

# **ORDINANCES GOVERNING POSTGRADUATE PROGRAMMES**

**Passed in the 5<sup>th</sup> Senate Meeting held on Wednesday, July 31, 2013**

*(Incorporated the modifications amended by different Senate meetings up to 51th Senate held on 26 May, 2026)*



*(Logo Passed in first Senate resolution no 3)*

**INDIAN INSTITUTE OF TECHNOLOGY  
(BANARAS HINDU UNIVERSITY)  
VARANASI**

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## 1. INTRODUCTION

The Benares Engineering College (BENCO), College of Mining and Metallurgy (MINMET), and College of Technology (TECHNO) were established in 1919, 1923, and 1932, respectively, by the visionary and patriot Mahamana Pt. Madan Mohan Malaviya ji to impart technical education at the Banaras Hindu University (BHU) to cater to the needs of the soon-to-be independent nation. The first-ever bachelor's degree courses in Mechanical, Electrical Engineering, as well as Mining Engineering, Metallurgical Engineering, Ceramic Engineering, and Pharmaceuticals in India were initiated at BHU. After the country's independence, post-graduate and doctoral research programmes were also introduced. These colleges produced outstanding engineers who served various indigenous industries, academic institutions, and R & D laboratories in independent India. To provide a strong integrated technological education, these three colleges were merged to form the Institute of Technology in 1968. The Institute of Technology has been converted to the Indian Institute of Technology (Banaras Hindu University), Varanasi by the Government of India. (*Institute of Technology Act 1961, amended in 2012*)

The Institute has the following Engineering Departments: Department of Ceramic Engineering, Department of Chemical Engineering and Technology, Department of Civil Engineering, Department of Computer Science and Engineering, Department of Electrical Engineering, Department of Electronics Engineering, Department of Mechanical Engineering, Department of Metallurgical Engineering, Department of Mining Engineering and Department of Pharmaceutical Engineering and Technology, and **Department of Architecture, Planning & Design.**

In addition, there are three interdisciplinary Schools, namely, School of Bio-chemical Engineering, School of Bio-medical Engineering and School of Materials Science and Technology, and N C Jain School of Decision Sciences.

The Institute has the following Science Departments: Department of Chemistry, Department of Mathematical Sciences, and Department of Physics.

Further, the Department of Humanistic Studies was established in 2015.

The Institute offers four-year B.Tech. degree programmes, five-year Integrated Dual Degree programmes (B.Tech., M.Tech.), five-year B.Arch. programme, two-year Master of Science (M.Sc.) programmes and M.Tech./ M.Pharm. programmes of two years duration. All the **Departments / Schools** offer Ph.D. programmes.

Joint registrations for Ph.D. programmes involving more than one Department/School are encouraged to promote multidisciplinary research.

The P.G. programmes of the Indian Institute of Technology (Banaras Hindu University), Varanasi are aimed at imparting education with a sound theoretical and experimental background in frontier areas of research in engineering, sciences, humanities (HSS) and interdisciplinary subjects. The emphasis of the P.G. programme is on understanding the scientific basis and engineering principles involved in solving problems of practical importance in the relevant field using multidisciplinary approaches. An important component of these programmes is to inculcate the habit of independent thinking and initiative in the students in planning and execution of their research work. These programmes seek to train manpower of the highest quality and competence, having academic values and work ethics in the students for societal, industrial, and national service.

With these goals in view, the postgraduate programmes include courses, seminars, and project/thesis through which a student may develop rational thinking and conceptual clarity to hone intellectual and innovative skills, with emphasis on a practical approach.

The rules and procedures stated in these ordinances shall govern the PG programmes of the Institute for the students admitted in academic years 2019-20 and onwards. The various Departments/Schools may impose additional requirements to suit their particular academic expectations, subject to the approval of the Dean (Academic Affairs). (*Senate Res no 26.13/Ex Agenda item, 37<sup>th</sup> Senate*)

The DoAA, established according to the by-laws of the Senate, operates through the Department Postgraduate Committees (DPGCs) to administer all aspects of the PG programmes. The constitution, jurisdiction, and functions of the DoAA and the DPGC are given in Annexure – I.

### 1.1. Postgraduate Programmes

1. The Institute offers programmes leading to the Master of Technology (M. Tech.) degree in Ceramic Engineering, Chemical Engineering & Technology, Civil Engineering, Computer Sciences & Engineering, Electrical Engineering, Electronics Engineering, Mechanical Engineering, Metallurgical Engineering, Mining Engineering, Bio-chemical Engineering, Bio-medical Engineering, Systems Engineering and Materials Science & Technology, and Decision Science and Engineering.

2. **The Institute offers** Master of Science programmes leading to the M.Sc. degree by Department of Physics and Department of Chemistry.

In addition, the Institute offers a Master of Pharmacy (M. Pharm.) degree.

The specializations in which these programmes are available are given in Table 1 of Annexure – II.

3. **All the Departments/ Schools offer PhD Program.** Programmes leading to the Doctor of Philosophy (Ph.D.) degree exist in all Departments/Schools.

4. The thesis work during VIII to X Semesters of the IDD programs is governed by these (P.G.) Ordinances and all matters with reference to the above Semesters will be dealt with by DPGC. However, allotment of Supervisors will be done by DUGC.

5. Special programmes to cater to the specific needs of any major sector, such as Defence, Railways, or industry, may be initiated in the Institute subject to the approval of the Educational Policy Committee (EPC) and the Senate.

### 1.2. Waiver of Requirements in Special Cases

The procedures and requirements stated in these ordinances, other than those in Section 2.3 (**Reservation of seats**), 2.4 (Eligibility for Admission), and Section 6.7 (Academic Performance Requirement) may be waived by the Chairman, Senate, under special circumstances for cogent reasons on the recommendation of the DPGC and the DoAA. All such exceptions shall be reported to the Senate in its next meeting.

## 2. ADMISSION

### 2.1. Academic Session

The academic session of the Institute is divided into three parts: two regular semesters and a summer term, as notified by the academic calendar of the Institute, as declared by the academic office and approved by the senate. The **First (Odd) Semester** will normally commence in the last week of July and the **Second (Even) Semester** in the First week of January every year. The summer term will run from mid-May to mid-July.

Each of the two regular semesters consists of about 18 weeks with one week of intra-semester recess. The last two weeks of each semester are utilized for end-semester examinations and one week during the semester is utilized for the One Mid Term examinations. Thus, there are about 13-14 working weeks in each semester. The summer term consists of about 8 working weeks, including one mid-term examination and one end-term examination.

### 2.2. Admission Calendar

1. Admissions to the M.Sc. programmes are made in the odd semester only through JAM, jointly conducted by IITs every year. Admissions to the M.Tech. and M.Pharm. programmes will be made in the odd semesters only.
2. Admissions to the Ph.D. programmes are normally made in April-May for the odd semester and in November-December for the even semester. The Dean of Academic Affairs will notify the admission calendar in each semester.
3. The Indian Nationals Residing Abroad (INRA)/Foreign Nationals/Candidates **with external fellowships** may be admitted to Ph.D. programmes during the course of a semester as per the provisions of Section 2.4.B and 2.6.

### 2.3. Reservation of Seats

Reservation of seats for various reserved categories shall be notified by the Government of India **from time to time**.

Annexure–III provides the details of the reservations approved by the BoG.

### 2.4. Eligibility for Admission

#### 2.4.A. MASTER'S DEGREE PROGRAMMES

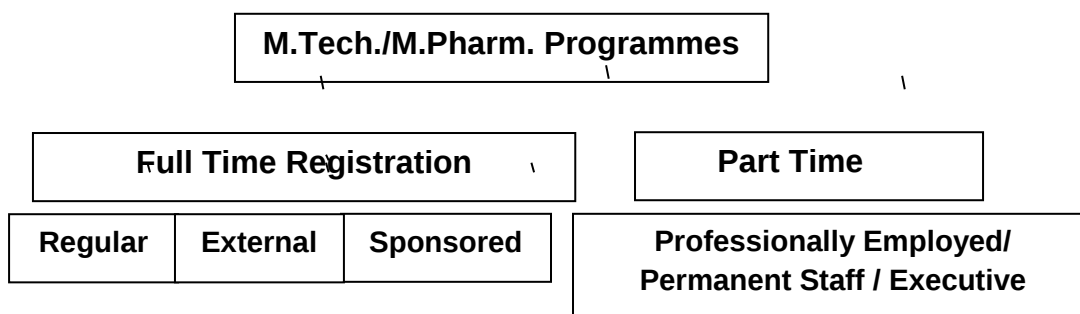
##### 2.4.A.1. M.Sc.

Requirements for admission to these programmes are as specified in Joint Admission of M.Sc. (JAM) **brochures** jointly conducted by IITs.

The minimum educational qualification for M.Sc in Chemistry is B.Sc/B.S or an equivalent degree in Chemistry for 3 Years/6 Semester and must have studied Mathematics till class 12 (*Senate Resolution no 50.12 dated 17<sup>th</sup> December 2025*).

##### 2.4. A.2. M.Tech./M.Pharm.

A candidate may apply for any of the four categories of registration as given below, subject to the fulfilment of requirements, minimum qualification (A.2.1), and eligibility criteria (**Table 2, Annexure-II**).



#### 2.4.A.2.1 Full-Time Regular Registration Category

Candidates who possess the requisite qualifications as indicated in **Table 1 of Annexure - II** are eligible for admission to postgraduate programmes in the respective Departments/Schools of the Institute leading to M.Tech./M.Pharm. degree. The candidates should have secured a minimum of 60% marks / 6.0 CPI (on a 10.0-point scale) in the qualifying degree. In addition, they must have qualified in the Graduate Aptitude Test in Engineering (GATE) for M.Tech. Programmes & Graduate Pharmacy Aptitude Test (GPAT) for M.Pharm. Programme with validity not expired.

##### 2.4.A.2.1.2 Financial Assistance

Financial assistance in the form of Teaching Assistantship is available to students admitted to M.Tech. and M.Pharm. under the **Full-Time Regular Registration Category**. A student shall be assigned duties up to eight hours per week by the Departments/Schools to avail the Teaching Assistantship. The renewal of assistantship is contingent on the student's satisfactory performance in the academic programme and in the discharge of assistantship duties on a semester-to-semester basis.

No student shall be admitted to the Full-Time Regular Registration Category without Teaching Assistantship. No student can get financial assistance from more than one source at a time.

**2.4.A.2.3 Full Time External Registration Category:** A candidate working in an external R&D organization or in an industry recognized by the Institute (the list of recognized external R&D organizations and industries is given in Annexure – IV), which is equipped with necessary research and library facilities, may be considered for admission to M.Tech./M.Pharm. programmes, provided he/she satisfies the eligibility criteria laid down for the programme concerned (**see Sec. A.2.1 and Table 2 Annexure-II**). Such a candidate must show satisfactory performance in the interview, must be sponsored by his/her employer, and must have been in employment with the sponsoring organization for at least two years at the time of admission.

The requirement of qualifying in GATE/GPAT is waived off for such candidates for the purpose of admission to PG programmes.

The employer must undertake to grant paid leave to the candidate and relieve him/her from duties to complete the coursework requirements.

The candidate should submit a certificate obtained from his/her organization stating that the research facilities of his/her organization will be made available to him/her for carrying out research. He/she should also provide the bio-data of the prospective supervisor, along with his/her consent, who will supervise the candidate's work at his/her organization.

[N.B. Letter of appointment and Form – 16 for two years of service is required from the employer at the time of the written test/interview.]

In addition, an R&D organization/industry or a research area in the specific organization may be recognised by the Institute as per the following procedure. On the recommendation of the DPGC, the DoAA will constitute a committee to assess and approve an R&D organization/industry for the admission of sponsored candidates to M.Tech./M.Pharm. programmes. The committee may, upon inspection, also approve all areas where R&D activities are underway in that organization.

#### **2.4.A.2.4 Full-Time Sponsored Registration Category**

A candidate who is sponsored by a teaching institution or by an R&D organization or by an industry is eligible for admission to M.Tech./M.Pharm. programmes, provided he/she satisfies the eligibility criteria laid down for the programme concerned (**see Sec. A.2.1 and Table 2 Annexure-II**). He/she must have been in the service of the sponsoring institution/organization for at least two years at the time of admission. The sponsoring organization must specifically undertake to provide full salary to the candidate and to relieve him/her to pursue the programme for its full duration. Such candidates have to complete the requirements of the programme by staying on campus for the full duration of the programme.

The requirement of qualifying in GATE/GPAT is waived off for such candidates for the purpose of admission to PG programmes.

[N.B. Letter of appointment and Form – 16 for two years of service is required from the employer at the time of the written test/interview.]

[In addition, the candidate must submit an undertaking that he/she will continue to submit Form – 16 for the subsequent years till he/she completes the programme.]

#### **2.4.A.2.5 Part-time Registration Category**

The Institute offers part-time M.Tech. and M.Pharm. programmes for permanent staff and faculty members of the Institute as well as research assistants working in an externally funded research project running in the Institute, provided they satisfy the eligibility criteria laid down for the programme concerned (**see Sec A.2.1 and Table 2 Annexure-II**). Such a candidate should submit a no-objection certificate from the Head of the Department/Coordinator of School/ Principal Investigator as the case may be as applicable. They will be required to attend to normal duties assigned to them by the Department/School/ the Principal Investigator of the research project.

In case the candidate (project fellow) has B.Tech./B.S. (4-years)/B.E./ **B.Pharm./M.Sc.** or equivalent degree with CGPA/CPI 7.0 and above (**on a 10.0 point scale**) or equivalent as the qualifying degree from IITs/NITS/ CFTIs/State or Central funded/**Top 100 NIRF (Overall or Engineering Category) institutions/ universities**, and is **without GATE/GPAT score**, may be considered for admission to **part-time M.Tech./M.Pharm.** programme.

- In addition to the above criteria, the applicants must also satisfy the eligibility criteria specified by the respective Departments /Schools for shortlisting in this category.

- The shortlisted candidates need to qualify for the written test and interview as specified by the individual Department /Schools.

**(Senate resolution number 51.10, dated 26 May 2026)**

The Institute offers part-time M.Tech./M.Pharm. Programme also open to a professionally employed person, who pursues the programme while continuing the duties of his/her service, provided the sponsoring institution/organization from the Institute and is engaged in broad areas of M.Tech./M.Pharm. programme applied, provided they satisfy the eligibility criteria laid down for the programme concerned (**see Sec A.2.1 and Table 2 Annexure-II**). He/she must be a regular employee of the sponsoring organization/institution for at least two years. A no-objection certificate from the Head of the Institution/organization must be enclosed with the application. The candidate must satisfy the eligibility criteria laid down for the programme concerned.

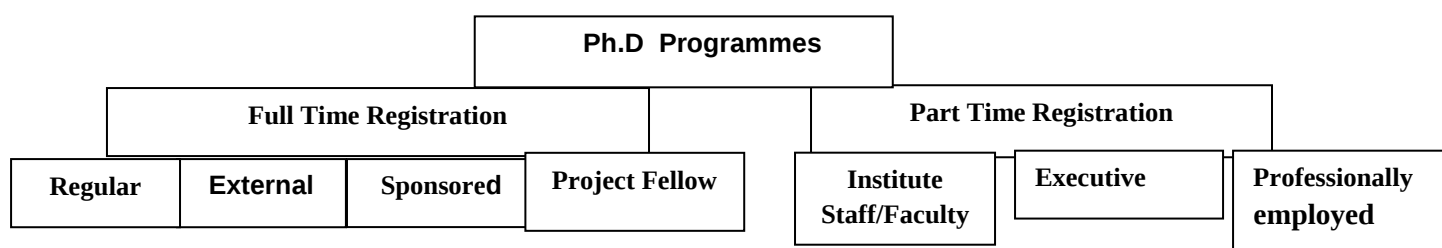
However, the requirement of qualifying in GATE/GPAT is waived off for such candidates for the purpose of admission to PG programmes.

[N.B.: Letter of appointment and Form 16 or equivalent document or equivalent documents issued by the employer for two years of service is required at the time of the written test/interview. In addition, the candidate must submit an undertaking that he/she shall continue to submit Form 16 or equivalent document for the subsequent years till he/she completes the programme.]

**Change of Registration (From Regular Full-time to Part-time)** The Institute is also offering the M.Tech. Program (Part-time) after a change of registration. The minimum residency requirement for the M.Tech. (Part-time) is the completion of coursework. If a candidate completes his/her coursework and submits his thesis from outside the Institute, he/she will be awarded the M.Tech. degree in Part-time by changing his/her mode of registration from full-time to Part-time. If a candidate takes admission in the regular M.Tech. program and applies for professional employment leave, and wishes to complete his/her thesis outside the Institute, he/she will be considered a Part-time candidate.

#### **2.4.B. Ph.D. DEGREE PROGRAMMES**

A candidate may apply for any of the following categories of registration as given below, subject to the fulfilment of requirements, minimum qualification (B.1.), and eligibility criteria (**Table 3, Annexure-II**).



### 2.4.B.1 Full-Time Regular Registration Category

Applicants must have the requisite qualification with a minimum percentage of marks/CPI as mentioned below in the discipline concerned or in an allied discipline/area. A list of allied disciplines and research areas currently available for Ph.D. Programmes is given in **Table 3** and **4**, respectively, of **Annexure – II**.

#### 2.4.B.1.1 Minimum Qualifications for Ph.D.

##### Minimum Eligibility Criteria for Ph.D. Admission:

1. M.Tech/M.E./M.Pharm./M.S./Master's degree with CGPA/CPI 6.0 and above (on a 10.0 point scale) or equivalent from Indian Institutions/Universities with GATE/GPAT/NET-JRF qualification. However, candidates in the Full-Time External, Full-Time Sponsored, Part-Time Internal, Part-Time External, and Part-Time Executive categories are exempt from the GATE/GPAT/NET qualification requirement.

**OR**

M.Tech/M.E./**M.Pharm.**/M.S./Master's degree with CGPA/CPI 7.0 and above (on a 10.0 point scale) or equivalent from Indian [IITs/NITs/CFTIs/State or Central funded universities/Top NIRF 100 (Overall or Engineering category)] or Foreign (QS Ranking) Institutions/Universities may be exempted from the requirement of GATE/GPAT/NET-JRF qualification for admission to Ph.D. programs under Teaching assistantship Category. Such candidates and NET-LS candidates need to qualify written test and interview as specified by the individual Department/Centre/ Schools.

**OR**

Applicants with bachelor's degree in engineering in the discipline concerned or in an allied discipline/area from Indian Institutions/ Universities must have a minimum of 75.0% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level **with GATE/GPAT qualification**. Applicant with more than two years of professional experience, the minimum requirement shall be 70.0% marks or 7.0 CPI (on 10 point scale) at bachelor degree provide the degree.

**OR**

Applicants with master's degree in science as an allied discipline/area (where science is an allied discipline/area) **with GATE/GPAT/NET-JRF qualification**, must satisfy each of the following criteria:

- (i) A minimum of 65.0% marks or 6.5 CPI (on a 10.0 point scale) at the master's degree level,
- (ii) A minimum of 60.0% marks or 6.0 CPI (on a 10.0 point scale) at the bachelor's degree level.

2. In addition to general eligibility criteria, the applicants must also satisfy the eligibility criteria specified by the respective Departments/ Schools for shortlisting.

3. The final selection process for the Ph.D. programme in any Department/School/will be governed by individual Departments/Schools.

*(Senate resolution number 51.10 Dated 26 May 2026)*

#### 2.4 B.1.1.1 Dual Degree M.Tech-PhD Programs

Applicants with B.Tech. /B.Pharm./4 yrs. BS (BA, MBBS, BSc Agriculture, etc.) /M.Sc. and CGPA of 7.5 (on a 10-point scale) and above from Current Top 100 NIRF-ranked or Top QS world-ranked ( $\leq 500$ ) Premier Institutions may be considered for the Dual degree program. The candidate should have a valid GATE/GPAT score. Such candidates need to qualify the written test and interview as specified by the individual Department/Centre/Schools. Applicants may be considered eligible for admission to the Dual Degree Master's & Ph.D. Program. Such candidates will attend our Master's Program for three semesters. Those who secure a CGPA of 7.5 & above will continue to a Ph.D. Program. & will be awarded master's and Ph.D. degrees, finally. Those who secure a CGPA below 7.5 will complete their M.Tech. dissertation in 2 years and would exit with a Master's Degree. However, M.Tech. thesis is mandatory to continue the Ph.D. program. (Senate Resolution no 50.25 dated 17<sup>th</sup> December, 2025).

**Note: In the ordinance, wherever the minimum CPI / CGPA / marks are not indicated /specified, the same is to be taken as 6.0 (on a 10-point scale) or equivalent.**

#### 2.4.B.1.2 Financial Assistance

Financial assistance in the form of Institute Assistantship is available to the students admitted to Ph.D programmes under the Full-Time Regular Registration Category. The conditions for Institute Assistantship shall be governed as per the Department of Higher Education, Ministry of Education guidelines.

| Designation and Qualification                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Postgraduate Degrees in Basic Science OR Graduate/ Postgraduate Degrees in Professional Courses selected through a process described through any one of the following:<br>A. Scholars who are selected through the National Eligibility Test - CSIR/UGC-NET, including lectureship (Assistant Professorship) or GATE/GPAT.<br>B. The selection process through National level Examinations conducted by MoE and its agencies and institutions, such as UGC/IIT/IISc/IISER/IIT, etc. |

Assistantships are available to full-time students admitted to the Ph.D. programmes.

The NET-LS qualified students may also be eligible for Institute Assistantship in Humanistic Studies Department, provided they have a CPI of 7.0 (on a 10-point scale) or 70% marks in the qualifying examination.

A student shall be assigned duties up to eight hours per week by the Departments/Schools to avail the Teaching Assistantship. The renewal of assistantship is contingent on the student's satisfactory performance in the academic programme and in the discharge of assistantship duties on a semester-to-semester basis.

The number of available Institute Assistantships should not be considered as available seats. Applicants who are either of the sponsored registration category or who are already awarded fellowship by external agencies, or the Part-time registration category or the external

registration category can submit their applications for admission in departments/schools even if there is no Institute Assistantship available.

