle and (c) Ph.D. at the bottom.
7. The contents of the thesis should have the following:
  - (i) The hard bound copies of the thesis must contain the following copyright notice in the beginning of the thesis (left side of the inner cover page): -

© Malaviya National Institute of Technology Jaipur-200.....

All rights reserved.

- |                           |  |
|---------------------------|--|
| (ii) Inner cover page     | (iii) Certificate of the Supervisor(s) |
| (iv) Acknowledgement      | (v) Abstract                           |
| (vi) Table of contents    | (vii) List of figures                  |
| (viii) Body of the thesis | (ix) References                        |
| (x) Appendices and        | (xi) Brief Bio-data of the author.     |
8. The inner cover page should as follows:

**TITLE OF THESIS**

by

**(NAME OF AUTHOR)**

..... Department

Submitted

in fulfillment of the requirements of the degree of Doctor of Philosophy  
to the

**MALAVIYA NATIONAL INSTITUTE OF TECHNOLOGY JAIPUR****(Deemed University)****Month & Year**

## ELIGIBILITY CRITERIA

Annexure E

Requirements with respect to degree/disciplines for admission to Ph.D. programme (In conjunction with R2)

| <b>Department</b>  | <b>Minimum Educational Qualification in relevant field</b>   |
|--|--|
| <b>Civil/Structural Engineering</b>  | <ul style="list-style-type: none"> <li>» B.Tech/M.Tech. or equivalent degree in Civil Engineering</li> <li>» B.Tech./M.Tech. Degree in any branch of Engineering may be considered for research areas consistent with the academic background and special interests.</li> <li>» M.Sc. Degree in Environmental Science/Biotechnology may also be considered for research areas in Environmental Engineering</li> </ul>  |
| <b>Chemical Engineering</b>  | <ul style="list-style-type: none"> <li>» B.Tech./M.Tech. or equivalent degree in Chemical Engineering.</li> <li>» B.Tech./M.Tech. or equivalent degree in any branch of Engineering/ Chemical Technology and interdisciplinary areas.</li> <li>» M.Sc. in disciplines consistent with the research areas of the department.</li> </ul>   |
| <b>Chemistry</b>   | <ul style="list-style-type: none"> <li>» M.Sc. or equivalent degree in Chemistry/Physics.</li> <li>» M.Sc. in Bio-technology or M.Sc. in Biochemistry</li> </ul>   |
| <b>Electrical Engineering</b>  | <ul style="list-style-type: none"> <li>» B.Tech./M.Tech. or equivalent degree in Electrical Engineering.</li> <li>» B.Tech./M.Tech. or equivalent degree in a branch of Engineering consistent with the research areas as mentioned by the Department from time to time.</li> <li>» M.Sc. in a discipline consistent with the research areas as mentioned by the Department from time to time.</li> </ul>  |
| <b>Computer Engineering/ Information Technology</b><br>(The Ph.D. degree awarded to a candidate with MCA will be in Computer Science). | <ul style="list-style-type: none"> <li>» M.E./M. Tech. in Solid State Electronics/ Microwaves/Communication Systems/ Control Systems/ Instrumentation/Computer Science &amp; Engg./ Information Technology or equivalent.</li> <li>» B.E./B.Tech. in Electronics &amp; Communication/ Computer Sc. &amp; Engg./ Electrical Engg./ Information Technology or equivalent.</li> <li>» M.Sc. in Physics/ Maths/ Instrumentation/ Electronics/MCA in disciplines consistent with the research area of the department</li> </ul> |
| <b>Electronics &amp; Communication Engineering</b>   | <ul style="list-style-type: none"> <li>» M.E./M. Tech. in Solid State Electronics/ Microelectronics/Microwaves/ Communication Systems/Control Systems/Instrumentation/ or equivalent.</li> <li>» B.E./B.Tech. in Electronics &amp; Communication or equivalent.</li> <li>» M.Sc. in disciplines consistent with the research areas of the department</li> </ul>  |
| <b>Humanities and Social Sciences</b>  | <ul style="list-style-type: none"> <li>» M.A./M.Com. or equivalent degree with 55% marks (or equivalent grade)</li> <li>» Master's degree in Science/Graduate Degree in Engineering/ Technology with 60% marks (or equivalent Grade) may be considered for research areas consistent with the academic background and special interests.</li> </ul>  |
| <b>Mathematics</b>   | <ul style="list-style-type: none"> <li>» M.A./M.Sc. in Mathematics/ Statistics/ Computer Science/ Applied Mathematics/ Mathematics.</li> <li>» M.Stat.</li> <li>» M.C.A</li> </ul>   |
| <b>Mechanical Engineering</b>  | <ul style="list-style-type: none"> <li>» B.Tech./ M.Tech. degree or equivalent degree in Mechanical/Industrial/ Production Engg.</li> <li>» B.Tech./ M.Tech. Degree/ disciplines consistent with the research areas of the department.</li> </ul>  |
| <b>Metallurgical &amp; Materials Engineering</b>   | <ul style="list-style-type: none"> <li>» M.E./M. Tech. in Metallurgical Engg./ Metallurgical &amp; Materials Engg.</li> <li>» B.E./B. Tech. in Metallurgical Engg./ Metallurgical &amp; Materials Engg.</li> <li>» M. Sc. in Physics/Material Science/ Chemistry provided Mathematics was a subject at B.Sc. level.</li> </ul>   |
| <b>Physics</b>   | <ul style="list-style-type: none"> <li>» M.Sc./M.Phil. in Physics/Applied Physics or equivalent,</li> <li>» M.Sc./M.Phil. in Chemistry, Mathematics/ Biophysics/ Geophysics/ Computer Science provided Physics was a subject at B.Sc. level.</li> <li>» M.Tech./B. Tech. or equivalent in Electrical/Electronics/ Chemical/ Metallurgical/ Mechanical Engg./ Information Technology/ Computer/ Engineering Physics</li> </ul>  |
| <b>Management Studies</b>  | <ul style="list-style-type: none"> <li>» M. Tech. /M.B.A. or equivalent, B.E./ B.Tech./ B.Arch./ B. Pharma/ M.Sc./ M.C.A. or equivalent</li> </ul>   |