- a) Full Institute Assistantship upon completion of the project (provided the remaining project duration at the time of registration was at least one year) fellowship will be given to those students who had qualified for Institute Assistantship or were recipients of JRF/SRF through national-level tests conducted by UGC, CSIR, Department of Biotechnology, Indian Council of Medical Research, etc.;
- b) Other Ph.D. Students (who had qualified for Institute Assistantship) working in various projects are to be given full Institute Assistantship upon completion and closure of their Project Fellowship. However, such Ph.D. students may rejoin projects by leaving the Institute Assistantship when selected for any new Project with the Supervisor. (Senate Resolution no 46)
- c) The uniform period of 5-years of Ph.D. will be calculated from the date of registration in Ph.D., irrespective of the fact that they have received fellowship from a project or Institute;
- d) In case a student who has qualified for Institute Assistantship and is supported by project funds, may revert to being supported by Institute Fellowship (Full fellowship), if needed.
- e) In case a student has submitted a thesis before 5 years of registration, the Institute Assistantship may continue on the recommendation of DPGC and approval of the Dean (Academic Affairs) up to 5 years or date of oral examination, whichever is earlier. Such students shall register for the retention fee. No student shall be admitted to the Full-time Regular Registration Category without Institute Assistantship or National-level Scholarships/Fellowships. **No student can get financial assistance from more than one source at a time.**

#### **2.4.B.1.3 Admission of Candidates having National-level Scholarships, including PMRF**

There is a provision for admission to Ph.D. programmes for candidates who fulfil the eligibility criteria for the respective programmes and also have qualified in any of the national-level JRF/SRF tests conducted by UGC, CSIR, Department of Biotechnology, Indian Council of Medical Research or DST-INSPIRE fellowship or Dr. K.S. Krishnan Fellowship of DAE, etc.

Applicants must have the requisite qualification with minimum marks/CPI (**see Sec 2.4.B.1.7 and Table 3 Annexure-II**). Such candidates may be offered admission after an interview, as and when they apply in Departments/Schools where they are eligible. For PMRF candidates, the requirement for an interview is waived. They will be recommended by DPGC to register for the programme in the next available semester. Such candidates applying for admission in response to this advertisement for the current session will undergo a selection process similar to that described above.

#### **2.4.B.1.4 Admission for candidates who come through the QIP Programme**

The Institute is now recognized as the Major QIP Center of AICTE for research across all disciplines. For a detailed procedure, applicants should contact AICTE, New Delhi.

#### **2.4.B.1.5 Full-Time External Registration category**

A candidate working in an external R&D organization or in an industry recognized by the Institute (the list of recognized external R&D organizations and industries is given in **Annexure – IV**), which is equipped with necessary research and library facilities can also apply for admission to Ph.D. programmes, provided he/she satisfies the eligibility criteria laid

down for the programme concerned (see **Sec.2.4.1 B.7 and Table 3 Annexure-II**). Such a candidate must show satisfactory performance in the interview, must be sponsored by his/her employer, and must have been in employment with the sponsoring organization for at least two years at the time of admission.

The employer must undertake to pay full salary to the candidate and relieve him/her from the duty to enable the candidate to stay on the campus and to complete the coursework requirements.

The candidate should submit a certificate obtained from his/her organization stating that the research facilities of his/her organization will be made available to him/her for carrying out research. He/she should also provide the bio-data of the prospective supervisor, along with his/her consent, who will supervise the candidate's work at his/her organization.

**[N.B. Letter of appointment and Form – 16 or equivalent document for two years of service is required from the employer at the time of interview.]**

In addition, an R&D organization/industry or a research area in the specific organization may be recognised by the Institute as per the following procedure. On the recommendation of the DPGC, the **Dean (Academic Affairs) will constitute a committee to assess and approve an R & D organization/industry for the** admission of sponsored candidates to carry out Ph.D. research in a specified area. The committee may, upon inspection, also approve all areas where R&D activities are underway in that organization.

An application for admission from a candidate working in the approved organization will be considered only if he/she wishes to work in the approved area.

#### **2.4.B.1.6 Full-Time Sponsored Registration Category**

A candidate who is sponsored by a teaching institution or by an R&D organization or by an industry can also apply for admission to Ph.D. programmes, provided he/she satisfies the eligibility criteria laid down for the programme concerned (see **Sec. B.1 and Table 3 Annexure-II**). He/she must have been in the service of the sponsoring institution/organization for at least two years at the time of admission. The sponsoring organization must specifically undertake to provide full salary to the candidate and to relieve him/her to pursue the programme for its full duration. Such candidates have to complete the requirements of the programme by staying on campus for the full duration of the programme.

[N.B. Letter of appointment and Form – 16 issued by the employer for two years of service is required at the time of the written test/interview. In addition, the candidate must submit an undertaking that he/she will continue to submit Form – 16 for the subsequent years till he/she completes the programme.]

#### **2.4.B.1.7 Part-time Registration Category**

The Institute offers part-time Ph.D. programmes for permanent staff and faculty members of the Institute, provided they satisfy the eligibility criteria laid down for the programme concerned (see **B.1 and Table 3 Annexure-II**). Such a candidate should submit a no-objection certificate from the Head of the Department/Coordinator of School/Principal Investigator, as the case may be (See Form I & II of the Application Form) as applicable. They will be required to perform their normal duties assigned by the Department/School/Units.

The Institute offers a part-time Ph.D. Programme to a professionally employed person, who pursues the programme while continuing the duties of his/her service, provided the sponsoring institution/organization is engaged in broad areas of Ph.D. Programme applied. He/she must be a regular employee of the sponsoring organization/institution for at least two years. A no-objection certificate from the Head of the Institution/organization must be enclosed with the application. The candidate must satisfy the eligibility criteria laid down for the programme concerned (**see Sec. B.1 and Table 3 Annexure-II**)

The Institute offers part-time executive Ph.D. Programme to persons from Industry/Academia/Government organisation with Bachelor's / Master's Degree in Engineering & Technology/ Sciences/ Medical Sciences/ Nursing/ Medical Technology/ Agriculture/ Management/ Pharmacy/ Architecture/ Humanities etc, who pursue the programme while continuing the duties of his/her service. He/she must be a regular employee of the Industry/Academia/Government for at least five years for candidates with a Master's degree and seven years for candidates with a Bachelor's degree. No objection certificate from the Head of the organization must be enclosed with the application. The candidate must satisfy the eligibility criteria laid down for the programme concerned.

Under the executive Ph.D. programme, the admitted student(s) may be allowed to complete his/her course credit requirements using online resources through the NPTEL/SWAYAM portal on the recommendation of DPGC or attend the classes of the Institute in Hybrid mode. Such student(s) will be required to report physically in the Institute for at least seven days per semester. The DPGC may waive coursework requirements for the eligible candidate(s). The minimum duration for the part-time Executive Ph.D. programme is three years.

[N.B.: Letter of appointment and Form 16 or equivalent document issued by the employer for five years of service is required at the time of the written test and interview. In addition, the candidate must submit an undertaking that he/she shall continue to submit Form 16 or equivalent document for the subsequent years till he/she completes the programme]

#### **2.4.B.1.8 Project Fellow candidates**

- M.Tech/M.E./M.Pharm./M.S./ Master's degree with CGPA/CPI 6.0 and above (on a 10.0 point scale) or equivalent from Indian Institutions/Universities with GATE/GPAT/NET-JRF qualification.

**OR**

A candidate applying for a Ph.D. Programme, at IIT(BHU) under this category, with M.Tech/M.E./**M.Pharm.**/M.S./ Master's degree with CGPA/CPI more than 7.0 (on a 10.0 point scale) or equivalent from Indian [IITs/NITs/CFTIs/State or Central funded universities/Top NIRF 100 (Overall or Engineering category)] or Foreign (QS Ranking) Institutions/Universities may be **exempted from the requirement of GATE/GPAT/NET-JRF qualification** for the consideration of admission to Ph.D. programme.

- In addition to the above criteria, the applicants must also satisfy the eligibility criteria specified by the respective Departments /Schools for shortlisting in this category.
- The short-listed candidates need to qualify for the written test and interview as specified by individual Departments/Schools.

*(Senate resolution number 51.10, dated 26 May 2026)*

Other qualifications would remain as given in Clause No. 2.4.B.1.1 (b) and (c).

The student who joins the Ph.D. program through a sponsored project will be called as 'Project Fellow' and be considered a full-time research scholar. However, he/she cannot take full course credit in a semester. He/she may be given partial thesis credits during this time. He/she will be eligible to take the full thesis unit once the required course credit completes. (*Senate resolution number 50.25, dated 17<sup>th</sup> December 2025*)

## **2.5. SELECTION PROCESS**

### **2.5.1 M.Tech./M.Pharm /M.Sc Programs**

1. The applicants must apply for admission to M.Tech./M.Pharm. programmes when advertised by the Institute.
2. All admissions will be made on approval by the Chairman, Senate on the recommendations of the duly constituted selection committees and the Dean (Academic Affairs). A selection committee will consist of all regular faculty members, and a faculty member from another Department/ School as a nominee of Dean (Academic Affairs). The Chairperson of the Committee shall be appointed by DPGC with the consultation of the concerned Head of Department. The constitution of the selection committee will be proposed by the DPGC and approved by the Dean (Academic Affairs).
3. The selection committee may form separate sub-committees, if necessary, to select candidates belonging to different categories, viz., sponsored, QIP, etc. It is necessary to prepare separate merit lists for each case. Notwithstanding any other clause contained in these ordinances, all such candidates should satisfy the specified minimum requirements of marks/CPI in the qualifying degree.
4. For the full-time regular category, candidates shortlisted on the basis of GATE/GPAT Score, which is valid and above the qualifying pass mark, may be selected for M.Tech./M.Pharm. programmes either on the basis of their GATE/GPAT score, or written test, or interview, or on the basis of any combination of these as declared by the individual department/school.

For admission under other categories, the requirement of qualifying GATE/GPAT is waived off, and also such candidates are exempted from appearing in the written test.

5. At first, a merit list of all applicants who have qualified in the admission test/interview shall be prepared, and the seats allocated to the Open Category shall be filled up in order of merit from this merit list. Remaining qualified applicants shall be allotted seats on a category-wise basis.
6. Candidates for whom the results of the qualifying examination are not declared at the time of the written test/interview may also be considered for the written test/interview. In such cases, candidates are selected; their admission will be provisional, subject to the condition that they produce proof of having completed all examinations, including the project/thesis examination and the viva voce, before the date of registration. Such candidates are required to produce evidence of their having passed the qualifying degree examination with at least the minimum marks for eligibility by the last date for document submission as mentioned in the academic calendar (usually about 8 weeks from the date of registration), failing which their admission shall be cancelled.

7. Upon approval, the Head of the Department/Coordinator of the School concerned will issue the admission letters to the candidates who will be required to accept the offer of admission by depositing the prescribed fee before a specified date.
8. In case a candidate does not accept the offer by paying the prescribed fee by the specified date, the offer of admission may stand withdrawn, and the admission may be offered to the candidates in the waiting list, if any, in order of merit.
9. The offer of admission may also be withdrawn if the candidate who has accepted the offer fails to register by the date for late registration.
10. Admission to the M.Sc Programs is made in odd semesters only through JAM, jointly conducted by IITs every year **(2.4.A.1)**.

### **2.5.2 Ph.D. Programme**

1. The applicants must apply for admission to Ph.D. programmes when advertised by the Institute.
2. All admissions will be made on approval by the Chairman, Senate, on the recommendations of the duly constituted selection committees and the Dean (Academic Affairs). A selection committee will consist of all regular faculty members, and a faculty member from another Department/ School as a nominee of the Dean (Academic Affairs). The Chairperson of the Committee shall be appointed by DPGC with the consultation of the concerned Head. The constitution of the selection committee will be proposed by the DPGC and approved by the Dean (Academic Affairs).
3. The selection committee may form separate sub-committees, if necessary, to select candidates belonging to different categories, viz., sponsored, QIP, etc. It is necessary to prepare separate merit lists for each case. Notwithstanding any other clause contained in these ordinances, all such candidates should satisfy the specified minimum requirements of marks/CPI in the qualifying degree.
4. Admission will be based on a written test and an interview of the candidates shortlisted by the Department/School concerned.
5. The following category of applicants shall be exempted from appearing in the written test:
  - a) External Registration Category
  - b) Sponsored Registration Category
  - c) Part-time Registration Category, including Executive Part-time category.
  - d) Candidates having National Level Scholarships
  - e) Outstanding candidates from Premier Institution:
    - i) Applicants who have qualifying degrees from IITs with CPI of 8.00 or above (on a 10.0-point scale).
    - ii) THERE WILL NOT BE ANY CATEGORY-WISE OR SPECIALIZATION-WISE SEATS for selection under the above type;
    - iii) The number of seats in this type will be 20% of the “announced number of seats” and shall be considered as “Supernumerary seats”. Any fractional number arrived at would be rounded to the higher integer;
    - iv) An interview should be conducted for this type of candidate PRIOR to the conduct of the Written Test for the remaining candidates;
    - v) Any candidate who could not qualify in the said Interview, through this channel, is eligible to take the regular selection procedure of the Written Test and Interview. Since the candidate has been interviewed once, he/she will not appear again in the interview, and marks of the first interview will be considered for preparing the merit list.

6. Further, if qualifying marks are specified in the written test and/or interview, a 5% relaxation will be given to SC/ST candidates. If a candidate avails such relaxation, he/she shall not be considered for admission in the general category.

7. At first, a merit list of all applicants who have qualified in the admission test/interview shall be prepared, and the seats allocated to the Open Category shall be filled up in order of merit from this merit list. Remaining qualified applicants shall be allotted seats on a category-wise basis.

8. Candidates for whom the results of the qualifying examination are not declared at the time of the written test/interview may also be considered for the written test/interview. In case such candidates are selected, their admission will be provisional, subject to the condition that they produce proof of having completed all examinations, including the project/thesis examination and the viva voce, before the date of registration. Such candidates are required to produce evidence of their having passed the qualifying degree examination with at least the minimum marks for eligibility by the last date for document submission as mentioned in the academic calendar (usually about 8 weeks from the date of registration), failing which their admission shall be cancelled.

9. Upon approval of the Chairman, Senate, the Head of the Department/Coordinator of the School concerned will issue admission letters to the candidates who will be required to accept the offer of admission by depositing the prescribed fee before a specified date.

10. In case a candidate does not accept the offer by paying the prescribed fee by the specified date, the offer of admission will stand withdrawn, and the admission will be offered to the candidates in the waiting list, if any, in order of merit.

**Note:** Mere fulfilment of eligibility criteria does not guarantee admission to a programme. The candidates' performance in the written test and interview should be at the levels expected for the respective programmes.

## **2.6. ADMISSION OF FOREIGN NATIONALS**

Admissions to Ph.D. Programmes are available for Indian nationals residing abroad (INRA) and foreign nationals (those applying through the Study in India Programme of MoE) as per the details given below.

1. Indian Nationals Residing Abroad (INRA): Candidates must have been residing abroad continuously for at least one year at the time of applying for admission. Their applications may be processed by the departments/schools as and when they are received or according to any schedule convenient to the departments/schools. The applications should be scrutinized to make sure that, in terms of qualifications, they are comparable to the candidates admitted in the general category.

2. The applications of foreign nationals, who are sponsored by the Indian Council of Cultural Relations (ICCR) directly or through the Study in India Programme of MHRD, will be scrutinized by the departments/schools concerned to assess their suitability for admission to the programme. The recommendations of the Department/School will be sent to the Chairman, Senate, through the Dean (Academic Affairs) for approval.

**Note:** Candidates belonging to the above two categories should satisfy the eligibility conditions laid down in section 2.4 and should have qualified for the GRE/TOEFL/IELTS. Any non-GRE/TOEFL/IELTS qualified candidate may also be considered for admission. However, such candidates shall have to study and pass a suitably designed English Course.

Further, all foreign nationals, if admitted, shall study and pass a course on Research Methodology. The above courses shall be in addition to coursework specified in the Ordinances. [Senate Resol. No. 26.7]

## **2.7. Admission of Non-Degree Students**

1. A non-degree student is a student who is registered for a degree in a recognized Institute or university in India or abroad, and who is officially sponsored by that Institute or university to complete part of his/her academic requirements at IIT (BHU). For that purpose, the non-degree student may carry out research, or take courses for credit or otherwise, or may use other academic facilities. However, any credits earned by a non-degree student cannot be used to apply for any degree programme at IIT (BHU) at any time.
2. A candidate will be admitted as a non-degree student on a duly sponsored application to the Dean of Academic Affairs, who will recommend admission on the advice of DPGC and sent to the Chairman, Senate for approval. The strength of non-degree students in any programme of a Department/School should not be more than 5% of the sanctioned strength.
3. Students admitted will be governed by all rules, regulations, and discipline of the Institute and shall pay the registration fee prescribed for such students.
4. If a foreign national student wishes to register as a non-degree student, his/her application should be routed through ICCR or other suitable Government of India program and will be processed according to clause 2 above.

## **3.0 REGISTRATION**

1. A student is required to register at the beginning of each semester for the courses/thesis credits that he/she intends to pursue in that semester. The registration process involves:
  - i) The student fills the Registration Form online in advance or on the day of physical registration as announced by the Institute. [Senate Resol. No. 13.6.4]
  - ii) payment of fees for that semester and clearance of outstanding dues, if any, a priori online or on the day of registration; [Senate Resol. No. 13.6.4]
  - iii) signing the registration roll in the concerned Department/School.
  - iv) All students who are on semester leave/maternity leave, etc., at the time of registration and not including leave under Clause 4 shall also register for retention fee or reduced credits.
2. A new entrant (to the postgraduate programme) who is awaiting the results of the qualifying examination will be allowed to register "provisionally" on submission of a certificate from his/her institution certifying that he/she has appeared in the final qualifying examination (including all papers in theory, practical, project, submission of thesis, oral, etc.). The candidate will submit attested copies of the certificates of having passed the qualifying examination with marks not less than the specified minimum by the last date for document submission as specified in the academic calendar (usually about 8 weeks from the date of registration).
3. All students who are not on authorized leave must continue to register in the following semester till they submit their thesis. However, if a student submits his/her thesis on or before the last date for adding/dropping of courses (as notified in the academic calendar), he/she need not register in that semester.
4. The INRA students and the foreign nationals who are admitted to the Ph.D. programme during a semester will be required to register for research credits with proportionate reduction

in units for the remaining time in the semester, as decided by the Convener, DPGC or the faculty advisor.

5. Ph.D. students who have submitted their thesis and are waiting for the defence of the thesis may register for a **retention fee**. They may, however, apply to the Institute for leave with permission to defend the thesis while on leave. Such students do not have to pay the registration fee.

6. In very special cases, students who have completed all the thesis work and analysis related to the thesis and are on sanctioned leave, the DoAA on the specific recommendations of the DPGC, may allow submission of the thesis without registration.

7. On the recommendation of the DPGC and the approval of the DoAA, the employees of IIT (BHU) Varanasi and QIP students registered for the Ph.D. programmes who have completed the course and thesis credit requirements and the prescribed residence period may not register in the following semester, provided they have completed research work related to their thesis. However, they will be required to submit their theses within the prescribed maximum period (specified in Section 6.1).

8. A student under the external registration category must complete the residence requirements (as laid down in Section 6.1) before the beginning of the semester in which he/she wants to register for thesis credits for the first time.

9. A student under the external registration category, who has completed the minimum residence requirements, can register for thesis credits during the period starting from one week prior to the end of the previous semester till the late registration date of the next semester, provided he/she has been awarded grades for the previous semester. As such, the student shall come back to the Institute to take the examination of the semester.

### **3.1. Late Registration**

1. If, for any compelling reason like illness, a student is unable to register on the day of registration, he/she will be allowed to register till the day of late registration specified in the academic calendar, along with a late registration fee as specified by the Institute. No late registration is permitted for the summer term [IC: Section 4.4].

2. In exceptional cases, the Chairman, Senate—on the recommendation of the DoAA and DPGC, may permit registration beyond the date of late registration. In such a case, the student will be allowed to register only for thesis credits.

3. If a student has already filled the online course Registration Form and also paid the Registration Fee online, prior to the announced date of Registration, and happens to be physically absent on the day of Registration is deemed to be late for Registration unless otherwise he is permitted according to sub-clauses 1 and 2 above. [Senate Resol. No. 13.6.4]

4. Late registrations due to prolonged summer internships are not permitted beyond the date specified for late registration in the Academic Calendar.

In case the student fails to report and register on or before the date of late registration without any bona fide reason, and the student also does not report the reason for the same to the Institute within two weeks of the date of late registration for that semester is liable to be cancelled. [Senate Resol. No. 13.6.4]

**3.2. Academic Advising** A student will be advised in the selection of courses either by the Convener, DPGC or by the faculty adviser appointed by the DPGC of the Department/School concerned. A student registering for thesis units must have a thesis supervisor assigned to him/her.

### **3.3. Semester Load Requirements (Till the Academic Session 2024-25)**

1. A semester load is defined as equivalent to about 55 credits. A student registering solely for thesis work may register for 5 thesis units, each carrying 11 credits. For a well-merited case, the Dean (Academic Affairs) may permit a student, on the recommendation of the Convener, DPGC, to register for a maximum of 20% overload (i.e. 11 additional credits with equivalent integral number of courses/thesis units) or a minimum of 20% under load (i.e. 11 credits less with equivalent integral number of courses/thesis units).
2. The normal semester load for a part-time student is equivalent to 33 credits. For a well-merited case, the DoAA may permit a part-time student to register for a maximum of 44 credits (with an equivalent integral number of courses/thesis units) and a minimum of 22 credits (with an equivalent integral number of courses/thesis units) during a regular semester.
3. A student in the external registration programme when registering for thesis credits to be carried out at his/her organization, can register for a maximum of 33 credits (3 units) or a minimum of 22 credits (2 units) during the regular semester.
4. A student is normally expected to register for thesis credits only after completing the coursework requirements. However, to fulfill the semester load requirements, a student may be permitted by the DPGC to register for thesis credits after the first semester.