Annexure-F

**Malaviya National Institute of Technology, JAIPUR**  
**Format of application for submission of synopsis**

Academic Section

Date: .....

**Format of certificates in connection with submission of synopsis****Certificate No. 1.**

Certified that Mr./Ms. \_\_\_\_\_, Roll. No./ID \_\_\_\_\_, Department of \_\_\_\_\_, has been prescribed \_\_\_\_\_ course credits and he/she has qualified the prescribed credit requirements.

SO (Academic)

**Certificate No. 2**

Certified that the above mentioned candidate has presented the results of his/her investigations to a panel duly constituted (DGC) for the purpose on \_\_\_\_\_. (Copy enclosed).

Signatures of Members, DGC

**Certificate No. 3.** (To be completed by the Research Supervisor(s))

Certified that the above candidate has carried out the research work under my guidance during the period \_\_\_\_\_ to \_\_\_\_\_.

(Date of registration)

Further certified that:

1. *there is prima facie case for consideration of the thesis.*
2. *the thesis does not include any work which has at any time previously been submitted for the award of a degree and*
3. *the work involved the following/on collaboration namely:*

Signature of Supervisor(s)

**Certificate No. 4.** (to be completed by the candidate)

I submit herewith 8 copies of the synopsis of my thesis, together with certificate from the Academic Section, Head of the department, the Research supervisor(s) , as laid down under the Ph.D. rules.

I have also mailed the PDF file of the Synopsis to academic@mnit.ac.in.

My address for communication will be as follows:

(I hereby undertake to intimate change of address, if any)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Signature of the candidate

Name of the candidate in full:

Date: .....

To  
The Chairman, DRC  
Department of \_\_\_\_\_

Dean, Academic affairs