Notwithstanding the above, if a student is permitted to go for an internship related to research work under any programme as per an MoU with an organization, either within the country or abroad, such students will be governed by the agreed conditions of the MoU and can be permitted to register at the appropriate time. [*Senate Resol. No. 13.6.4*]

**\*Note: An Institute Project Fellow may register for normal semester load (allowable maximum thesis unit) after completion of the required minimum course credit.**

### **3.3. Semester Load Requirements (For the Academic Session 2025-26 onwards)**

1. For thesis work, a normal semester load is defined as equivalent to 20 credits. Whereas, for coursework, a normal semester load ranges from 15 to 18 credits. A student registering solely for thesis work may register for 5 thesis units, each of which carries 4 credits. For a well-merited case, the Dean (Academic Affairs) may permit a student on the recommendation of the Convener, DPGC, to register for a maximum of 20% overload (i.e. 3/4 additional course/thesis credits with equivalent integral number of courses/thesis units) or a minimum of 20% underload (i.e. 3/4 course/thesis credits less with equivalent integral number of courses/thesis units).
2. The normal semester load for a part-time student is equivalent to 12 credits. For a well-merited case, the DoAA may permit a part-time student to register for a maximum of 16 credits (with an equivalent integral number of courses/thesis units) and a minimum of 8 credits (with an equivalent integral number of courses/thesis units) during a regular semester.

3. A student in the external registration programme when registering for thesis credits to be carried out at his/her organization, can register for a maximum of **12** credits (3 units) or a minimum of **8** credits (2 units) during the regular semester.

4. A student is normally expected to register for thesis credits only after completing the coursework requirements. However, to fulfil the semester load requirements, a student may be permitted by the DPGC to register for thesis credits after the first semester.

Notwithstanding the above, if a student is permitted to go for an internship related to research work under any programme as per an MoU with an organization, either within the country or abroad, such students will be governed by the agreed conditions of the MoU and can be permitted to register at the appropriate time.

### **3.4. Summer Term Registration**

Students may register in the summer term for up to a maximum of half the normal semester load (a maximum of 3 Theory courses), including courses from all previous Semesters. A student cannot register for a course in the summer term if the course is not offered. [IC: Section 7.4]

### **3.5. Adding/Dropping of Courses and Withdrawing from Courses**

1. Adding and/or dropping courses after registration is permitted on the student's request. It may be permitted only if the student's request is endorsed by the instructor of the course and is also endorsed by the Convener, DPGC. The last date of applying for adding and dropping of courses is specified in the academic calendar. No adding or dropping of courses is permitted in the summer term.

2. Also, a student may be required to drop a course at any stage if it is determined that he/she does not fulfil the prerequisites for the course, or if a timetable clash exists which does not permit him/her to attend all the meetings of the course, or any rule in these ordinances which forbids him/her to take the course(s) that he/she has registered for.

3. The DPGC in consultation with the instructor and with the approval of the Dean(AA) may allow a student at his/her request to withdraw from one or more courses during the semester, if he/she has been sick for considerable time and has submitted a certificate to the satisfaction of the DPGC, but the reduced load shall not be less than the minimum semester load (specified in Section 3.3). A student in the first semester of his/her academic programme and on a full semester load may also withdraw up to a maximum of one course on the recommendation of the DPGC and approval of the **Dean(AA)**. The withdrawal can be made within two weeks after the mid-term examinations.

### **3.6. Change of Registration from M.Tech./M.Pharm. Programme to Ph.D. Programme**

A student registered for the two-year M.Tech./M.Pharm. programme may be allowed in the beginning of the third-semester to change his/her registration to that of the Ph.D. programme on the recommendation of DPGC and with the approval of DoAA. Since this is a change of programme, Section 2.3 rules are not automatically applicable. Instead, one of the following two conditions must be satisfied.

a) The student (i) satisfies the eligibility criteria for admission to the Ph.D. programme as specified in Section 2.4.B but completes two semesters of the M.Tech./ M.Pharm.

programme, (ii) completes the coursework prescribed for the M.Tech./ M.Pharm. programme, and (iii) obtains a CPI of at least 7.5

b) The student (i) does not satisfy the eligibility criteria for admission to the Ph.D. programme as specified in Section 2.4.B but completes three semesters of the M.Tech./ M.Pharm. programme, (ii) completes the coursework prescribed for the M.Tech./ M.Pharm. programme, and (iii) obtains a CPI of at least **8.0**

Such a change of registration shall be reported to the Senate. Students in part-time M.Tech./ M.Pharm. programmes are not permitted to change over to a part-time or full-time Ph.D. programme.

For such students, the ‘effective’ date of registration in Ph.D. Programme will be taken as the date on which he/she got registered to M.Tech./M.Pharm. programme. He/She will be eligible for Assistantship of a Ph.D. student from the date of change of programme (but not from the ‘effective’ date of registration). [*Senate Resol. No. 13.6.5*]

### **3.7. Change of Registration from Full-Time to External Registration Programme**

If a student, admitted to M.Tech./M.Pharm. programme as a full time regular student, gets a professional employment after completing the course work requirements and minimum residence period in accordance with Section 6, he/she may be permitted, with the recommendation of DPGC and **Dean (AA)** and approval of the Chairman, Senate, to do his/her thesis work at his/her prospective organization, provided the organization is one of the approved organizations by the Institute listed in Annexure – IV. Such a student has to submit (i) the consent of the organization for carrying out the thesis work at the organization and (ii) the consent of a prospective external supervisor (along with his/her bio-data) from the organization before availing this facility. He/she has to register for every semester till he/she submits the thesis work as an external student.

If a student, who has registered for a Ph.D. programme as a full time regular student, gets a professional employment after passing the comprehensive examination and giving the state-of-the-art seminar, he/she can be permitted, with the recommendation of DPGC and **Dean (AA)** and approval of the Chairman, Senate, to do the rest of his/her thesis work at his/her prospective organization, provided the organization is one of the approved organizations by the Institute listed in Annexure – IV. Such a student has to submit (i) the consent of the organization for carrying out the thesis work at the organization and (ii) the consent of a prospective external supervisor (along with his/her bio-data) from the organization before availing this facility. He/she has to register for every semester till he/she submits the thesis work as an external student.

### **3.8. Paid Internship**

A full-time regular student of M.Tech./M.Pharm., if already completed the specified coursework and registered for thesis credits only, gets an employment or paid internship may be permitted\* with the recommendation of DPGC and **DoAA** and approval of the Chairman, Senate to do his/her thesis work at the prospective organization, provided the DPGC approves that the organization has infrastructure/facility to carry out the proposed thesis work. The DPGC should not disapprove any paid internship on the grounds that no faculty member can be appointed as an internal Supervisor. Such a student has to submit with the recommendation of the internal supervisor (i) the consent of the organization for carrying out the thesis work at the organization, (ii) the consent of the prospective external supervisor

(along with his/her biodata) from the organization before availing this facility. He/She will register for every semester till he/she submits the thesis work.

The M.Tech./M.Pharm. The thesis Oral Examination Committee shall be constituted as provided in the PG Ordinance, with the external supervisor as an additional member. The student shall not be entitled to any fellowship/stipend/TA from the Institute from the date of commencement of paid internship/employment.

**\*preferably in the 3rd Semester with the recommendation of DPGC and the supervisor.**

## **4. ATTENDANCE AND LEAVE RULES**

### **4.1. Attendance Requirements**

Attendance is important for learning from the teacher in a classroom or a laboratory. The understanding that a teacher can transmit to the students as well as the learning that can take place from discussions in the classroom, may not be attainable merely from textbooks. The attendance is an Institute requirement and needs to be fulfilled on a course-by-course basis. The student is expected to be present in all the classes i.e., 100% attendance. A grace of only 15% in attendance is allowed for minor illness and emergencies, for which no application will be required to be submitted.

For a student who has an absence above 25% in a course, whatever may be the reason for a shortfall in attendance, his/her registration in the course will stand cancelled. A student is required to be responsible and keep track of his/her attendance throughout the semester. The absence of 25% shall be calculated on the absolute number, rounded off to the next higher integer of the actual number of classes held in a course.

Further, a relaxation of seven days will be provided to a student who has obtained prior approval of the Dean (Academic Affairs) through the Dean (Student Affairs), Dean (R&D), or concerned Head of the Department/Coordinator of School to represent the Institute in various activities, and also for presenting a research paper. This relaxation may also be granted by the Dean (Academic Affairs) for prolonged illness of a duration of two weeks or more on the recommendation of DPGC. Any illness of duration less than two weeks shall not be considered for the above-mentioned relaxation.

### **4.2. Leave Rules**

Students may be granted leave under Sections 4.2.1 and 4.2.2 on application to the Head of the Department/Coordinator of the School concerned through the Convener, DPGC. Leaves under Sections 4.2.3 and 4.2.4 will be sanctioned by DoAA on the recommendation of DPGC. Applications must be submitted at least one week before the commencement of the leave requested. However, in the case of casual leave, the student is expected to submit/arrange to submit his/her leave application within 48 hours of availing such leave. Leave for a period longer than that specified in Sections 4.2.1, 4.2.2, and 4.2.3 may be sanctioned by DoAA on the recommendation of DPGC, and it will entail loss of financial assistantship for the extended period.

These leave rules mentioned in Sections 4.2.1 to 4.2.5 relate only to Institute Assistantship/**All full-time PhD Students**. They do not alter or reduce the attendance requirements specified in Section 4.1, which is required for academic purposes.

#### 4.2.1. Vacation and Casual Leave

1. A postgraduate student may be allowed vacation leave of up to 15 days per semester with a maximum of 30 days in an academic year, during any period of the Institute's vacation or intra-semester recess. The vacation leaves, not availed in a semester may be carried over to the next semester, but not from one academic session to the next academic session.
2. In addition, a student may be allowed casual leave for up to 8 days per semester, subject to the condition that such leave will not be allowed for longer than 6 days at a time. Casual leave cannot be combined with any other type of leave and will not be carried over.
3. There will be no loss of financial assistantship for students going on vacation or casual leave.

#### 4.2.2. Medical Leave

Leave on medical grounds, duly supported by a medical certificate, may be granted to a student for up to eight days per semester. Leave not availed may be carried over to the next semester up to a maximum of 8 days. However, at a stretch, the medical leave shall not exceed 15 days. Such leave shall not entail any loss of financial assistantship.

#### 4.2.3. Maternity Leave

A female student may be granted Maternity/ **Childcare Leave for a maximum of 240 days**. Further, a leave of up to 6 weeks is admissible for miscarriage, including medical termination of pregnancy. Such leave can be combined with any other leave due and will not entail any loss of financial assistantship.

Further, such students may not be allowed any relaxation in the maximum duration of the Ph.D. Programme. [Senate Resol. No. 22.7 dated 08.05.2018]

In both the above cases, if the student is given an earlier complete semester leave (or drop) due to any serious medical reasons, such period will be excluded in counting the total period. (amended by PG Ordinance Committee)

#### 4.2.4. Semester Leave

Semester leave for up to a maximum of two semesters for M. Tech., M. Pharm., **M.Sc.**, and Ph.D. students may be sanctioned for *bona fide* reasons. Except for medical reasons, such leave would not normally be sanctioned before a student has completed his/her residence requirements and in no case before the student has spent two semesters in the programme. However, on medical considerations, such leave may be sanctioned after his/her stay of one semester. Leave for more than one semester at a time will not be granted except for the cases mentioned in Section 4.2.5.

#### 4.2.5. Leave for Professional Employment

If a student is admitted to M.Tech./M.Pharm./M.Sc. programme gets professional employment after completing the coursework requirements, he/she may be granted semester leave for more than one semester at a stretch to join his/her job. Such a student can take leave from his/her employer at a later date and re-join the Institute by registering for thesis credits to complete the M.Tech./M.Pharm./M.Sc. programme without exceeding the maximum time limit from the date of his/her first registration as specified in **Section 6.1**. If he/she is unable

to complete the thesis within the above maximum period, he/she will not be allowed to continue in the programme.

This provision also exists for a student admitted to the Ph.D. programme, who has given the state-of-the-art seminar and who has completed the minimum residence requirements. Such a student can later take leave from his/her employer and re-join the Institute by registering for thesis credits to complete the Ph.D. programme without exceeding the maximum time limit from the date of his/her first registration as specified for completion of the programme in Section 6.1. If he/she is unable to submit the thesis within the above maximum period, he/she may not be allowed to continue in the programme.

A student, who has completed the requirement for coursework within two semesters or at the earliest at the end of the First Semester, may give SOTA before the end of the Semester in which she/he registered for thesis credits. Such students admitted to the Ph.D. programme and who have given their state-of-the-art, but have not completed the residence requirement, need to complete the minimum residence period before submitting the thesis. However, for such a student, a part of the semester before and after the leave shall not be counted as a residence period. [*Senate Resol. No. 18.15 dated 07.04.2017*]

#### **4.2.6 Medical Certificate**

If a student falls ill while being on the campus of the Institute, a medical certificate must be obtained from the designated medical officer of the Institute. If he/she falls ill outside the campus while on sanctioned leave, the medical certificate must be obtained from a registered medical practitioner. To satisfy itself, the Institute may require a medical examination to be performed by a designated doctor in the vicinity.

#### **4.2.7. Absence for More than Four Weeks on Sanctioned Leave**

If a registered student is absent on sanctioned leave for a period of 4 weeks or more at a stretch, DoAA may decide to convert the leave to a semester leave, or reduce the thesis units (in blocks of 11 or 4 credits as the case may be) appropriately, in case the student is registered only for thesis units.

#### **4.2.8. Absence without Sanctioned Leave**

Absence without sanctioned leave will entail loss of financial assistantship for the period of absence, and may result in the termination of the student's programme on the recommendation of the DPGC and approval of the DoAA.

### **5. PERMISSION TO PROCEED FOR ACADEMIC WORK OUTSIDE IIT (BHU)**

#### **5.1. Permission to Proceed to Other Academic Institutions and Research Organizations as Non-Degree Students**

In order to help students broaden their horizons and enrich their cultural and academic experience, the provision to proceed to other academic institutions and research organizations in India or abroad as non-degree students is available. Rules and procedures to be followed for availing this provision are as follows:

- i) An M.Tech. or a Ph.D. student who satisfies the minimum conditions laid down in paragraph (ii) below may proceed to another academic institution or research organization in India or abroad with prior permission of the DoAA on the recommendation of the DPGC.

- ii) Only those postgraduate students who have spent at least two semesters and have a CPI of at least 8.0 are eligible to proceed as non-degree students elsewhere.
- iii) For permission to spend time as a non-degree student elsewhere, an eligible student will make an application to the DoAA through the DPGC, duly supported by a statement of purpose to undertake the proposed work and sufficient information about the Department/Institution for the purposes of paragraph (iv) below.
- iv) The DPGC will consider the student's application forwarded by the supervisor/faculty adviser and will determine if the proposed programme of work is of such a nature that waiver for at least 33/12 credits per regular semester or 11/4 credits per summer term is possible. The DoAA may approve the application on the recommendation of the DPGC. In all such cases, the student will be informed about the requirements he/she must fulfil to apply for academic credit on his/her return.
- v) Permission to proceed to an institution as a non-degree student does not imply that the student will automatically get any waiver from the academic requirements of IIT (BHU), as laid down in this document.
- vi) The student, after completion of the work, will apply for a waiver from the requirements of his/her programme at IIT (BHU) Varanasi supported by an official transcript of the grades obtained and whatever material the DPGC may require for the purpose given in paragraph (vii) below. This Clause will also apply to any course(s) done remotely, for which prior permission was taken. [Senate Resol. No. 13.6.6]
- vii) The DPGC concerned will evaluate the work done by the student and will make recommendations to the DoAA after determining by whatever means it deems fit, the equivalent IIT (BHU) courses/requirements for which the student may be given a waiver.
- viii) On the recommendation of the DPGC, the DoAA may allow the waiver for a maximum of 55/20 credits. Against each requirement for which a waiver is granted, a T would appear on the grade report with an explanatory note that T stands for waiver/transfer for the work done at the Institution concerned. All such credits earned by waiver shall not be counted for SPI/CPI calculations.
- ix) The minimum residence requirement for the students who avail of this provision will remain unchanged for Ph.D. students, but may be reduced by one semester for M.Tech./M.Pharm. students, provided they spend at least one semester duration or two quarters of at least 6 weeks duration each as non-degree students elsewhere with prior permission.
- x) Those students who are selected by the Institute as per the recommendations of a competent body constituted by the Senate for such purpose to proceed on any institutional exchange programme will also have to go through the procedure and rules for the waiver of credits as outlined in paragraphs (vi), (vii), (viii), and (ix) above.

**Note:** These provisions given in this section **are not** applicable to the students going under the DAAD or any other foreign fellowship programme or MoU signed by the Institute/GoI, **duly recommended by DPGC, and approved by Dean(AA)**, and they will be governed by the norms/procedures as specified by DAAD or any other foreign fellowship or according to the MoU.

## **5.2. Permission to Proceed for Academic Activities (without being a non-degree student)** [Senate Resol. No. 13.6.6]

(i) The PG students can be permitted to proceed for academic activities outside IIT (BHU) to carry out field work, library work, computational work, experimental work, and lab work, and also to attend conferences, short-term courses, and to undertake other research work during Summer or Winter breaks, etc. Permission for a period of up to 30 days may be sanctioned by the DPGC of the Department/School concerned, with intimation to DoAA, based on an application duly forwarded by the supervisor(s). If such permission is required for a period longer than 30 days, the same may be granted by the Dean (Academic Affairs) on the recommendation of the DPGC of the Department/School concerned, and such a period may be counted for their residence requirements.

(ii) In case the collaborative research is outside IIT (BHU) Varanasi, the DPGC is required to make specific recommendations of cases where the student is seeking permission to avail this provision to carry out work at premier institutions outside IIT(BHU) Varanasi including those overseas, for **one semester** (exceptional cases one year may be approved by the Chairman, Senate) to make use of the special facilities or expertise available at such places. While making such special recommendations, DPGC should consider the following:

- i) whether such expertise is not available in the IIT (BHU); or
- ii) whether the work is likely to create a new area of research in our institute, or
- iii) whether the Supervisor is also visiting the place or having collaborative research and thus having formal/informal linkages with the said Institution/Laboratory.
- iv) whether any fellowship is provided to the student by the host.

## 6. ACADEMIC REQUIREMENTS

### 6.1. Minimum Residence, Maximum Duration, and Academic Requirements

The following Table lists the minimum residence and maximum duration allowed in the programme, and credit requirements for graduation in the various programmes (to be read together with Section 2.4 and Tables 2 & 3 of Annexure – II):

**The requirement of earning credits through coursework may be waived off by DoAA on the recommendation of DPGC for a student admitted to Ph.D. under the external registration programme provided he/she has M.Tech./M. Pharm. as a qualifying degree from an IIT.**

The following criteria may be followed for the evaluation of course credits

1. Ordinarily, no course waiver is to be provided
2. In specific cases, the student may be allowed to take up NPTEL/SWAYAM courses if recommended by DPGC.
3. Attendance waiver in particular courses may be provided on the recommendation of the DPGC, if equivalent courses are not available in NPTEL/SWAYAM portal. In such courses, all the assessment components of the course have to be completed by the student.

*(Senate resolution number 50.25 dated 17<sup>th</sup> December, 2025).*

However, the candidates admitted through the Executive Ph.D. Programs may earn the required credits for coursework through ONLINE resources like SWAYAM/NPTL, etc.,

portal or by hybrid classes. In the Executive PhD programs, candidates are compulsorily required to report to the concerned Department/School for SEVEN days per semester.

*"Course Work" includes only postgraduate course credits as well as permitted undergraduate course credits (up to a maximum number of 2 courses of level 4), unless stated otherwise. To satisfy the "Minimum Residence" requirements, registration must be over consecutive semesters; an exception will be made only if the student is on authorized leave. "Maximum Duration" is counted from the date of the student's first registration. SPI/CPI will be calculated only on the basis of coursework.*

***Credit structure for the academic session till 2024-25***

| <b>Programme</b>                           | <b>Minimum Total Credits</b> | <b>Minimum Credits through Course Work</b> | <b>Minimum Credits through Thesis Work</b> | <b>Minimum Number of Courses<sup>1</sup></b> | <b>Minimum Residence<sup>2</sup></b> | <b>Maximum Duration</b> |
|--------------------------------------------|------------------------------|--------------------------------------------|--------------------------------------------|----------------------------------------------|--------------------------------------|-------------------------|
| M.Sc.                                      | 220                          | 180                                        | 30                                         | 8                                            | 4 Semesters                          | 4 Years                 |
| M.Tech.                                    | 220                          | 88                                         | 99                                         | 8                                            | 4 Semesters                          | 4 Years                 |
| M.Pharm.                                   | 220                          | 88                                         | 99                                         | 8                                            | 4 Semesters                          | 4 Years                 |
| Ph.D. for students with M.Tech.            | 220                          | 44                                         | 110                                        | 4                                            | 4 Semesters                          | 6 Years <sup>3</sup>    |
| Ph.D. for students with M.Sc.              | 275                          | 66                                         | 110                                        | 6                                            | 5 Semesters                          | 6 Years <sup>3</sup>    |
| PH.D. for students with B.Tech./4 yr. B.S. | 330                          | 88                                         | 110                                        | 8                                            | 6 Semesters                          | 7 Years                 |

***Credits structure for academic session 2025-26 onwards***

| <b>Programme</b>                           | <b>Minimum Total Credits</b> | <b>Minimum Credits through Course Work</b> | <b>Minimum Credits through Thesis Work</b> | <b>Minimum Residence<sup>2</sup></b> | <b>Maximum Duration</b> |
|--------------------------------------------|------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------|-------------------------|
| M.Sc.                                      | 80                           | 60                                         | 15                                         | 4 Semesters                          | 4 Years                 |
| M.Tech.                                    | 80                           | 33                                         | 36                                         | 4 Semesters                          | 4 Years                 |
| M.Pharm.                                   | 80                           | 33                                         | 36                                         | 4 Semesters                          | 4 Years                 |
| Ph.D. for students with M.Tech.            | 80                           | 15                                         | 40                                         | 4 Semesters                          | 6 Years <sup>3</sup>    |
| Ph.D. for students with M.Sc.              | 100                          | 21                                         | 40                                         | 5 Semesters                          | 6 Years <sup>3</sup>    |
| Ph.D. for students with B.Tech./4 yr. B.S. | 120                          | 27                                         | 40                                         | 6 Semesters                          | 7 Years                 |

1. The 'Minimum Number of Courses' is only indicative, and in case of any difference, the minimum number of credits through coursework will be required to be fulfilled.
2. Students admitted to Ph.D. under the External Registration programme/**QIP** will be required to stay on the campus at least as long as it takes to (i) complete the required

coursework, (ii) pass the comprehensive examination, and (iii) give the state-of-the-art seminar.

3. Add an additional year in case of part-time/external students/**Executive part-time Ph.D. Programs.**

4. **If the requirement of minimum course credits is waived off, a student under external registration will have to earn the total minimum credits through thesis work only.**

The minimum specified for each category is arrived at on the basis of optimum credits per semester. This gives flexibility to a student to choose more/less credits between courses and research work to make up for the minimum credit requirement for a programme.

A Department/School may prescribe, with prior approval of the DoAA, additional credits of courses/thesis over and above the minimum specified in the above Table.

#### **Calculation of credits for M.Tech., M.Pharm., M.Sc., and Ph.D. Programmes:**

The credits assigned for the coursework are given by

$$C = 3L + 2T + P \text{ (Till the Academic session 2024-25)}$$

$$C = 1L + 1T + 0.5P \text{ (From Academic Session 2025-26 onward)}$$

where L indicates the number of lecture hours per week, T indicates the number of tutorial hours per week, P indicates the number of practical hours per week.

#### **6.2. Extension of Programme**

No student who has completed the prescribed maximum duration in the programme shall be allowed to register in the subsequent semester unless he/she has been granted extension of the programme by the Chairman, Senate, on the recommendations of the DPGC and the DoAA.

#### **6.3. Audit Courses**

Students are permitted to audit courses, with the consent of the instructor concerned, but such courses shall not be shown either on the registration form or on the grade report.

#### **6.4. Evaluation of Academic Performance in a Course**

1. In each course a student is registered, he/she earns certain approved credits and is awarded a letter grade indicating his/her overall performance in that course.

2. A student shall be continuously evaluated for his/her academic performance in a course through tutorials, practicals, home assignments, term papers, field work, seminars, quizzes, Periodical Tests, Mid-Term Examination, the End-Semester Examination, as applicable. The distribution of weightage for each component shall be as follows :

(a) **Theory Courses with Laboratory:**

|                                                  |            |
|--------------------------------------------------|------------|
| (i) End-Semester Examination                     | 50         |
| (ii) Mid-Semester Examination                    | 20         |
| (iii) Laboratory Work                            | 20         |
| (iv) Quizzes/short tests, tutorials, assignments | 10         |
| <b>Total</b>                                     | <b>100</b> |

(b) **Theory Courses without Laboratory:**

|                                                   |            |
|---------------------------------------------------|------------|
| (i) End-Semester Examination                      | 60         |
| (ii) Mid-Semester Examination                     | 30         |
| (iii) Quizzes/short tests, tutorials, assignments | 10         |
| <b>Total</b>                                      | <b>100</b> |
| <b>(c) Laboratory Courses:</b>                    |            |
| (i) Sessional work, quizzes and regularity        | 50         |
| (ii) Practical examination                        | 50         |
| <b>Total</b>                                      | <b>100</b> |

### **Coordination Committee:**

(a) For each course of a semester, a Coordination Committee shall be constituted by the DPGC, and the DPGC shall also nominate one faculty member from amongst the members of the committee to act as the Convener of the committee. For subjects requiring classroom instructions, the Coordination Committee shall consist of all the teachers involved in teaching and conducting classes for that course (lectures, tutorials, field work, drawing/design work, practical laboratories, workshop classes, seminars, etc.). The committee shall have at least two members. If only one teacher is involved in teaching, the DPGC will include one additional faculty of the area related to the course as a member in the committee. In no case is a tutor or teaching assistant permitted to conduct theory courses. They may be engaged for tutorial classes and for laboratory classes under the guidance of the course convener.

(b) The Coordination Committee\* shall have the following functions during the semester.

- i) Planning and coordination of teaching theory as well as practical subjects.
- ii) Scheduling home assignments, quizzes, tutorials, etc.
- iii) Conducting and assessing short tests, etc.
- iv) Setting of question papers for Mid-Term and End-Semester Examinations. The following should be observed by the Coordination Committee:

a) The question paper should be designed in such a manner that it covers the complete syllabus as per the course structure and content given in the course booklet/Academic Portal and announced to the student by the concerned teacher at the beginning of the semester.

b) The question paper should be designed in a manner that it contains questions of varying difficulty levels.

For example: The paper should have a fair balance of questions containing direct question/, logical reasoning/ analytical ability/ mathematical ability/ case studies, and questions of applied nature depending upon the subject.

c) The question paper should be designed in a manner that students can complete the paper in the prescribed duration of the examinations. The question paper should not be short or long in duration i.e., time distribution should be fair.

d) Marks assigned to the questions should be fairly distributed over all units of the course content of the concerned subject.

v) Evaluation of Answer books and preparation of the final marks list and submission of grades to the Examination Section, Office of Dean (Academic Affairs).

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\* If only one teacher is involved in teaching, all the functions except setting of question papers for Mid Term and End Semester Examination shall be carried out by the convener only.

The following grading systems and attendance rules shall be applicable to different categories of M.Sc., M.Tech., M.Pharm & Ph.D. students at IIT (BHU). (*Senate Resolution No. Ninth(Special) Annexure-II*)

**Grading System applicable for**

| Grade                | Grade Point | Description                                                 |
|----------------------|-------------|-------------------------------------------------------------|
| <b>A*</b>            | <b>10</b>   | <b>Outstanding (Extraordinarily high level of learning)</b> |
| <b>A</b>             | <b>10</b>   | <b>Excellent</b>                                            |
| <b>A<sup>-</sup></b> | <b>9</b>    | <b>Very Good</b>                                            |
| <b>B</b>             | <b>8</b>    | <b>Good</b>                                                 |
| <b>B<sup>-</sup></b> | <b>7</b>    | <b>Very Fair</b>                                            |
| <b>C</b>             | <b>6</b>    | <b>Fair</b>                                                 |
| <b>C<sup>-</sup></b> | <b>5</b>    | <b>Poor (But pass grade for the course)</b>                 |
| <b>F</b>             | <b>0</b>    | <b>Fail (Extremely low level of learning)</b>               |
| <b>S</b>             | ---         | <b>(Research Unit) Satisfactory</b>                         |
| <b>X</b>             | ---         | <b>(Research Unit) Unsatisfactory</b>                       |
| <b>I</b>             | ---         | <b>Incomplete</b>                                           |
| <b>T</b>             | ---         | <b>Waiver/ Transfer</b>                                     |
| <b>Y</b>             | —           | <b>Deregister</b>                                           |

3. If a student does not complete all the requirements for a course for a genuine reason, the instructor may award the grade I (Incomplete), awaiting completion of work. An I grade may also be awarded if the student has not appeared in the end-semester examination for cogent reasons. If the reason for missing the end-semester examination is not accepted as a cogent reason by the competent authority, the I grade shall be converted to a fail grade F; otherwise, a make-up end-semester examination shall be conducted, and the grade I shall be replaced by the grade obtained by the student, as per the provisions of this document. An I grade must be converted by the instructor to a regular letter grade by the last date for such conversion specified in the Academic Calendar, failing which it is automatically converted to an F grade by the Dean of Academic Affairs Office. Unless there is a written request from the instructor for extension of the last date, which is accepted by a competent authority.

4. A student getting an F grade in a course must repeat the course. If the course happens to be an elective course, he/she can substitute the same with another elective course with the permission of the Convener, DPGC.

5. If an M.Tech./M.Pharm. /M.Sc. student does not secure a CPI of at least 6.0 at the end of a semester/summer term, he/she may be allowed to repeat a course in which he/she has obtained grade C<sup>-</sup>, or substitute the course (if it is an elective course) by another elective course with the permission of the Convener, DPGC.

If a Ph.D. student does not secure a CPI of at least 6.5 at the end of immediate following Summer Term after the completion of two regular semesters from the date of admission, he/she may be allowed to repeat a course in which he/she has obtained grade C<sup>-</sup>, or substitute

the course (if it is an elective course) by another elective course with the permission of the Convener, DPGC.

Whenever a student is permitted to repeat or substitute a course, the new letter grade replaces the old letter grade in the computation of the CPI, but both the grades appear on his/her grade report.

6. A student registers for thesis credits for M.Tech., M.Pharm., **M.Sc.**, or Ph.D. programme in units of 11/4 (Academic Session 2025-26 onwards) credits in a semester. A semester load of research work is equivalent to 5 units.

At the end of the semester, the progress made by an M.Tech./M.Pharm./**M.Sc.** student in the thesis work during the semester will be assessed by the supervisor(s) and the grade S/X will be awarded for each thesis unit if the work is satisfactory/unsatisfactory, as the case may be.

At the end of the semester, the Research Progress Evaluation Committee (RPEC) (Section 11.2.1) appointed for the purpose will assess the progress made by a Ph.D. student towards the thesis work during the semester, and the grade S/X will be awarded for each thesis unit if the work is satisfactory/unsatisfactory, as the case may be.

Thus, a student registered for 5 units can get one of the following six combinations, namely, 5S, 4S+1X, 3S+2X, 2S+3X, 1S+4X, or 5X.

Format for the M.Tech., M.Pharm., **M.Sc.**, and Ph.D. thesis grades in students' grade reports

| Thesis Units | Maximum Thesis Credits | Grading Options                      |
|--------------|------------------------|--------------------------------------|
| 5            | 55                     | 5S, 4S+1X, 3S+2X, 2S+3X, 1S+4X or 5X |
| 4            | 44                     | 4S, 3S+1X, 2S+2X, 1S+3X or 4X        |
| 3            | 33                     | 3S, 2S+1X, 1S+2X or 3X               |
| 2            | 22                     | 2S, 1S+1X or 2X                      |
| 1            | 11                     | 1S or 1X                             |
| 0            | 0                      | 0S+0X                                |

From the Academic Year 2025-26 onwards

| Thesis Units | Maximum Thesis Credits | Grading Options                      |
|--------------|------------------------|--------------------------------------|
| 5            | 20                     | 5S, 4S+1X, 3S+2X, 2S+3X, 1S+4X or 5X |
| 4            | 16                     | 4S, 3S+1X, 2S+2X, 1S+3X or 4X        |
| 3            | 12                     | 3S, 2S+1X, 1S+2X or 3X               |

|   |    |                 |
|---|----|-----------------|
| 2 | 08 | 2S, 1S+1X or 2X |
| 1 | 04 | 1S or 1X        |
| 0 | 0  | 0S+0X           |

7. If a student is on leave for a part of the semester or submits his/her thesis in the middle of a semester, the DoAA may reduce his/her thesis units appropriately, on the recommendation of DPGC.

8. In addition to the above, a separate oral examination will be conducted for M.Tech./M.Pharm./M.Sc. students as outlined in Section 10.4.1.

### 6.5. Computation of the Semester Performance Index (SPI) and Cumulative Performance Index (CPI)

The Semester Performance Index (SPI) is a weighted average of the grade points earned by a student in courses credited and describes his/her academic performance in a semester. If the grade points associated with the letter grades awarded to a student are  $G_1, G_2, G_3, G_4$ , and  $G_5$  in five courses and the corresponding credits are  $C_1, C_2, C_3, C_4$ , and  $C_5$ , the SPI is given by

$$SPI = \frac{C_1 \times G_1 + C_2 \times G_2 + C_3 \times G_3 + C_4 \times G_4 + C_5 \times G_5}{C_1 + C_2 + C_3 + C_4 + C_5}$$

The Cumulative Performance Index (CPI) indicates the overall academic performance of a student in all the courses registered up to and including the latest completed semester/summer term. It is computed in the same manner as the SPI, considering all the courses (say,  $n$ ), and is given by

$$CPI = \frac{\sum_{i=1}^n C_i \times G_i}{\sum_{i=1}^n C_i}$$

where  $C_1, C_2$ , etc. are the credits for the courses that the student has registered for all the semesters, including the summer terms completed, and  $G_1, G_2$ , etc. are respectively the corresponding grade points.

In the computation of both SPI and CPI, courses with S, X, and T grades are ignored.

Where necessary, the CPI may be converted to its percentage equivalent by multiplying the same by 10.

### 6.6. Make-up Examination

If a student, for cogent reasons such as illness, etc., fails to appear in the midterm/ the end-semester examination in one or more course(s), he/she may make a request personally or through someone to the Dean (Academic Affairs), duly forwarded by the Convener, DPGC, for a make-up examination within two days of the date of the scheduled examination. Such a request must, however, be made on a prescribed form, available in the office of the Dean of Academic Affairs, giving reasons for the failure to appear in the end-semester examination

with a certificate from the designated medical officer of the Institute, in case the failure was due to illness.

The make-up examination is ordinarily scheduled after the end-semester examination but before the last date for submission of grades. However, if the illness due to which such an examination was requested prolongs, the make-up examination may be conducted at a suitable date, but well before the date of registration for the next semester. [Senate Resol. No. 13.6.7]

### 6.7. Academic Performance Requirement

1. In the M.Tech./M.Pharm./M.Sc./Ph.D. programme one has to fulfil the credit requirement as specified in Section 6.1.

2. The minimum CPI requirement for graduation is

M.Tech./M.Pharm./M.Sc. programme : 6.0.

Ph.D. programme: 6.5.

3. The DPGC will keep a watch on the progress of students who earn less than 50% of credits at the end of the first semester and issue a letter stating that they should fulfil the requirements as per the following clause with intimation to the DoAA.

4. If a student, at the end of the summer term after the second semester, fails to earn at least 50% of the total credits of the cumulative load up to that point, he/she shall be deemed to have earned a retention fee, and all the grades he/she has obtained in both the first and the second semesters will be cancelled. **Such a student has to repeat the programme by registering again for it as a fresh candidate.** However, for the purpose of maximum duration of the course, the date of his/her first registration shall be treated as the starting point. The grade report shall indicate that the previous grades are cancelled and the fresh grades are for the semesters that he/she has repeated.

The duration of the Institute Assistantship will also normally be limited to the stipulated period mentioned during the award of the fellowship. [Senate Resol. No. 13.6.7]

5. The DPGC will also keep a watch on the M.Tech./M.Pharm./M.Sc./Ph.D. students who are registered for the thesis credits, and will issue a warning letter to a student if he/she accumulates two X grades in the thesis units.

6. An M.Tech./M.Pharm./M.Sc. student will normally not be allowed to continue in the programme if he/she accumulates four or more X grades in the thesis units.

7. A Ph.D. student will normally not be allowed to continue in the programme if he/she accumulates eight or more X grades in the thesis units.

8. The cases of termination of the programme of such students will be presented to the Senate by the Dean (Academic Affairs) based on the recommendation of the DPGC concerned.

9. The termination letter is issued by the Head of the Department/Coordinator of the School after receiving the communication from the Dean of Academic Affairs.

### 6.8. Exit from Ph.D. Program

A Ph.D. student in an engineering Department/School may exit from the programme with an M.Tech./M.Pharm. as per clause 2.4.B.1.1 provided

(i) he/she does not already hold a master's degree in engineering/**Pharmacy**

- (ii) a request to this effect is made at least six months before the exit but not before the student has completed two-and-a-half years (excluding the period of sanctioned leave, if any) in the programme;
- (iii) the request is approved by the Senate on the recommendations of DPGC and DoAA; and
- (iv) the student has completed all the requirements of the M.Tech./M.Pharm. degree (including thesis).

This provision is available only for the students admitted in those Departments/Schools in which already a two-year M.Tech./M.Pharm. programme is existing.

## 7. COMPREHENSIVE EXAMINATION OF Ph.D. STUDENTS

1. Students registered in the Ph.D. programme must pass a comprehensive examination designed to test the overall comprehension of the student in the various subjects. A student can appear in the comprehensive examination only after he/she has completed the course requirements and satisfied the minimum specified CPI requirement (To be read with Clause 6.1).
2. Students with B.Tech., M.Sc., or M.A. degrees or part-time students with M.Tech./M.Pharm. or equivalent degrees admitted to Ph.D. programmes may appear in the comprehensive examination at the earliest at the end of the second semester, **but must pass the same before the end of the fifth semester after their first registration**. Students admitted with M.Tech. or equivalent degrees may appear in the comprehensive examination at the earliest at the end of the first semester, but must pass the same before the end of the fourth semester after their first registration. The above time limits are exclusive of the period of sanctioned leave, if any.
3. The examination will be in oral form but may be supplemented with a written part.
4. The comprehensive examination board will consist of at least three but not more than five faculty members of the student's Department/School, plus one faculty member from outside the Department/School. There may be two faculty members from outside the Department/School in case the co-supervisor is from outside the Department/School. The supervisor may have the option to propose 4-5 names from premier Institutions and Research establishments in addition to the names of faculty members from the Institute for comprehensive examination. The Dean/Chairman may approve one or two such experts to be members of the committee. (*Senate resolution number 50.25 dated 17<sup>th</sup> December, 2025*). In the case of external registration candidates, the external supervisor from the R & D organization may be invited to be a member of the examination board. The Constitution of the board will be proposed by the DPGC in consultation with the Head of the Department/Coordinator of the School and the thesis supervisor, if already assigned, and will be forwarded to the Dean (Academic Affairs), who will send it to the Chairman, Senate for approval. The thesis supervisor of the student, if already assigned, will be the Chairman of the board. In case no thesis supervisor is assigned, the Convener, DPGC, or the Faculty Advisor will be the Chairman of the board.
5. A student will be considered to have passed the comprehensive examination if all the members (with the exception of at most one member) of the board are satisfied with the student's performance in the examination. The report of the comprehensive examination will be sent to the Dean (Academic Affairs).

6. In case a student does not pass the comprehensive examination in his/her first attempt, a second comprehensive examination will be conducted with a gap of at least one semester by the same board that was constituted earlier, unless a different board is approved by the Chairman, Senate, on the recommendation of the DPGC and the DoAA.

Students can register for Thesis Credits any time after their I Semester of coursework. However, they should complete their Comprehensive and give SOTA during the Semester subsequent to completion of their coursework. [Senate Resol. No. 13.6.8]

The student who is allotted a Supervisor at the end of that I semester or II semester may register for thesis credits in addition to the course credits that he/she might have registered for clearing the comprehensive. However, the total credits (Thesis + Course) should not exceed 55/20 the normal Semester load. [Senate Resol. No. 13.6.8]

This provision is not to override the requirements of Clauses 8 and 9, and such students are required to give their SOTA at the end of the semester in which they registered for thesis credits for the first time. In addition, they should clear their comprehensive examination during the subsequent semester. [Senate Resol. No. 13.6.8]

7. The examination board may also recommend additional coursework in case of extremely low performance of a candidate.

8. If a student fails twice in the comprehensive examination, he/she would have to leave the Ph.D. programme. All such cases shall be brought to the notice of the Senate.

## **8. CANDIDACY FOR THE Ph.D. DEGREE**

A student enrolled in the Ph.D. programme is formally admitted to candidacy for the Ph.D. degree after he/she has completed the course requirements for the degree with at least the minimum required CPI, and has passed the comprehensive examination. Only such students who are admitted to the candidacy will be allowed to submit Ph.D. theses in accordance with the guidelines laid down in Section 10.3.2.

## **9. STATE-OF-THE-ART SEMINAR**

Every Ph.D. student admitted to candidacy for the Ph.D. degree is required to give a general seminar in the Department/School in the presence of the Research Programme Evaluation Committee (RPEC) [IC: Section 10.2.1], covering the State-of-the-Art (SOTA) of the proposed area of research. The supervisor may have the option to propose 4-5 names from premier Institutions and Research establishments in addition to the names of faculty members from the Institute for SOTA seminar. The Dean/Chairman may approve one or two such experts to be members of the committee for the SOTA examination. (Senate resolution number 50.25 dated 17<sup>th</sup> December, 2025). This seminar must be given before the end of the semester in which the student registered for thesis credits for the first time. A report of satisfactory completion of this requirement is to be communicated to the Dean (Academic Affairs) through the convenor DPGC by the thesis supervisor. The supervisor will be the Chairman of the SOTA Seminar. [Senate Resol. No. 13.6.8].

**A candidate who doesn't qualify in SOTA will be given another opportunity after 6 months. If one doesn't succeed in both attempts, the PhD program may be considered for termination.** (Senate resolution number 50.25 dated 17<sup>th</sup> December, 2025).

## 10. THESIS AND THESIS EXAMINATION

### 10.1. Appointment of Thesis Supervisors for M.Tech., M.Pharm., M.Sc., and Ph.D. Students

1. A student shall not normally have more than two supervisors (Supervisor and a Co-Supervisor) at any given time. In case of students under external registration programme, the co-supervisor shall be from the sponsoring organization, who shall be referred to as external supervisor.

2. The supervisor(s) will normally be appointed at the end of the first semester for M.Tech./M.Pharm./M.Sc. students. The Supervisor shall be appointed within thirty days from the date of registration for a Ph.D. student. **Supervisor shall be appointed in the first semester (within thirty days from the date of registration) for a Ph.D. student admitted under the external registration category, provided the requirement of earning credits through coursework has been waived. (Refer Clause 6.1)**

However, a student under an external registration programme may be allotted supervisors (one from the Institute and the other (external supervisor) from the sponsoring organization) at the time of first registration to the Ph.D. programme.

Until the supervisor is appointed, a faculty advisor may be appointed by the DPGC for all students admitted in a particular semester, who will advise on the selection of courses, oversee the performance and credit requirements of each in that batch of students.

3. A student is not permitted to register for thesis credits in the First semester of registration for Ph.D. [Senate Resol. No. 13.6.9]

Thesis supervisor(s) of a student will be appointed from amongst the faculty members of the Department/School by the Dean (Academic Affairs) on the recommendation of DPGC. In case of a Ph.D. student who is required to work in two Departments/Schools, he/she will have supervisor from the Department/School in which the student has enrolled for Ph.D. programme and a Joint Supervisor /co-supervisor from the other Department/School. **The Joint supervisor from outside of the parent department of the Institute will be appointed on the recommendation of the DPGC, with approval from the Dean (Academic Affairs). The administrative function relevant to the PhD program will be performed by the parent Department. A joint MoU is necessary to appoint a joint Supervisor from outside the Institution.**

4. DST-INSPIRE Faculty or a Faculty Fellow selected by any other Scheme similar to DST-INSPIRE may be permitted to **supervise** a Ph.D. student or M.Tech./M.Pharm. /M.Sc. student only if it is a Joint Supervision along with an identified **supervisor**. **Both the supervisors** together are required to submit an undertaking that they are jointly working in the area, and in case the Supervisor, who happens to be DST-INSPIRE Faculty, ever leaves the Institute, another Supervisor who is fully conversant with the work will continue to guide the research student on the same topic by becoming the main Supervisor.

The above conditions also apply to the guidance of a Ph.D. student for an Assistant Professor on contract. For guidance of M.Tech./M.Pharm./M.Sc. student, he/she may guide independently as a supervisor, if his/her tenure permits.

Visiting Faculty who wish to participate in the research activities of the Department/School may do so by offering their mentorship and guidance to the research. If such collaborative work results in publication/s then the Visiting Faculty becomes a Co-author. However, the

Visiting Faculty may be associated formally as Co-Supervisor for M.Tech./M.Pharm./M.Sc. thesis if his/her tenure permits.

In exceptional cases, if the DPGC of a Department/School recommends the name of an expert in an area as Visiting Faculty or otherwise, he/she can be recommended as Supervisor/Co-Supervisor by the Department/School concerned as per the existing PG Ordinances.

The research Associates who were working in the erstwhile Institute of Technology, Banaras Hindu University, and whose services are absorbed (transferred) into IIT(BHU) Varanasi and who are under consideration of being treated as Senior Research Officers, are eligible to Supervise/Co-Supervise Ph.D./ M.Tech./ M.Pharm./M.Sc. theses provided they fulfil the following conditions:

- (i) They have had a continuing track record of research in the last three years.
- (ii) They have had at least one publication per year in reputed journals in their area of research in the last three years.
- (iii) As regards any freshly-joined Research Associate(s) selected by UGC or CSIR or any R&D Project, their cases will only be considered for Supervisorship/Co-Supervisorship when they are treated equivalent to a Senior Research Officer.

If a faculty member takes a Ph.D. student, within Two years before one's date of retirement, a Co-Supervisor (not due to retire within 3 years) must be taken with the condition that the Supervisor and Co-Supervisor together are required to submit an undertaking that they are jointly working in the area and after retirement of the Supervisor, the Co-Supervisor who is fully conversant with the work will continue to guide the research student on the same topic by becoming the main Supervisor.

Under exceptional circumstances, an employee of IIT (BHU) Varanasi with the rank of senior scientific officer and above and having a doctoral degree in the discipline concerned can be appointed as a supervisor/co-supervisor of a Ph.D. student. The recommendation of the DPGC through the DoAA, regarding the merit and qualifications of the supervisor/ co-supervisor under consideration, will be sent to the Chairman, Senate for approval. Such an employee can be appointed as a supervisor/co-supervisor for only one Ph.D. student at a time.

5. In exceptional cases, a student can have a **joint** supervisor from outside the Institute on the recommendation of the DPGC and the DoAA and approval of the Chairman, Senate. **The appointment of a joint supervisor should follow the serial number three of 10.1.** In case the Supervisor is opted from the Banaras Hindu University, such cases will be governed by the provisions of the MoU between IIT(BHU) and the Banaras Hindu University. [*Senate Resol. No. 13.6.9*]

6. An Institute Professor cannot be the sole supervisor of any student. Such an Institute Professor may be permitted to supervise/co-supervise a Ph.D. student or M.Tech./M.Pharm./M.Sc. student only if it is a Joint Supervision. The Supervisor and Co-Supervisor together are required to submit an undertaking that they are jointly working in the area, and in case the Supervisor, who happens to be the Institute Professor, ever leaves the Institute, the Co-Supervisor is fully conversant with the work and will continue to guide the research student on the same topic by becoming the main Supervisor.

7. The appointment or change of supervisor(s) will be communicated to the DoAA by the DPGC. No change/addition of supervisor(s) is allowed after the thesis has been submitted.

8. In case there has been a change/addition in the supervisor(s), the M.Tech./M.Pharm./M.Sc. thesis will not be submitted earlier than three months, and the Ph.D. thesis will not be submitted earlier than **one year** from the date of such a change.

9. If a student's supervisor proceeds on long leave for more than one year in case of Ph.D. students, and on leave for more than three months in case of M.Tech./M.Pharm./M.Sc. students, the DPGC shall appoint a new supervisor or a co-supervisor in consultation with the supervisor and the student. In such a case, the number of supervisors may be more than two if an external supervisor already exists. If the supervisor of a student proceeds on leave for not more than one year in case of Ph.D. students\*, and not more than three months in case of M.Tech./M.Pharm./M.Sc. students, the DPGC may appoint a programme coordinator to take care of the various formalities.

**\*Note:** The comprehensive examination can be conducted by the Convener, DPGC, or the programme coordinator. However, the SOTA, open seminar, thesis submission, defense, etc., might get postponed till the supervisor returns. However, if the student has a co-supervisor, these matters may be handled by the co-supervisor.

10. If all research work and related analysis are complete except for writing and submission of the thesis, and the supervisor proposes to go on leave, the DPGC may appoint a programme coordinator to take care of the formalities, such as providing the list of examiners, conducting the oral examination, etc.

11. In case a supervisor resigns/retires/expires or otherwise ceases to be a faculty member of the Institute, the DPGC will appoint a new supervisor or co-supervisor.

12. In case a faculty member is due to retire in less than two years' time, he/she will not be appointed as a supervisor for a Ph.D. student. However, he/she can be appointed as a co-supervisor for a Ph.D. student and a supervisor for M.Tech. student. [Senate Resol. No. 13.6.9]

13. In such extraordinary situations as and when a supervisor refuses to supervise a student *or a student is not willing to continue with the allotted Supervisor during the course of the thesis work*, the candidate may be given an option to identify another supervisor from the same Department/School and transfer his/her thesis credits earned thus far, under the new supervisor. Alternatively, the candidate may be given a choice to transfer his/her registration to another Department/School where a matching research area exists and a faculty member is willing to supervise the student. The two DPGCs concerned should reach a mutual agreement. The matter should be sent to the Chairman of the Senate, through DoAA, for approval.

However, this provision cannot be exercised as a matter of right. [Senate Resol. No. 13.6.9]

## **10.2. Constitution of Committees/Boards for Thesis and Oral Examination**

### **10.2.1. Research Progress Evaluation Committee**

a. The Research Progress Evaluation Committee (RPEC) for a Ph.D. student consists of the Supervisor(s), one subject expert from the Department/School and one member from outside the Department/School. The RPEC examines the research progress of the candidate at the end of each semester and awards grades. The Supervisor will be the Chairman of the RPEC. The committee is constituted by the supervisor and forwarded by the DPGC and communicated to the Dean, Academic Affairs, for approval.

b. The supervisor may also include experts from premier institutions or research establishments in addition to RPEC members of the Institute. The inclusion of an expert from a premier Institute or research establishment is not a mandatory provision. In the case of a joint supervisor, the RPEC will be formed by the supervisor of the parent department.

c. DPGC may conduct an evaluation of the research progress of all PhD students of respective Departments who have completed three years from the date of registration.

#### **10.2.2. M.Tech./M.Pharm./M.Sc. Thesis Oral Examination Committee**

1. The thesis will be examined by an oral examination committee proposed by the thesis supervisor(s)/programme coordinator in consultation with the Head of the Department/Coordinator of the School concerned. It will be recommended by the DPGC and approved by the Dean (Academic Affairs).

2. The committee shall consist of the thesis supervisor(s)/ programme coordinator and at least two but not more than four other members, one of whom should belong to a Department/School other than the student's Department/School. The thesis supervisor/programme coordinator will act as the Chairman of the Committee.

3. With respect to the constitution of the Oral Board for M.Tech./M.Pharm./**M.Sc.**/IDD students, the option is exercised for the constitution of a specialization-wise board for the Group of students in the case of big Departments/Schools. In case of smaller Departments/Schools having no specializations, an individual Board for each student be constituted.

The Chairman of the Board will be the Supervisor of the respective student by rotation. This is applicable to bigger Departments as well as smaller Departments. [Senate Resol. No. 13.6.9]

#### **10.2.3. Ph.D. Thesis Board**

1. The thesis board shall consist of three members in addition to the thesis supervisor(s) and is approved by the Chairman, Senate. Unless some special circumstances make it impractical, at least two members of the thesis board (other than the supervisor(s)) must be from outside the Institute, and at least one of these two must be from within the country. The thesis supervisor will be the chairman of the board.

2. The procedure for constituting the thesis board is given below.

i) The thesis board may be proposed at most 4 weeks before the submission of the thesis.

ii) The thesis supervisor(s)/ programme coordinator, in consultation with the Head of the Department/Coordinator of the School shall propose a list of examiners consisting of at least six names for the thesis board (in addition to the thesis supervisor(s)/ programme coordinator). This list, along with an adequate number of copies of the extended abstract/synopsis (prepared according to the format prescribed in "Specification and Information Regarding the Preparation of Thesis", **as per Annexure-IX**), shall be forwarded by the DPGC to the Dean of Academic Affairs through the Dean (Academic Affairs). This may be done about one month before the submission of the thesis, so that the necessary processing of the selection of examiners and obtaining their consent can be carried out by the Dean (Academic Affairs).

In case the Thesis work spans an allied discipline, then the names of examiners from the allied discipline may also be included. Form V will suitably be modified to include this provision. [Senate Resol. No. 13.6.9]

iii) The Chairman, Senate in consultation with the Dean of Academic Affairs will select the members of the thesis board from this list. If considered necessary, the Chairman, Senate may require additional names of experts to be submitted or may select members outside the list(s) thus submitted. In case the Chairman, Senate is the supervisor/co-supervisor of the student concerned, the Dean of Academic Affairs will select the members of the thesis board. In case the Dean of Academic Affairs is the supervisor of the student concerned, the Chairman, Senate will select the members of the thesis board.

iv) The names of the members of the thesis board shall be kept confidential till successful completion of the thesis evaluation. However, on completion of Ph.D. thesis evaluation (as detailed in Section 10.4.3), the Academic Section will send to the thesis supervisor(s) the names of the Institute faculty who are the members of the thesis board, as well as that member who is from outside the Institute but is from within the country so that these names can be included in the proposed list of the members of oral board.

#### **10.2.4. Ph.D. Oral Board**

1. The oral board shall consist of four members in addition to the thesis supervisor(s)/programme coordinator. Of the four, three shall be from among the faculty members of the Institute (including those, if any, on the thesis board) and one shall be from among the members of the thesis board within the country but outside the Institute. Of the three members from IIT (BHU) at least one shall be from a Department/School, which is different from the student's own. The thesis supervisor/programme coordinator will act as the Chairman of the Ph.D. Oral Board.

2. The thesis supervisor(s)/programme coordinator in consultation with the Head of the Department/Coordinator of the School shall propose the constitution of the oral board through the DPGC and the Dean (Academic Affairs) to the Dean of Academic Affairs, who will forward it to the Chairman, Senate for approval.

### **10.3. Submission of Thesis**

#### **10.3.1. M.Tech./M.Pharm./M.Sc. Thesis**

After the M.Tech./M.Pharm./M.Sc. oral examination committee has been constituted, unbound copies of the thesis, one for each examiner of the oral board (prepared according to the format prescribed in the “Specification and Information Regarding the Preparation of Thesis”, **as per Annexure-VI**), will be submitted to the Convener, DPGC, at least 10 days before the probable date of oral examination. The concerned DPGC will arrange to send the copies of the thesis to the examiner after obtaining the approval of the DoAA. Two copies of the abstract (approximately 250 words) should also be submitted along with the thesis.

#### **10.3.2. Ph.D. Thesis**

A Ph.D. thesis can be submitted only after the thesis board has been duly approved and the intimation of the satisfactory completion of the open seminar has been received. Bound copies of the Ph.D. thesis (prepared according to the format prescribed in the “Specification and Information Regarding the Preparation of Thesis”, **as per Annexure-VI**), one for each examiner of the thesis board, plus an adequate number of additional copies for the oral board, will be submitted to the Dean of Academic Affairs through the DPGC.

A student may submit a soft copy of an extended abstract (of about 1500 words) a month in advance of the submission of the Ph.D. thesis, along with a requisition to the Dean of Academic Affairs through the Convener, DPGC, and the Dean (Academic Affairs) for initiating the process of appointment of the thesis board. A student is eligible for submission of a thesis if he / she fulfil either of three conditions.

### **Criteria for Ph.D thesis submission**

**A necessary condition for Ph.D. thesis submission is as follows**

1. Two research publications from his / her Ph.D. thesis in Q1 / Q2 journals indexed by SCIE/SCOPUS/\*AHCI/\*SSCI/\*ESCI/\*PubMed/\*ABDC/AMS**OR**
2. One paper in a Q1 journal indexed by SCIE/ SCOPUS / \*AHCI/\*SSCI/\*ESCI/\*PubMed/\*ABDC/AMS and one (01) patent published (**distinct from the published Q1 journal paper**). **OR**
3. One paper in a Q1 journal indexed by SCIE/ SCOPUS / AHCI/\*SSCI/\*ESCI/\*PubMed/\*ABDC/AMS and one paper published in a non-index journal ( the list has to be given by DPGC six months in advance of submitting the thesis). **OR**
4. One paper in a Q1 journal indexed by SCIE/ SCOPUS / AHCI/\*SSCI/\*ESCI/\*PubMed/\*ABDC/AMS and one paper published in an A\* or equivalent conference proceedings (**distinct from the published Q1 journal paper and** the list has to be given by DPGC six months in advance of submitting the thesis).

### **Ph.D. Thesis Examination by Internal Committee**

The thesis may be evaluated by two Indian Examiners (from the proposed examiner list given by the department) to be recommended by DoAA and appointed by the Chairperson of the Senate, in case any of the conditions mentioned below are satisfied.

1. TWO papers published in Q1 journals, ONE A\* conference proceedings, and ONE patent granted **OR**
  2. FOUR papers published in Q1 journals **OR**
  3. Three papers published in Q1 journals and ONE paper in A\* conference proceedings **OR**
  4. Three papers published in Q1 journals and ONE patent granted.
- *Conference proceedings and patents must be distinct from the published Q1 journal paper.*

For such cases, the thesis examination will be fast-tracked and expected to be completed within 30 days. The detailed procedure is outlined below:

- a) **A list of External examiners proposed by the thesis supervisor and recommended by the DPGC will consist of Eight Examiners from within the country.**

- b) **A communication will be sent to the examiners that they are expected to complete the assessment of the thesis and conduct the oral viva-voce within 30 days.**
- c) **Once the examiners' reports are received, the thesis evaluation process will be done as per clause 10.4.3 (item no. 4). The thesis board and oral board will be constituted as detailed in clause no. 10.2.3 and 10.2.4.**

**Note: In case of the Department specific e.g., Architecture, Humanistic or MathSciNet for Mathematics and Computing,) or one paper is published in an A\*conference ( or an equally reputed conference as may be identified in advance for the Department of Architecture, Humanistic studies.**

\* AHCI -Arts and Humanities Citation Index (AHCI)

\*SSCI-Social Sciences Citation Index

\*ESCI-Emerging Sources Citation Index

\*PubMed - For Biomedical and Biochemical.

\*ABDC- Australian Business Deans Council (ABDC)

## **10.4. Processing of the Thesis**

### **10.4.1. M Tech/M.Pharm. Oral Examination**

1. The oral examination will be conducted within four months from the date of submission of the thesis. If a student does not appear for the oral examination within this time period, his/her programme would be deemed to have been terminated. Requests for reinstatement in the programme by such a student should be addressed to the Chairman, Senate. The request may be considered by the Senate, and in case the Senate grants the request, it shall specify the requirements that the student must fulfil for the award of the degree.
2. The thesis supervisor/programme coordinator will intimate the date of the oral examination to the Office of the Dean (Academic Affairs).
3. The oral examination committee will evaluate the thesis, conduct the oral examination, and send a report of the examination to the Dean of Academic Affairs through DPGC and the Dean (Academic Affairs).
4. A thesis will be considered to have been accepted if all members of the oral examination committee recommend its acceptance. A thesis, which is not accepted, will be considered to have been rejected. Upon acceptance, the candidate is expected to submit the bound copies to the Office of the Dean (Academic Affairs), incorporating corrections, if any, normally within one week of the acceptance of the thesis by the oral examination committee.
5. If a thesis is rejected in the present form but recommended for resubmission after incorporating any modification/correction suggested by the oral examination committee, oral examination of the resubmitted thesis will be conducted by the original committee unless a different committee is approved by the Dean (Academic Affairs). If the re-submitted thesis is rejected, the matter will be reported to the Senate for appropriate action.
6. Acceptance of the thesis will be reported to the Senate for approval.

#### 10.4.2. Open Seminar of Ph.D. Students

Before proceeding to finalize the thesis, each Ph.D. student must deliver a seminar open to faculty and students in which the research work will be presented to obtain comments, suggestions, and criticism, if any, which may be incorporated in his/her thesis. A notice of the seminar must be displayed at least four days in advance. A thesis can be submitted only after the satisfactory fulfilment of this requirement. The thesis supervisor will be the Chairman of the open seminar. Upon successful completion of the seminar, an intimation that the open seminar has been given will be communicated by the thesis supervisor to the Dean of Academic Affairs through the Convener, DPGC, [Senate Resol. No. 13.6.9 (Clause 11.2 shifted as 11.4.2)]

#### 10.4.3. Ph.D. Thesis Evaluation by the Thesis Board

1. After the synopsis/**extended abstract** has been submitted and the thesis board constituted, the Dean of Academic Affairs will send a letter by e-mail/fax to each member of the thesis board enclosing a copy of the synopsis and requesting him/her to serve as an examiner for the thesis. If the examiner refuses or no response is received within two weeks (with a reminder being sent after one week), steps will be taken to appoint another examiner.

*[Senate Resol. No. 36.10]*

On receipt of the acceptance for being an examiner, a copy of the thesis, along with a thesis evaluation form for the examiner's report, will be sent to each examiner.

In case the Examiners' report is not received within **four** weeks of dispatch of the thesis, a reminder will be sent by the Dean (Academic Affairs) and if there is no reply from the Examiners within the next **two** weeks, a second reminder will be sent by the Dean (Academic Affairs) and if there is no reply from the Examiners within a week then, Chairman, Senate will appoint a new Examiner.

Further, after appointing other examiners in between, if a report is received from hitherto unresponsive examiners, then any first two reports may be considered for further proceeding to the evaluation process.

3. In case the Dean of Academic Affairs is the supervisor of the student concerned, the above processing (detailed in paras 1 and 2) will be done by the Chairman, Senate.

4. When an examiner's report is received, the Dean of Academic Affairs will place it in one of the following four categories:

i) **Category I:** An examiner accepts the thesis in the present form or suggests corrections regarding punctuation, grammar, spelling, or language.

The supervisor(s) can use their discretion regarding the incorporation of such suggestions.

ii) **Category II:** An examiner points out minor technical mistakes, raises some queries, or suggests modifications, but does not imply that the acceptance of the thesis is subject to removal of these defects to the examiner's satisfaction.

The supervisor will be intimated to pass on the said comments to the student and obtain his/her written responses. The copies of the Thesis will be sent to the Dean (Academic Affairs) after incorporating the corrections in the body of the thesis and also attaching a separate sheet describing the changes. Upon receipt of the status of corrections, the Dean of

Academic Affairs will inform the examiner(s) concerned of the responses by the candidate to the comments made by the Examiner(s). [Senate Resol. No. 13.6.10]

**iii) Category III:** An examiner does not recommend acceptance of the thesis in the present form, and raises technical points suggesting mandatory modifications which must be answered/carried out to the examiner's satisfaction before the thesis can be accepted.

The student is required to make the necessary changes in consultation with the supervisor(s) and resubmit the thesis, along with a point-by-point response to the queries by the examiner. The supervisor will then communicate to the Dean of Academic Affairs the changes made in the thesis, if any, in response to the examiner's comments along with an explanatory note which will be sent to the examiner (by the Dean of Academic Affairs) with a request to respond within four weeks. If the examiner's response is not received within two weeks, a reminder will be sent and if no reply is received within a further period of **one** week, new examiner will be appointed by the Chairman, Senate. [Senate Resol. No. 13.6.10]

**iv) Category IV:** An examiner conclusively rejects the thesis for the award of the degree.

5. Copies of the categorized report (without the identity of the examiner) will be sent to the thesis supervisor(s) and the Head of the Department/Coordinator of the School concerned.

*[Senate Resol. No. 36.10]*

On completion of the process detailed above, the Dean of Academic Affairs will intimate the supervisor of the concurrence of the Chairman, Senate, if given, to initiate the constitution of the oral board. This concurrence of the Chairman, Senate will be given if all the examiners recommend acceptance of the thesis. If one of the examiners rejects the thesis, an opinion of a new (third) examiner may be sought. A new (third) examiner, if appointed, shall be an Indian or a foreigner, depending on whether the thesis was rejected on the recommendation of the Indian or a foreign examiner in the first instance. The reports of the two previous examiners may be sent to the new (third) examiner without revealing the identity of the previous two examiners, along with the response of the candidate, if any, to the grounds for such recommendation as given in the detailed comments. The thesis shall be deemed to be acceptable if the new (third) examiner recommends acceptance. If the newly (third) appointed examiner recommends revision, the thesis would be suitably revised and resubmitted at least after 3 months and sent for examination to the previous examiner, except for the ones in whose place the new (third) examiner was appointed. In case the newly appointed (third) examiner recommends rejection or his recommendations for revision are not accepted by the candidate, the thesis will be rejected. If two or all the examiners reject the thesis, the thesis will be rejected.

7. In case the Dean (Academic Affairs) is the supervisor of the student concerned, the above processing (detailed in paragraphs 4, 5, and 6) will be done by the Associate Dean of Academic Affairs (PG).

8. The Dean (Academic Affairs) will send a copy of the thesis report to the Supervisor/Chairman of the Oral Board with a covering letter asking to constitute the oral board, under a copy to the concerned Head of the Department. However, he would send only a copy of the covering letter to the concerned Convener, DPGC, for information. *[Senate Resol. No. 13.6.10]*

#### 10.4.4. Ph.D. Oral Examination

1. The Ph.D. oral examination will be an open examination. The supervisor/ programme coordinator will be the Chairman of the oral board and will fix the date of the oral examination and intimate the date to the Office of the Dean (Academic Affairs).
2. If a member of the oral board, communicates in advance, his/her inability to be present or fails to be present on the specified date and time, the Chairman, Senate may appoint another member in his/her place, in consultation with the thesis supervisor(s)/programme coordinator, Head of the Department/Coordinator of the School and Dean of Academic Affairs.
3. Each member of the oral board will be given a copy of the thesis along with the entire set of thesis examiner's reports and modifications thereto, if any, at least one week before the date of the oral examination.
4. The oral board shall
  - i) examine the thesis reports,
  - ii) examine if necessary modifications suggested by the thesis examiners have been incorporated,
  - iii) elicit the candidate's replies to the questions raised by the thesis examiners,
  - iv) authenticate the work as the student's own,
  - v) judge if the presentation of the work by the student and the answers to the questions asked have been satisfactory, and
  - vi) give a report of the examination, which will be communicated by the supervisor(s)/programme coordinator to the Dean of Academic Affairs through the Convener, DPGC.
5. If all, except at most one member, declare the student as passed, the student shall be deemed to have passed.
6. If a candidate has not passed, the oral board will specify whether
  - i) the candidate may be given another chance to appear in the oral examination, and will specify the **tentative** date for re-examination. The original oral board will conduct the re-examination unless a different oral board is approved by the Chairman, Senate. In the re-examination, the board will declare whether the student has passed or failed as per the criteria laid down above, but will not recommend holding a third oral examination.
  - ii) the candidate is declared to have failed.
7. On receipt of the report that the student has passed the oral examination, the Dean of Academic Affairs will recommend to the Senate for the award of the Ph.D. degree.
8. If the candidate has failed, the matter will be brought to the attention of the Senate for further action.
9. The Chairman, Senate may order a special procedure for the evaluation of a Ph.D. thesis to protect the work of a classified nature involving national security and sovereignty, and/or to protect the intellectual property rights of the candidate, the supervisor, and the Institute.

#### 10.5. Date of Award for Ph.D. Degree

The date of final Viva-Voce Examination will be considered as the date of award of PhD degree. (Senate Resolution no 50.25 dated 17<sup>th</sup> December 2025).

## **11. GRADUATION REQUIREMENTS**

A student shall be deemed to have completed the graduation requirements if the student has

- i) passed all the prescribed courses (as specified in the course structure),
- ii) attained the minimum required CPI,
- iii) earned the minimum number of credits through coursework and thesis work and the minimum number of total credits prescribed for the programme,
- iv) satisfied the minimum residence requirements,
- v) satisfied all the requirements specified by the concerned Department/School, if any,
- vi) satisfied the quality of expectations for the thesis as specified by the thesis board,
- vii) at least two research publications for Ph.D. (accepted for publication/published) (to be submitted separately), and
- viii) satisfied all the requirements specified by the Senate and the Ordinances.

In addition, the student should have paid all the dues to the Institute and should have no pending case of indiscipline.

## **12. REMOVAL OF DIFFICULTY**

Notwithstanding anything contained in these ordinances, the Senate of the Indian Institute of Technology (Banaras Hindu University) Varanasi, reserves the right to modify/amend without notice the curricula, procedures, requirements, and rules pertaining to its postgraduate programmes.

Any doubt or dispute about the interpretation of these Ordinances shall be referred to the Chairman, Senate of the Indian Institute of Technology (Banaras Hindu University) Varanasi, whose decision shall be final and binding.

## **POSTGRADUATE COMMITTEES**

Each Department/School shall have a Department Postgraduate Committee (DPGC) consisting of a Convener to be nominated by the Head of the Department/Coordinator of the School in consultation with the faculty of the Department/School, the Head of the Department/Coordinator of the School and a minimum of four and a maximum of eight faculty members to be chosen by the Department/School, and two students, one from the Ph.D. programme and the other from the M. Tech./M.Pharm. programme. If an M.Tech. programme does not exist in a Department/School; both students shall be from the Ph.D. programme. The student members shall be chosen by the postgraduate students of the Department/School for a period of one academic year.

The Senate Postgraduate Committee (SPGC) shall consist of the DoAA (Ex officio Chairperson), ADoAA-PG, Conveners of all the DPGCs, and five additional student members, of whom two shall be from the Ph.D. programme, two shall be from the M.Tech. programme and one shall be from the M.Pharm. programme. The student members shall be nominated by the Students' Senate.

The committee shall have jurisdiction in the following matters concerning the postgraduate programmes of the Institute: the formal approval of new courses of instruction, modification of courses already approved, the credit value of courses, the formal approval of admission of postgraduate students, the admission of qualified students to candidacy for degrees, the rules governing the form of presentation and disposal of theses, the conduct of oral and written examinations and in such other related matters as may be referred to it by the Senate.

The functions of the committee shall consist primarily of general policy determination, coordination, and review, but the Senate shall retain the power of final review. In the discharge of its responsibilities, the committee shall make full use of the appraisals and recommendations of the various Departments/Schools concerned. This committee shall be assisted by the DPGCs.

The student members shall not participate when the cases of academic evaluation of individual students are being considered, although the students' opinions might be sought prior to making any decision.

**Table 1: M.Tech./M.Pharm./M.Sc. Programmes and the Specializations****A. Programmes in the Engineering Disciplines**

| <b>Programmes</b>                          | <b>Specialization</b>                                                                                                                                                                                                                     |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| M.Tech. in Ceramic Engineering             | -----                                                                                                                                                                                                                                     |
| M.Tech. in Chemical Engineering            | -----                                                                                                                                                                                                                                     |
| M.Tech. in Civil Engineering               | a) Environmental Engineering<br>b) Geotechnical Engineering<br>c) Hydraulics and Water Resources Engineering<br>d) Structural Engineering<br>e) Transportation Engineering<br>f) Engineering Geosciences<br>g) Geoinformatics Engineering |
| M.Tech. In Computer Sciences & Engineering | a. Artificial Intelligence (AI)<br>b. Internet of Things (IoT)                                                                                                                                                                            |
| M.Tech. in Electrical Engineering          | a) Power Systems<br>b) Electrical Machines and Drives<br>c) Control Systems<br>d) Power Electronics                                                                                                                                       |
| M.Tech. in Electronics Engineering         | a) RF and Microwave Engineering<br>b) Digital System Engineering<br>c) Microelectronics<br>d) Communication Systems Engineering<br>e) VLSI Architecture & Chip Design                                                                     |
| M.Tech. in Mechanical Engineering          | a) Machine Design<br>b) Thermal and Fluid Engineering<br>c) Production Engineering                                                                                                                                                        |
| M.Tech. in Metallurgical Engineering       | a) Extractive Metallurgy<br>b) Alloy Technology                                                                                                                                                                                           |
| M.Tech. in Mining Engineering              | a) Mine Environment<br>b) Rock Mechanics<br>c) Mine Planning                                                                                                                                                                              |
| M.Pharm.                                   | a) Pharmaceuticals<br>b) Pharmaceutical Chemistry<br>c) Pharmacology<br>d) Pharmacognosy                                                                                                                                                  |

**B. Interdisciplinary Programmes**

| <b>Programmes</b>                  | <b>Offered by</b>                 |
|------------------------------------|-----------------------------------|
| M.Tech. in Biochemical Engineering | School of Biochemical Engineering |
| M.Tech. in Biomedical Engineering  | School of Biomedical Engineering  |

|                                                                                 |                                            |
|---------------------------------------------------------------------------------|--------------------------------------------|
| M.Tech. in Materials Science and Technology                                     | School of Materials Science and Technology |
| M.Tech. in Industrial Management                                                | Mechanical Engineering Department          |
| M.Tech. in Systems Engineering                                                  | Electrical Engineering Department          |
| M.Tech. in Tunnelling and Underground Space Engineering                         | Civil Engineering Department               |
| M.Tech. in Bioscience and Bioengineering with specialization in Medical Devices | School of Biomedical Engineering           |

### C. Programme in Science Discipline

| Programme                        | Offered by              |
|----------------------------------|-------------------------|
| M.Sc. in Chemistry               | Department of Chemistry |
| <a href="#">M.Sc. in Physics</a> | Department of Physics   |

**Table 2: M.Tech./M.Pharm./M.Sc. Programmes and the Requisite Qualifications**

Most of the Bachelor's and Master's degrees that are being awarded in the disciplines/areas in the country and abroad are listed below. However, a candidate possessing a degree that does not exactly conform to the degrees listed below may be considered for admission, based on the performance in the written test and/or interview, and provided that the interview/admission committee, upon scrutiny of the list of courses done and credits earned by the candidate, finds that the degree concerned is at par with those listed below.

### A. Programmes without specializations

| Discipline                                                                                   | Eligibility                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ceramic Engineering                                                                          | B.Tech. or an equivalent degree in Ceramic/ Civil/ Electronics/ Electrical/ Mechanical/ Metallurgical Engg./ Chemical Engg. and Technology/Materials Science & Technology/ Silicate Technology or M.Sc. Physics (with special papers in Solid State/ Electronics) or Electronics or Chemistry (with special papers in Physical/ Inorganic/ Solid State Chemistry) provided the candidate has passed B.Sc./ B.Sc.(Hons.) Examination with Physics, Chemistry and Mathematics |
| Chemical Engineering                                                                         | B.Tech. or an equivalent degree in Chemical Engg. or Bio-Chemical Engg. /Electrochemical Engg. /Energy Engg. /Environmental Engg. /Food Processing Engg./Petrochemical Engg./Petroleum Engg./Chemical Technology/Oil Technology/Paint Technology/Petroleum Technology/Plastic Technology/Polymer Technology/Bio-Technology/Food Technology /allied Engineering or Technology with a valid GATE score in Chemical Engineering.                                               |
| Materials Science and Technology (Offered by the School of Materials Science and Technology) | B.Tech. or an equivalent degree in Ceramic/Chemical/Electrical/Electronics/ /Polymer/Plastic Technology/Materials Technology/Nanotechnology/Mechanical/Metallurgical Engineering OR M.Sc. degree in Chemical Science/Materials Science/Physical Science, Nanoscience and Nanotechnology, provided the candidate has obtained a Bachelor's Degree in Chemistry/Physics/Mathematics/Computer Science/Statistics.                                                              |

## B. Programmes with specializations

| Discipline                       | Specialization                                                                                                                                                                                                                                                                              | Eligibility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Civil Engineering                | a) Environmental Engineering<br>b) Geotechnical Engineering<br>c) Hydraulics and Water Resources Engineering<br>d) Structural Engineering<br>e) Transportation Engineering<br>f) Engineering Geosciences [Senate Resol. No. 19.1]<br>g) Geoinformatics Engineering [Senate Resol. No. 19.1] | <p><b>For (a to e)</b><br/>           B.Tech./B.E in Civil Engineering or a degree in an equivalent branch of Engineering/Technology.<br/>           &amp;<br/>           GATE qualification in Civil Engg. or allied discipline<br/> <b>Executive M.Tech.:</b> B.Tech/B.E. or an equivalent degree in Engineering.</p> <p><b>For (f)</b><br/>           B.Tech./B.E. in Civil Engineering /Mining Engg./Petroleum Engg./ or a degree in an equivalent branch of Engineering/Technology.<br/>           OR<br/>           M.Sc. in Geology/Geophysics<br/>           &amp;<br/>           GATE qualification in Civil Engg./Geology/Geophysics or allied discipline.</p> <p><b>For (g)</b><br/>           B.Tech./B.E. in any branch/B.Arch. or B. Plan/M.Sc. in Geography/MCA<br/>           &amp;<br/>           GATE in any of the following: Civil Engineering/Geomatics Engineering/Computer Engineering/Architecture and Planning.</p> |
| Computer Science and Engineering | a) Artificial Intelligence (AI)<br>b) Internet of Things (IoT)                                                                                                                                                                                                                              | B.Tech. or B.E. degree in Computer Technology/ Information Technology/ All related subjects of Computer Engineering at B.Tech. level Computer Engineering/Data (DE) Engineering /Data Sciences (DS)/Artificial Intelligence/Maths & Computing M.Sc. (Computer Science)/MCA. The candidates must also hold a valid GATE score in CSIT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Mechanical Engineering           | a) Machine Design<br>b) Thermal and Fluid Engineering<br>c) Production Engineering                                                                                                                                                                                                          | B.Tech. or an equivalent degree in the respective branch of engineering.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Metallurgical Engineering        | a) Extractive Metallurgy<br>b) Alloy Technology                                                                                                                                                                                                                                             | B.Tech. or an equivalent degree in Metallurgical Engg., Materials Science/Engineering, Mineral/Chemical/Ceramic /Mechanical Engg., Chemical Tech. or M.Sc. (Physics/ Chemistry) with specialization in Solid State Physics, Physical/ Inorganic Chemistry, provided the candidate passed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

|                                   |                                                                                                                         |                                                                                                                                                                                                                                             |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   |                                                                                                                         | B.Sc./ B.Sc. (Hons.) Examination with Mathematics as one of the subjects at the undergraduate level                                                                                                                                         |
| Mining Engineering                | a) Mine Environment<br>b) Rock Mechanics<br>c) Mine Planning                                                            | B.Tech or an equivalent degree in the respective branch of Engineering.                                                                                                                                                                     |
| Electrical Engineering            | a) Power Systems<br>b) Electrical Machines and Drives                                                                   | B.Tech. or an equivalent degree in Electrical Engg and a valid GATE score in Electrical Engineering.                                                                                                                                        |
|                                   | c) Control Systems                                                                                                      | B.Tech. or an equivalent degree in Electrical/ Electronics/ Control Systems/ Instrumentation Engg and a valid GATE score in Electrical Engineering/Electronics/Instrumentation Engineering.                                                 |
|                                   | d) Power Electronics                                                                                                    | B.Tech. or an equivalent degree in Electrical/ Electronics Engg. and a valid GATE score in Electrical Engineering/Electronics Engineering.                                                                                                  |
| Electronics Engineering           | a) Microwave Engg.<br>b) Digital Techniques and Instrumentation<br>c) Microelectronics<br>d) Communication System Engg. | B.Tech. or an equivalent degree in Electrical or Electronics Engineering, Instrumentation Engineering or Computer Science, or Information Technology with a valid GATE score in Electronics and Communication Engg. [Senate Resol. No.10.4] |
| Pharmaceutical Engg. & Technology | a) Pharmaceutics<br>b) Pharmaceutical Chemistry<br>c) Pharmacology<br>d) Pharmacognosy                                  | B.Pharm. or an equivalent degree in Pharmacy with a valid GPAT score<br>OR<br>B.Tech. in Pharmaceutical Engineering & Technology or equivalent degree with a valid GPAT/GATE score                                                          |

### C. Inter-disciplinary programmes

| Discipline                                                                                   | Eligibility                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Decision Sciences and Engineering (Offered by the N C Jain School of Decision Sciences )     | B.Tech. or an equivalent degree in any branch of engineering                                                                                                                                                                                                                                                                                                                                                        |
| Systems Engineering (Offered by the Electrical Engineering Department)                       | B.Tech. or an equivalent degree in any branch of engineering                                                                                                                                                                                                                                                                                                                                                        |
| Materials Science and Technology (Offered by the School of Materials Science and Technology) | B.Tech. or an equivalent degree in Ceramic/ Chemical/ Civil/ Electrical/ Electronics/ Polymer/ Plastic Technology/ Materials Technology/ Nanotechnology/ Mechanical / Metallurgical Engineering OR M.Sc. degree in Chemical Science/ Materials Science/ Physical Science, provided the candidate has passed B.Sc./ B.Sc. (Hons.) Examination with Chemistry/ Physics/ Mathematics and Computer Science/ Statistics. |
| Biochemical Engineering (Offered by the School of Biochemical Engineering)                   | <b>B.Pharm.*/B.Tech. or equivalent degree</b> in Biochemical Engineering, Biotechnology#, Chemical Engineering/Tech., Food Tech./ Engg., Bioinformatics OR <b>M.Sc. degree</b> in Biotechnology#, Biochemistry, Bioinformatics, Microbiology# and Chemistry#.<br><br>* See the eligibility criteria; #with all specializations                                                                                      |

|                                                                                                                     |                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Biomedical Engineering (Offered by the School of Biomedical Engineering)                                            | <b>B.Tech. or an equivalent degree</b> in Biomedical/ Bioengineering/ Ceramic/ Biotechnology/ Chemical/ Computer Science/ Electrical/ Electronics/ Instrumentation/ Mechanical Engg./Metallurgical Engg./Polymer Science and Engg./ Materials Science OR <b>M.Sc. degree</b> in Physics/ Biotechnology/ Chemistry/ Life Sciences OR BDS/MBBS. |
| M.Tech. in Tunnelling and Underground Space Engineering (Offered by the Civil Engineering Department)               | <b>Regular:</b> B.Tech./B.E. or an equivalent degree in Civil Engineering/Allied Engineering with a valid GATE score.<br><b>Executive M.Tech.:</b> B.Tech./B.E. or an equivalent degree in Engineering.                                                                                                                                       |
| Biosciences and Bioengineering with specialization in Medical Devices (Offered by School of Biomedical Engineering) | <b>B.Tech or an equivalent degree</b> in Biomedical/Bioengineering/Ceramic/Biotechnology/Chemical/Computer Science/Electrical/Electronics/Instrumentation/Mechanical Engg./Metallurgical Engg./Polymer Science and Engg./Materials Science OR M.Sc. degree in Physics OR BDS/MBBS (with compulsory mathematics at higher secondary level.     |
|                                                                                                                     |                                                                                                                                                                                                                                                                                                                                               |

#### D. M.Sc. Programme in Science Discipline

| Discipline | Eligibility                                                                                                                                                           |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chemistry  | B.Sc./B.S/ or an equivalent degree in chemistry for 3 years/6 semesters and Mathematics in Class 12th.                                                                |
| Physics    | No restrictions for Engineering degrees. For B.Sc/B.S. degree with Physics for at least two years/four semesters and Mathematics for at least one year/two semesters. |

**NOTE:** 1. Candidates desirous of applying for admission to different M.Tech. programmes must send separate applications to the Department/School concerned for M.Tech. programmes being offered by the Department/School. Separate applications are also required for inter-disciplinary programmes offered by the same Department.

Candidates desirous of applying for admission to different M.Tech. programmes must send their original application to the Department/School which is their first preference, and a copy of their application to each of their other preferred Departments/Schools.

2. Not more than 40% of the total seats in the Departments, wherever candidates from allied disciplines are declared eligible for admission, shall be open for any one allied discipline. However, preference will be given to eligible candidates from the discipline based on their performance in the written test/interview.

3. Not more than 40% of the total seats in interdisciplinary programmes in Schools will be open for any ONE branch of Engineering or Science.

**Table 3 : Departments/Schools/Disciplines and Allied Disciplines / Areas for Ph.D. Programmes.**

Most of the Bachelor's and Master's degrees that are being awarded in the disciplines/areas in the country and abroad are listed below. However, a candidate possessing a degree that does not exactly conform to the degrees listed below may be considered for admission, based on the performance in the written test and/or interview, and provided that the interview/admission committee, upon scrutiny of the list of courses done and credits earned by the candidate, finds that the degree concerned is at par with those listed below.

| Departments/<br>Schools<br>offering the<br>Programme     | Discipline                              | Allied Disciplines/ Areas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Department of<br>Architecture,<br>Planning and<br>Design | Architecture,<br>Planning and<br>Design | Master's /Bachelor's degree in any Engineering discipline: Master's / Bachelor's Degree in any Science discipline or Equivalent                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Department of<br>Ceramic<br>Engineering                  | Ceramic<br>Engineering                  | Bachelor's/ Master's degree in any branch of Engineering.<br>Master's degree in Materials Science/ Chemistry/ Applied Chemistry/ Physics/ Applied Physics/ Geology or Geophysics (with Mathematics as a subject at Bachelor's Degree level).<br>Master's degree in Biological Sciences/ Modern Medicine/ Indian Medicine (for the areas related to Bioceramics) <b>and CSIR-UGC NET(JRF)</b> .<br>Preference would be given to candidates with B.Tech./M.Tech. in Ceramic Engineering/with some background of ceramics.                                                                     |
| Department of<br>Chemical<br>Engineering &<br>Technology | Chemical<br>Engineering                 | (i) BE/B.Tech. or equivalent degree in any branch of Engineering/Technology with GATE score.<br>(ii) ME/M.Tech. or equivalent degree in any branch of Engineering/Technology.<br>(iii) Master's degree in Physics/Chemistry/Biochemistry/Mathematics/Statistics /Botany/Zoology/Environmental Science/Biotechnology/Industrial Chemistry/Microbiology/Nanotechnology/Computer Science/Material Science with GATE or CSIR/UGC-NET-JRF or DBT-JRF or ICMR-JRF or DST-Inspire Fellowship.<br>(iv) Nano Science/Computer Science/Material Science in M.Sc. Level with GATE or CSIR/UGC-NET-JRF. |
| Department of<br>Civil<br>Engineering                    | Civil<br>Engineering                    | <b>Specialization in Environmental Engineering</b><br>Bachelor's degree (B.Tech./B.E.) in Civil Engg./Environmental Engg. or equivalent branch<br>&<br>ME/M.Tech. in Chemical/Environmental/Biotechnology/Remote Sensing/Climate Change/Agricultural Engineering.<br>&<br>GATE qualification in Civil Engg. or allied discipline.<br><b>Specialization in Geotechnical Engineering</b><br>Bachelor's degree (B.Tech./B.E.) in Construction Technology and Management &<br>Master's degree in Geotechnical/Transportation/Structural/Environmental                                           |

|  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |  | <p>Engg./Hydraulics and Water Resources Engineering./Applied Mechanics/Construction Technology and Management/Agricultural Engineering/Rock Mechanics/Earthquake Engg.</p> <p>&amp;</p> <p>GATE qualification in Civil Engg. or allied discipline.</p> <p><b>Specialization in Structural Engineering</b></p> <p>Bachelor's degree (B.Tech./B.E.) in Construction Technology and Management/Aerospace Engineering/B.Arch./B.Plan.</p> <p>&amp;</p> <p>Master's degree in Structural/Applied Mechanics/Construction Technology and Management/Aerospace Engineering/Naval Architecture/Offshore Structures/Mechanical Engg./Ceramic Engg./Material Science &amp; Technology.</p> <p>OR</p> <p>Master's degree in Urban Planning/Disaster Mitigation/M.Arch.</p> <p>&amp;</p> <p>GATE qualification in Civil Engg. or allied discipline.</p> <p><b>Specialization in Hydraulic and Water Resources Engineering</b></p> <p>Bachelor's degree (B.Tech./B.E.) in Water Resources/Agriculture Engineering.</p> <p>&amp;</p> <p>Master's degree (M.Tech./M.E.) in Hydraulics/Hydrology/Water Resources Management/Environmental/Remote Sensing and GIS/Hydro-geology/Climate change/Agricultural Engineering/Mechanical Engg.</p> <p>&amp;</p> <p>GATE qualification in Civil Engg. or allied discipline.</p> <p><b>Specialization in Transportation Engineering</b></p> <p>Bachelor's degree (B.Tech./B.E.) in B.Arch./B. Plan. or equivalent branch</p> <p>&amp;</p> <p>Master's degree (M.Tech./M.E.) in Transportation/Highway Engineering/Construction Technology/Infrastructure/Structure/Geotech/Environmental Engg. or similar specializations</p> <p>OR</p> <p>Master's degree in Urban Transportation/Transportation Planning/M. Planning/M. Planning/M.Arch.</p> <p>&amp;</p> <p>GATE qualification in Civil Engg. or allied discipline.</p> <p><b>Specialization in Geoinformatics Engineering.</b></p> <p>B.E./B.Tech. in Geomatics/Geoinformatics/Computer Engg./Electronics Engg. or Equivalent branch of Engg./B.Arch., B. Plan. or M.Sc. in Geography, Computer Science, MCA</p> <p>OR</p> <p>M.Tech in Geomatics/Geoinformatics/Remote Sensing or equivalent</p> <p>&amp;</p> <p>NET/JRF/GATE in Civil Engineering/Geomatics Engineering/Computer Engineering/Architecture and Planning/Geography/Electronics.</p> <p><b>Specialization in Geoscience Engineering</b></p> <p>Master's degree (M.Tech./M.E.) in Geosciences/M.Tech. in Geology/Rock Mechanics or <u>M.Sc.</u>/MSc.(Tech.) in Geology/Geophysics/Rock Mechanics</p> <p>&amp;</p> |
|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                              |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                              |                                | NET/JRF/GATE in respective branches of Civil Engineering/Geophysics/Geology.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Department of Computer Science & Engineering | Computer Science & Engineering | B.Tech./B.E./M.Tech./M.E. degree in Computer Technology/ Information Technology/ Electronics and Communication Engineering/ All related subjects of Computer Engineering at M.Tech. level/ M.Tech. in Mathematics and Computing. All subjects related to Computer Engineering/Data (DE) Engineering/Data Sciences (DS)/Artificial Intelligence/Maths & Computing. <u>M.Sc.</u> (Computer Science)/MCA/Equivalent Master's Degree.The candidates holding any of the above criteria must also have qualified GATE in CSIT or M.Sc (Computer Sciences)/MCA/ Equivalent Master's Degree. The candidates holding any of the above criteria must have qualified GATE in CSIT/DA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Department of Electrical Engineering         | Electrical Engineering         | B.Tech. & M.Tech. in Electronics Engineering.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|                                              | Systems Engineering            | Bachelor's and Master's Degree in any Branch of Engineering or Bachelor's Degree in any Branch of Engineering.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Department of Electronics Engineering        | Electronics Engineering        | <p>(i) B.Tech.AND M.Tech in Electronics Engg./Electrical Engg OR</p> <p>(ii) B.Tech in Instrumentation Engg./Computer Science Engg./Information Technology AND M.Tech in any of the specified areas /disciplines OR</p> <p>(iii) M.Sc.(Electronics) AND M.Tech degree in the specified areas/Discipline</p> <p>(iv) B.Tech* in Electrical Engg./Electronics Engg./Instrumentation Engg./Computer Science Engg./Information Technology</p> <p>*marks &gt;=75%</p> <p><b>Specified areas/Discipline:</b></p> <p>Digital Communication Systems, Information and Coding Theory, Telecom Networks, Mobile and Wireless Communication Systems, Digital Systems and Microprocessors, Digital Signal and Image Processing, Computer Vision and Robotics, Signal and Systems Theory, Control Systems, Fuzzy Logic, Neural Networks and their applications, Power Electronics, Microelectronics and VLSI Systems, Semiconductor Device Modelling and Simulation, Solid State Devices, Organic Electronics, Transparent Semiconductors and Photovoltaics, Sensors and Pattern Recognition, Electronic Instrumentation and Virtual Instrumentation, Electromagnetics, RF Engineering and Microwaves, Antennas, Optoelectronics and Optical Communication, Photonic Networks and Systems, Information Technology, Embedded System, Applied Electronics, etc.</p> |
| Department of Humanistic Studies             | Humanities and Social Sciences | <p>Master's/Bachelor's degree in any Engineering discipline;</p> <p>Master's degree in any Science discipline;</p> <p>4-year Bachelor's Science degree.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Department of Mechanical Engineering         | Mechanical Engineering         | Bachelor's degree in Production Engineering and Master's degree in any discipline/ area relevant to Mechanical Engineering.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                              | Industrial Management          | Bachelor's degree in any branch of Engineering and Master's degree in any branch of Engineering/Management.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|                                                         |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Department of Metallurgical Engineering                 | Metallurgical Engineering               | <p>Bachelor's / Master's degree in Mechanical / Chemical / Production Engg./Manufacturing Engg./Mineral Engg./ Ceramic Engg.</p> <p>Master's degree in Materials Science / Engg./ Technology</p> <p>Master's degree in Physical Sciences (Solid State Physics)/Chemical Sciences (Inorganic / Physical Chemistry/ Industrial Chemistry)/ Biological Sciences/Geology with Mathematics as a subject at Bachelor's level.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Department of Mining Engineering                        | Mining Engineering                      | <p>Master's degree in Geology/Geophysics/Geohydrology Mathematics/ Petroleum Geosciences /Chemistry/ Environmental Science/Materials Science/Botany/ Zoology/Polymer Science/ Computer Science/Earth Science/Remote Sensing and GIS.</p> <p>B.Tech. in any branch of Engineering.</p> <p>M.Tech in any branch of Engineering.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Department of Pharmaceutical Engineering and Technology | Pharmaceutical Engineering & Technology | <p>MS/M.Pharm./M.Tech. in Pharmacy/Pharmaceutical Sciences/Pharmaceutics/ Pharmaceutical Chemistry/Pharmacology/Pharmacognosy/Pharmaceutical Engg./Pharmaceutical Technology/ Pharmaceutical Biotechnology/ Bioinformatics/ Biochemical Engineering/ Biomedical Engg. with graduation in Pharmacy (B.Pharm./B.Tech. in Pharmaceutical Engineering &amp; Technology)</p> <p>OR</p> <p>MD (Ayurveda)/MS (Ayurveda)/MD (Siddha)/MD (Homeopathy)/MD (Pharmacology)/M.V.Sc./MDS</p> <p>OR</p> <p>B.Pharm./B.Tech. in Pharmaceutical Engineering &amp; Technology/MBBS/BDS/BAMS/BHMS/BSMS/BUMS/B.V.Sc. &amp; A.H</p> <p>Applicants with a bachelor's degree must have a minimum of 75% marks or 7.5 CPI (on a 10.0 point scale) at the bachelor's degree level. Applicants with more than two years of professional experience, the minimum requirement shall be 70% marks or 7.0 CPI (on a 10-point scale) at bachelor degree provide the degree is from an Institution funded by the Central Government.</p> |
| Department of Physics                                   | Physics                                 | <p><u>M.Sc.</u>/M.Tech./B.S./B.Tech/4-years B.Sc. in Applied Physics, Engineering Physics, Bio-Physics, Chemical Engg., Electronics Engg., Materials Science, Ceramic Engg., Metallurgical Engg., Electrical Engg., Bio-Informatics, Geology, Geophysics, Geomatics and Geoinformatics, Earth Sciences, Environmental Science, Computer Science, Computer Engg., Mechanical Engg., Mathematics, Chemistry, Remote Sensing, Astrophysics, Space Physics, Applied Optics, Atmospheric Physics, Fibre Optics &amp; Photonics, Nanotechnology and Biotechnology, Life Sciences, Biomedical Engg.</p>                                                                                                                                                                                                                                                                                                                                                                                                         |
| Department of Chemistry                                 | Chemistry                               | <p>M.Sc./M.Tech. in Chemistry/Industrial Chemistry/Applied Chemistry/Bio-Chemistry/Microbiology/Medicinal Chemistry/Biotechnology/ Materials Science &amp; Technology/ Environmental Sciences/ Nano-Technology/Physics/Energy Science with a Chemistry as a subject in bachelor degree/BA-MS &amp; BS-MS (Ayurveda &amp; Siddha Medicine).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Department of Mathematical Sciences                     | Mathematical Sciences                   | <p>Master's degree in Statistics/ Computer Science/ Computer Engineering, with Mathematics as a subject at the Bachelor's level.</p> <p>Bachelor's degree (B.Tech./B.E.) in Mathematics and Computing/ Computer Engineering/Computer Science.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|                                          |                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| School of Biochemical Engineering        | Biochemical Engineering        | <p><b>1) B.E/B.Tech./M.E./M.Tech/Dual degree or equivalent in:</b></p> <p>Biochemical Engineering, Biotechnology#, Bioscience#, Bioengineering#, Biomedical Engg./Tech., Bioinformatics, Chemical Engg./Technology#, Environmental Engg./Tech., Food Tech./Engg., Genetic Engineering, Nanotechnology#, Material Science#, Polymer Science/Engg./Technology#, Paper &amp; Pulp Engg./Technology#, Textile Engg./Handloom Technology#, Agricultural Science/Engg./Technology#, Computational Biology#, System Biology#, Computational &amp; Integrative Science#, Data Sciences/AI</p> <p><b>2) M.Sc./M.S./Integrated Master's in:</b></p> <p>Biotechnology#, Microbiology#, Chemistry#, Genetics#, Biochemistry#, Bioinformatics#, Biomedical Science#, Food Science#, Molecular Biology#, Environmental Science/Technology#, Forensic Sciences#, Mathematics and Computing, Zoology/Animal Science#, Chemical Technology#, Computational Biology#, System Biology#, Data Science/AI (bio-related)#, Computational &amp; Integrative Sciences</p> <p><b>3) B. Pharma/M.Pharma in all branches#</b></p> <p><b>4) MBBS/BDS/BAMS/MS/MD- all disciplines included</b></p> <p><b># All allied branches</b></p> |
| School of Biomedical Engineering         | Biomedical Engineering         | <p>B.Tech./M.Tech. degree in Bioengineering/ Biomedical/Electrical Engg./Electronics Engg./ Instrumentation Engg./Mechanical Engg./ Computer Engg./Materials Science and Technology/ Chemical Engg./ Biotechnology/ Nanotechnology.</p> <p>M.Pharm./M.Sc./M.Tech. in Pharmacy.</p> <p>M.Sc./M.Tech. in Statistics, Mathematics.</p> <p>M.Sc. degree in Physics/Electronics/Instrumentation/Chemistry/Polymer Sciences/ Biochemistry/ Life Sciences/ Biotechnology/Master's Degree in Physiotherapy.</p> <p>BDS/MBBS.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| School of Materials Science & Technology | Materials Science & Technology | <p>Master's degree in Physical Sciences, Chemical Sciences, Engineering Sciences, Nanoscience, and Nanotechnology.</p> <p>Bachelor's / Master's degree in Materials Science and Engineering/Metallurgical Engineering/Mechanical Engineering/Electronics and Communication Engineering/Electrical Engineering/Polymer Science and Engineering/Nanoscience and Nanotechnology.</p> <p>Master's degree in Biotechnology/Life Sciences.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

### Inter-Disciplinary Programs

| S.No | Discipline                                  | Allied Disciplines/Areas                                                                                                                                                                                                        |
|------|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.   | Tunneling and Underground Space Engineering | Bachelor's degree (B.Tech/B.E)in Mechanical Engineering, /Electrical Engineering/Mining Engineering/Construction Technology & Management/Aerospace Engineering/B.Arch./ GATE qualification in Civil Engg. or Allied Discipline. |

**Table-4: Discipline-wise Research Areas for Ph.D. Programmes.**

The discipline-wise Research Areas in the Ph.D. programmes are listed below.

| Disciplines                    | Research Areas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ceramic Engineering            | Bio-Ceramics, Ceramic/Metal/Polymer matrix composites, Electro Ceramics, Glass and Glass Ceramics, Refractories, Advanced Ceramics, Nano Technology, Cement & Concrete Technology, Energy Materials.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Chemical Engineering           | Energy and Environment, Catalysis and Reaction Engineering, Advanced materials, Transport processes, Process Control, Nano and Biotechnology, Computational Chemical Engineering and related areas.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Civil Engineering              | Structural Engineering; Hydraulics and Water Resources Engineering; Environmental Engineering; Geotechnical Engineering; Transportation Engineering; Geo-informatics; Engineering Geoscience.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Computer Science & Engineering | Social Network Analysis, HPC, Machine Vision, Natural Language Processing, Information Extraction, Data Mining, Image Processing, Pattern Recognition. <b>All fields related to Computer Science &amp; Engineering.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Electrical Engineering         | Electrical machines & Drives; Power Electronics; Control Systems; Power Systems                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Systems Engineering            | Systems Engineering                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Electronics Engineering        | RF& Microwave Engineering; Digital System Engineering, Microelectronics, Communication System Engineering, VLSI Architecture & Chip Design.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Humanities and Social Sciences | <p>English Literary Studies, Professional Communication, Interpretation/ Application of Literary Theory, <u>@Film Studies (Bollywood)</u>, <u>@Health Humanities</u>, English Literature, Gender Studies, Linguistic Landscape, <u>@Cognitive Semantics</u>, Sociolinguistics, Applied Linguistics, <u>#Computational Linguistics</u>, Semantics, <u>#Indian Philosophy</u>, <u>#Traditional Shastra</u>, <u>#Indian Knowledge Systems</u>, Group Behaviour, Health &amp; Well Being, <u>#Sociology</u>, <u>#Social Anthropology</u>, <u>@Medical Anthropology</u>, <u>#Anthropology of Film</u>, <u>#Literature and Theatre</u>, <u>#Gandhian Studies</u>, <u>#Myth, Metaphor and Violence</u>, <u>#Ethical Concern in Everyday Life</u>, Sanitation and Health, Applied Geography, Sports Psychology.</p> <p>N.B.:</p> <p>1. Students applying for Institute Assistantship (IA) can apply for the underlined research areas only.</p> <p>Further, (a) Underlined research areas marked<sup>#</sup> are meant for NET/GATE/GPAT qualified candidates (b) Underlined research areas marked<sup>@</sup> are meant for GATE/GPAT qualified candidates only.</p> <p>2. Students with external fellowship (JRF etc.) can apply for all of the above research areas (both underlined and not-underlines).</p> |
| Mechanical Engineering         | <p>a) <b>Machine Design:</b> Fracture behavior of fibre composite through thickness, Mechanical behavior of biocomposites; Composites, Impact and failure mechanisms, Computational Fracture Mechanics, Transient Dynamics; Nuclear graphite and Fracture Characterization; Biomechanics, Cardiovascular stent design; Tiobology; Fracture Mechanics; Composite Materials such metal matrix composite, hybrid composite and nano composite for the mechanical and tribological applications; Fatigue wear modeling, contact modeling and its relevance to wear, Reliability of MEMS Devices.</p> <p>b) <b>Production Engg.:</b> Additive manufacturing, unconventional</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

| Disciplines                             | Research Areas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                         | <p>manufacturing, Incremental Forming &amp; Manufacturing, Metal forming, Manufacturing automation using: CAD/CAM/CAE/CE/Reverse Engg.; Tool wear condition monitoring; Materials aspect of Tribology, Composite Materials and Laser Surface Texturing; Weld metal characteristics, Thermal effects on weld metal properties, stress removal in casting.</p> <p>c) <b>Thermal and Fluid:</b> Thermal behavior of Fibre Composite Materials; Solar Thermal, Alternate Fuel, Hybrid System; Engine Simulation; Multi-phase flows related to Molten Metal-Gas interaction, Hydro and Gas cyclones, Droplet/Bubble dynamics; Atomization – Pressure assisted, Electrohydrodynamic; Aerosol generation and measurement; Particle Image Velocimetry; Heat and Mass Transfer Analysis of Grains during fluidized bed drying for achieving energy economy and higher quality; Influence of Climate Change for the Specification of Design Wind Speed of Engineering Structure, Gasification based Polygeneration Cycle of Biomass for Hydrogen Production; Numerical and Experimental analysis of pulverized coal and biomass combustion.</p> |
| Industrial Management                   | Operations Management, SCM, Production System                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Metallurgical Engineering               | Microstructural, Structural and Chemical Characterization; Mechanical Behavior, Deformation Processing and Failure Analysis; Phase Equilibria and Phase Transformation; Non-Equilibrium Processing of Advanced Materials; Ultra-Fine Grained and Nano-Structured Materials; Metallurgical and E-Waste Utilization; Design and Development of Advanced Steels; Tribology and Surface Engineering; Thermodynamics and Kinetics of Metallurgical Processes' Advanced Structural and Functional Materials.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Mining Engineering                      | Strata control and rock mechanics Tunnelling and Underground Space Technology, Numerical Modelling, Rock Instrumentation, Occupational Health and Safety, Safety Data Analytics, Noise and Vibration Surface Mine planning, Rock fragmentation by blasting, HEMM performance and evaluation, Mine environmental pollution Coal and rock characterization IOT, Mine digitization, Software development for mine applications, Virtual Reality, Remote Sensing & GIS, Air pollution modelling and mitigation, Mine Surveying.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Pharmaceutical Engineering & Technology | Pharmaceutics, Pharmaceutical Chemistry, Pharmacology, Pharmacognosy.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Physics                                 | Cosmology, Astronomy & Astrophysics, Solar & Space Plasma Physics; Condensed Matter Physics, Materials Science, Energy Studies, Quantum Information, Biophysics, Biotechnology, Nanotechnology, Optics, Photonics, Spectroscopy, Remote Sensing, High Energy Physics, Nuclear Physics.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Chemistry                               | Synthetic Chemistry, Environmental Chemistry, Surface Chemistry, and Computational Chemistry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Mathematical Sciences                   | Pseudo-differential operators/Wavelets Analysis/Functional Analysis, Partial Differential Equations, Differential Equation/Image Processing, Probability, Stochastic Process, Optimization Techniques (a student who knows real analysis), Graphs Theory and Network Sciences, Spectral Geometry, Differential Geometry, Analysis of Manifolds, Analysis of Partial Differential Equation, Functional Analysis, Measure Theory, Applied Probability, Stochastic Process, Statistics, Computational Fluid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| <b>Disciplines</b>             | <b>Research Areas</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                | Dynamics, Hydrodynamic Stability.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Biochemical Engineering        | All areas of Biochemical Engineering.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Biomedical Engineering         | <p>Physiology; Electrophysiology &amp; Neurobiology; Polymer in Medicine; Bioinstrumentation, Biomedical Signal &amp; Image Processing; Modeling of Biological System, Biological Control System Analysis; Biomechanics; Tissue Engineering &amp; Microfluidics; Molecular Biology, Biochemistry, Biotechnology &amp; Nano Medicine; Optical Nanomaterial, Biosensing, Image Theuranostics.</p> <p>(1) Artificial Intelligence and its application to Biomedical Signal &amp; Image Processing. (2) Bioinstrumentation. (3) Brain Computer Interface (4) Rehabilitation Engineering. (5) Computational Neuroscience. (6) Neuroinformatics. (7) Biomedical Signal Processing.</p> |
| Materials Science & Technology | <p>Electrical and Electronics Materials, Smart/Functional Materials, Magnetic Materials, Nanostructured Materials, Quantum Materials and Technology, Sensors and Devices, Computational Materials Science.</p> <p>Polymer Science &amp; Technology, Biotechnology, Biomaterials, Structural Materials, Advanced Ceramic Materials, Rubber Technology.</p> <p>Energy Materials, Optoelectronics, Nanophotonics, Materials for Environmental Applications, Stealth and Radome Materials, Microwave Materials.</p> <p>Ferrous &amp; Non-Ferrous Alloys, Mechanical Metallurgy, Additive Manufacturing, Low Temperature Instrumentation, Spectroscopic Techniques.</p>               |

## **RESERVATION OF SEATS**

### **SC/ST Category**

In each programme, 15 per cent seats are reserved for the Scheduled Castes (SC) candidates, and 7.5 per cent seats are reserved for the Scheduled Tribes (ST) candidates. Further, a relaxation of 5% marks or 0.5 CPI (on a 10-point scale) shall be admissible on the marks obtained in the qualifying degree for SC and ST candidates in the admission. Such candidates are required to produce at the time of admission an **original certificate** in the prescribed format (see Annexure III.1).

### **OBC Category**

The Board of Governors has approved a 27 percent reservation for Other Backward Classes (OBCs) candidates (other than those covered under the category of “creamy layer”). The reservation is applicable to those OBC candidates who satisfy the following eligibility requirements.

1. They belong to one of the castes listed against the state of their residence on the website of the **National Commission of Backward Classes (NCBC)**, i.e., they belong to the **central list** of OBC (visit the URL: <http://ncbc.nic.in/backward-classes/index.html>).

2. They are excluded from the Creamy Layer as provided in the OM No. 36012/22/93-(SCT) dated 8th September, 1993 of the Ministry of Personnel, Public Grievance and Pension, Department of Personnel and Training, as amended by that Department vide OM No. 36033/3/2004-Estt.(Res) dated 9th March, 2004, and any other notification that may take place before the admission. More details on the definition of Creamy Layer are available at the following links:

<http://ncbc.nic.in/html/creamyayer.html>

<http://persmin.gov.in/WriteData/WMS/ScanDocument/36033 5 2004 01April2005.htm>

To ensure that the benefit of reservation is given only to the **OBCs excluded from the Creamy Layer** (as per the above-mentioned Office Memorandum), candidates belonging to the OBC category are required to produce at the time of admission an **original certificate** in the prescribed format (see Annexure III.2).

### **PwD Category**

In total, 5% reservation (horizontal) shall apply for candidates with physical disability as per the Govt. of India norms (minimum 40% disability; attested copy of the certificate from the District CMO must be furnished). Such candidates must satisfy the eligibility requirements for admission. However, while considering these applications, only suitability for the programme is ensured, and they are not compared with those belonging to other categories. The candidates called for counselling may also be examined by a Medical Board constituted by the Indian Institute of Technology (BHU).

Further, a relaxation of 5% marks or 0.5 CPI (on a 10-point scale) shall be admissible on the marks obtained in the qualifying degree for PC candidates in the admission.

### **EWSs Category**

In each programme 10% additional seats are reserved for Economically Weaker Sections (EWSs) candidates. Such candidates are required to produce at the time of admission an **original certificate** in the prescribed format (see Annexure III.4).

**ANNEXURE III.1**  
(Format of SC/ST Certificate)

**FORM OF THE CERTIFICATE TO BE PRODUCED BY SCHEDULED CASTE AND SCHEDULED TRIBE CANDIDATES IN SUPPORT OF THEIR CLAIM**

1. This is to certify that Shri/Shrimati/Kumari\* \_\_\_\_\_ son/daughter\* of \_\_\_\_\_ of Village/Town\* \_\_\_\_\_ in District/Division\* \_\_\_\_\_ of State/Union Territory\* \_\_\_\_\_ belongs to the \_\_\_\_\_ Caste/Tribe\* which is recognised as a Scheduled Caste/Scheduled Tribe\* under:-

The Constitution (Scheduled Castes) Order, 1950

\*The Constitution (Scheduled Tribes) Order, 1950

\*The Constitution (Scheduled Castes) (Union Territories) Order, 1951

\*The Constitution (Scheduled Tribes) (Union Territories) Order, 1951

[As amended by the Scheduled Castes and Scheduled Tribes Lists (Modification Order) 1956, the Bombay Reorganisation Act, 1960, the Punjab Reorganisation Act, 1966, the State of Himachal Pradesh Act, 1970, the North Eastern Areas (Reorganisation) Act, 1971, the Scheduled Castes and Scheduled Tribes Orders, (Amendment) Act, 1976 and the Scheduled Castes and Scheduled Tribes Orders (Amendment) Act, 2002].

\*The Constitution (Jammu & Kashmir) Scheduled Castes Order, 1956;

\*The Constitution (Andaman and Nicobar Islands) Scheduled Tribes Order, 1959, as amended by the Scheduled Castes and Scheduled Tribes Order (Amendment) Act, 1976;

\*The Constitution (Dadara and Nagar Haveli) Scheduled Castes, Order, 1962;

\*The Constitution (Dadara and Nagar Haveli) Scheduled Tribes, Order, 1962;

\*The Constitution (Pondicherry) Scheduled Castes Order, 1964;

\*The Constitution (Uttar Pradesh) Scheduled Tribes Order, 1967;

\*The Constitution (Goa, Daman and Diu) Scheduled Castes Order, 1968;

\*The Constitution (Goa, Daman and Diu) Scheduled Tribes Order, 1968;

\*The Constitution (Nagaland) Scheduled Tribes Order, 1970;

\*The Constitution (Sikkim) Scheduled Castes Order, 1978;

\*The Constitution (Sikkim) Scheduled Tribes Order, 1978;

\*The Constitution (Jammu and Kashmir) Scheduled Tribes Order, 1989;

\*The Constitution (Scheduled Castes) Orders (Amendment) Act, 1990;

\*The Constitution (Scheduled Tribes) Order (Amendment) Act, 1991;

\*The Constitution (Scheduled Tribes) Order (Second Amendment) Act, 1991;

2. This certificate is issued on the basis of the Scheduled Castes/Scheduled Tribes\* Certificate issued to Shri/Shrimati\* \_\_\_\_\_ father/mother\* of Shri/Shrimati/Kumari\* \_\_\_\_\_ of Village/Town\* \_\_\_\_\_ in District/Division\* \_\_\_\_\_ of the State/Union Territory\* \_\_\_\_\_ who belong to the Caste/Tribe\* which is recognized as a Scheduled Caste/Scheduled Tribe\* in the State/Union Territory\* \_\_\_\_\_ issued by the \_\_\_\_\_ dated \_\_\_\_\_.

3. Shri/Shrimati/Kumari\* \_\_\_\_\_ and/or\* his/her\* family ordinarily reside(s)\*\* in village/town\* \_\_\_\_\_ of \_\_\_\_\_ District/Division\* of the State/Union Territory\* of \_\_\_\_\_.

Signature \_\_\_\_\_

Designation \_\_\_\_\_

(with seal of Office)

Place \_\_\_\_\_ State/Union Territory\* \_\_\_\_\_

Date \_\_\_\_\_

**\*Please delete the word(s) which are not applicable.**

#### IMPORTANT NOTES

1. The term “ordinarily reside(s)\*\* used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.
2. Officers competent to issue Caste/Tribe certificates:
  - (i) District Magistrate/Additional District Magistrate/Collector/Deputy Commissioner/Additional Deputy Commissioner/Deputy Collector/1st Class Stipendiary Magistrate/City Magistrate/Sub-Divisional Magistrate/Taluka Magistrate/Executive Magistrate/Extra Assistant Commissioner.
  - (ii) Chief Presidency Magistrate/Additional Chief Presidency Magistrate/Presidency Magistrate.
  - (iii) Revenue Officers not below the rank of Tehsildar.
  - (iv) Sub-Divisional Officer of the area where the candidate and/or his family normally reside(s).
  - (v) Administrator/Secretary to Administrator/Development Officer (Lakshdweep Island).
3. Certificate issued by any other authority will be rejected.

**ANNEXURE III.2**  
(Format of OBC Certificate)

**FORM OF CERTIFICATE TO BE PRODUCED BY OTHER BACKWARD CLASSES  
APPLYING FOR ADMISSION TO CENTRAL EDUCATION INSTITUTES UNDER  
THE GOVERNMENT OF INDIA**

This is to certify that Shri/Smt./Kum. \_\_\_\_\_ Son/Daughter of  
Shri/Smt. \_\_\_\_\_ of Village/Town \_\_\_\_\_  
District/Division \_\_\_\_\_ in the \_\_\_\_\_ State  
belongs to the \_\_\_\_\_ Community which is recognized as a backward  
class under:

- (i) Resolution No. 12011/68/93-BCC(C) dated 10/09/93 published in the Gazette of India Extraordinary Part I Section I No. 186 dated 13/09/93.
- (ii) Resolution No. 12011/9/94-BCC dated 19/10/94 published in the Gazette of India Extraordinary Part I Section I No. 163 dated 20/10/94.
- (iii) Resolution No. 12011/7/95-BCC dated 24/05/95 published in the Gazette of India Extraordinary Part I Section I No. 88 dated 25/05/95.
- (iv) Resolution No. 12011/96/94-BCC dated 9/03/96.
- (v) Resolution No. 12011/44/96-BCC dated 6/12/96 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 11/12/96.
- (vi) Resolution No. 12011/13/97-BCC dated 03/12/97.
- (vii) Resolution No. 12011/99/94-BCC dated 11/12/97.
- (viii) Resolution No. 12011/68/98-BCC dated 27/10/99.
- (ix) Resolution No. 12011/88/98-BCC dated 6/12/99 published in the Gazette of India Extraordinary Part I Section I No. 270 dated 06/12/99.
- (x) Resolution No. 12011/36/99-BCC dated 04/04/2000 published in the Gazette of India Extraordinary Part I Section I No. 71 dated 04/04/2000.
- (xi) Resolution No. 12011/44/99-BCC dated 21/09/2000 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 21/09/2000.
- (xii) Resolution No. 12015/9/2000-BCC dated 06/09/2001.
- (xiii) Resolution No. 12011/1/2001-BCC dated 19/06/2003.
- (xiv) Resolution No. 12011/4/2002-BCC dated 13/01/2004.
- (xv) Resolution No. 12011/9/2004-BCC dated 16/01/2006 published in the Gazette of India Extraordinary Part I Section I No. 210 dated 16/01/2006.

Shri/Smt./Kum. \_\_\_\_\_ and/or his family ordinarily reside(s) in the  
\_\_\_\_\_ District/Division of \_\_\_\_\_ State.

This is also to certify that he/she does not belong to the persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the Government of India, Department of Personnel & Training O.M. No. 36012/22/93-Estt.(SCT) dated 08/09/93 which is modified vide OM No. 36033/3/2004 Estt.(Res.) dated 09/03/2004.

Dated:  
District Magistrate/  
Deputy Commissioner, etc.  
Seal

**NOTE:**

(a) The term 'Ordinarily' used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.

(b) The authorities competent to issue Caste Certificates are indicated below:

(i) District Magistrate / Additional Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner / Deputy Collector / Ist Class Stipendiary Magistrate / Sub-Divisional magistrate / Taluka Magistrate / Executive Magistrate / Extra Assistant Commissioner (not below the rank of Ist Class Stipendiary Magistrate).

(ii) Chief Presidency Magistrate / Additional Chief Presidency Magistrate / Presidency Magistrate.

(iii) Revenue Officer not below the rank of Tehsildar' and

(iv) Sub-Divisional Officer of the area where the candidate and/or his family resides.

**X-X-X-X-X-X**

***ANNEXURE III.3***

**RELAXATION IN THE QUALIFYING MARKS FOR SC/ST CANDIDATES**

**A relaxation of 5% marks / 0.5 CPI shall be admissible on all qualifying marks/CPI for Scheduled Caste and Scheduled Tribe candidates in the admission.**

**Government of .....**  
**(Name & Address of the authority issuing the certificate)**

### INCOME & ASSEST CERTIFICATE TO BE PRODUCED BY ECONOMICALLY WEAKER SECTIONS

Certificate No. \_\_\_\_\_

Date: \_\_\_\_\_

**VALID FOR THE YEAR** \_\_\_\_\_

This is to certify that Shri/Smt./Kumari \_\_\_\_\_  
 son/daughter/wife of \_\_\_\_\_ permanent  
 resident of \_\_\_\_\_, Village/Street  
 \_\_\_\_\_ Post Office \_\_\_\_\_ District \_\_\_\_\_ in the  
 State/Union Territory Pin Code \_\_\_\_\_ whose photograph is attested below belongs to  
 Economically Weaker Sections, since the gross annual income\* of his/her "family"\*\*\* is below  
 Rs. 8 lakh (Rupees Eight Lakh only) for the financial year \_\_\_\_\_. His/her family does not  
 own or possess any of the following assets\*\*\* :

- I. 5 acres of agricultural land and above;
- II. Residential flat of 1000 sq. ft. and above;
- III. Residential plot of 100 sq. yards and above in notified municipalities;
- IV. Residential plot of 200 sq. yards and above in. areas other than the notified municipalities.

2. Shri/Smt./Kumari \_\_\_\_\_ belongs to the \_\_\_\_\_  
 caste which is not recognized as a Scheduled Caste, Scheduled Tribe and Other Backward  
 Classes (Central List).

**Recent Passport  
size attested  
photograph of the  
applicant**

Signature with seal of Office \_\_\_\_\_

Name \_\_\_\_\_

Designation \_\_\_\_\_

\*Note 1: Income covered all sources i.e. salary, agriculture, business, profession, etc.

Note 2: The term 'Family' for this purpose include the person, who seeks benefit of reservation, his/her parents and siblings below the age of 18 years as also his/her spouse and children below the age of 18 years

\*\*\*Note 3: The property held by a "Family" in different locations or different places/cities have been clubbed while applying the land or property holding test to determine EWS status.

The benefit of reservation under EWS can be availed upon production of an Income and Asset Certificate issued by a Competent Authority. The Income and Asset Certificate issued by any one of the following authorities in the prescribed format shall only be accepted as proof of candidate's claim as 'belonging to EWS': -

- (i) District Magistrate/Additional District Magistrate/ Collector/ Deputy Commissioner/Additional Deputy Commissioner/ 1st Class Stipendary Magistrate/ Sub-Divisional Magistrate/ Taluka Magistrate/ Executive Magistrate/ Extra Assistant Commissioner

- (ii) Chief Presidency Magistrate/Additional Chief Presidency Magistrate/Presidency Magistrate
- (iii) Revenue Officer not below the rank of Tehsildar and
- (iv) Sub-Divisional Officer or the area where the candidate and/or his family normally resides.

**LIST OF R & D ORGANIZATIONS RECOGNIZED BY THE INSTITUTE  
FOR EXTERNAL REGISTRATION**

1. All R & D Laboratories/Institutions of CSIR, DAE, DOS, DRDO, DST, ICMR, DHR, DBT, and the Ministry of Telecommunication & Information Technology.
2. Bharat Heavy Electricals Limited (BHEL), Research and Development Laboratories.
3. Central Indian Pharmacopoeia Laboratory, Ghaziabad.
4. Central Mine Planning and Design Institute Limited, Ranchi.
5. Central Power Research Institute, Bangalore.
6. Central Pulp and Paper Research Institute, Saharanpur.
7. Banaras Locomotive Works (BLW), Varanasi
8. Hindustan Aeronautics Limited, Lucknow & Korwa.
9. Hindustan Machine Tools (R & D Division), Bangalore.
10. Indian Bureau of Mines, Nagpur.
11. Jyoti Limited, Baroda.
12. Kirloskar Electric Limited, Bangalore.
13. Mechanical Engineering Research and Development Organization, Pune.
14. National Institute of Rock Mechanics, Kolar.
15. National Council for Cement and Building Materials (NCCBM), New Delhi.
16. Raman Research Institute, Bangalore.
17. Tata Steel, Jamshedpur.
18. National Metallurgical Laboratory Extension Centre, Chennai.
19. Nothern Coalfields Limited, Singrauli
20. Research Designs and Standards Organization (RDSO), Lucknow
21. JSW Steel Limited.
22. Coal India Limited with all subsidiaries.
23. Singareni Collieries Company Limited.
24. Hindustan Copper Limited.
25. National Mineral Development Corporation.
26. Neyveli Lignite Corporation India Limited.
27. Steel Authority of India Limited.
28. National Thermal Power Corporation.
29. National Aluminum Company Limited.
30. Directorate of General and Mines Safety.
31. Gujrat Mineral Development Corporation Limited.
32. Tata Elxsi – Quantum Computing & AI, Bangaluru.
33. Center for Development of Telematics (C-DOT) – Next-Generation Communication & AI, Bangaluru (Karnataka)
34. Society for Applied Microwave Electronics Engineering & Research (SAMEER) – 6G & Semiconductor Research, Mumbai.
35. Tabor Electronics Ltd.– Advanced Signal Processing & RF Technologies, Ahmedabad.
36. S-Qube Systems – Quantum Radar and Integrated Sensing.
37. QNu Labs – Quantum Cryptography & Secure Communication.
38. BosonQ Psi – Quantum Computing Applications.
39. QpiAI – AI & Quantum Machine Learning.
40. Tata Quantum – Quantum Technologies for Defense & Communication.

41. Synergy Quantum India – Quantum Communication & Sensing.

*N.B. All the research areas in which the above organizations are engaged in R&D activities are considered to be approved.*

\* \* \*

**EXAMPLES FOR CREDIT CALCULATION****a) Theory courses with Tutorials**

Assuming that there are 4 contact hours per week per course, out of which, one contact hour is devoted to tutorial,

$$C = 3L + 2T + P + A$$

$$= 3 \times 3 + 2 \times 1 + 0 + 0 = 9 + 2 = 11$$

**Credit structure from Academic Year 2025-26 onwards.**

$$C = 1L + 1T + 0.5P$$

$$= 1 \times 3 + 1 \times 1 + 0 = 3 + 1 = 4$$

**b) Theory courses without Tutorials**

Assuming that there are 3 contact hours per week per course,

$$C = 3L + 2T + P + A$$

$$= 3 \times 3 + 0 + 0 + 0 = 9$$

**Credit structure from Academic Year 2025-26 onwards.**

$$C = 1L + 1T + 0.5P$$

$$= 1 \times 3 + 1 \times 0 + 0 = 3 + 0 = 3$$

**c) Theory courses with 3 contact hours per week per course and two hours of additional work per week**

$$C = 3L + 2T + P + A$$

$$= 3 \times 3 + 0 + 0 + 2 = 9 + 2 = 11$$

**d) Practical courses**

Assuming that one hour of preparatory work is required before conducting a 3-hour practical per week,

$$C = 3L + 2T + P + A$$

$$= 0 + 0 + 3 + 1 = 4.$$

**credit structure from Academic Year 2025-26 onwards.**

$$C = 1L + 1T + 0.5P$$

$$= 0 + 0 + 1.5 = 1.5$$

e) Thesis credits:

Assuming that a week-long research work by a student can be approximately equated to 5 credits, a semester shall carry 55 credits of research work, which is equivalent to 5 units. In other words, one unit of thesis work is equivalent to 11 credits.

**Thesis credits from Academic Year 2025 onwards:**

**Assuming that a week-long research work by a student can be approximately equated to a minimum of 40 hours of work. A semester shall carry 20 thesis credits, which is equivalent to 5 units. In other words, one unit of thesis work is equivalent to 4 credits.**

\* \* \*

# **Specification and Information Regarding the Preparation of Thesis**

(Under Clause 11.4.2 of PG Ordinances)



**INDIAN INSTITUTE OF TECHNOLOGY  
(BANARAS HINDU UNIVERSITY)  
VARANASI – 221 005**

## **GUIDELINES FOR THESIS PREPARATION**

This document, hereinafter referred to as **Specification and Information Regarding the Preparation of Thesis**, lists the general and specific requirements governing thesis preparation, including guidelines for structuring the content.

### **1. SUBMISSION OF THESIS**

The required number of copies of the thesis and the abstracts are to be submitted to the Dean, Academic Affairs, along with the checklist as per the details given below. The thesis will be submitted only after all other requirements for graduation have been completed successfully, including the thesis credits requirements.

#### **Checklist at the time of Thesis Submission (for Office Use)**

**Please see Appendix D**

#### **1.1 M.Tech./M.Pharm./M.Sc./IDD**

Unbound copies of the thesis, one for each examiner of the oral board (including the thesis supervisor(s)), along with two copies of the abstract (of about 250 words) should be submitted at least 10 days before the probable date of oral examination. The abstract should include a cover page, the format of which is given in Appendix - A.

After the oral examination board has cleared the thesis, the student should incorporate suggestions and/or corrections (if any) and submit the thesis in the final bound form to the Examination Unit of the Office of the Dean, Academic Affairs.

#### **1.2 Ph.D.**

An extended abstract of about 1500 words in PDF format, written on a CD along with two print copies, is required to be submitted one month in advance of the submission of the thesis for transmission to various examiners. The abstract should include a cover page, the format of which is given in Appendix - A. It may also contain some illustrations if necessary.

Upon intimation from the Dean, Academic Affairs, four softbound (not spiral-bound) copies of the thesis should be submitted. In addition, a soft copy of the thesis, split chapter-wise, in PDF format, should also be submitted along with the thesis.

## **2 SPECIFICATIONS FOR THESIS FORMAT**

### **2.1 Preparation of Manuscript and Copies**

2.1.1 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 a single column on each page.

2.1.2 All copies of the 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.

2.1.3 Every chapter has to begin on a new page.

### **2.2 Size and Margins**

2.2.1 The thesis must be printed only on A4-size white paper.

2.2.2 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, the "mirror margin" option can be adopted for this purpose).

2.2.3 Content should not extend beyond the bottom margin except for completing a footnote, the last line of a chapter/subdivision, or a figure caption.

2.2.4 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.

2.2.5 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.

2.2.6 After the thesis is accepted by the oral board for the award of a Ph.D. degree, the student should make the final submission of two copies of the thesis in hard-bound form, one for record in the examination office of the Institute and the other for keeping in the Institute's Main Library. The student may choose to submit printed copies of the thesis either in the standard size (as in 2.2.1) or in a book format that is roughly half of A4. If the book format is adopted for final submission, it should be ensured that all textual and illustrative materials and figures are distinct and legible after reduction in size.

2.2.7 Students should also submit the final thesis in soft form (PDF) in a CD for storage and archival.

## **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 volumes.

## **2.5 Line Spacing**

The general text of the manuscript should be in two-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 chapter-wise sequentially 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 the 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 bitmap graphics. Figures must be clear in the 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 bits per pixel for the color images.

## **2.7 Binding**

The student should submit copies of the thesis in softbound form with soft cover (not spiral bound) for Ph.D. and partially bound form (spiral binding, clamping, or filing) for M.Tech, respectively. Once the thesis is accepted by the Oral Board, the student should submit two copies of the properly bound thesis to the office of the Dean, Academic Affairs. 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.

## **3. GUIDELINES FOR STRUCTURING CONTENTS**

### **3.1 Sequence of Contents**

The following sequence for the thesis organization should be followed:

- (i) Preliminaries
- (ii) Text of Thesis
- (iii) References and Bibliography
- (iv) Appendices

All the headings are centered (without punctuation) 25 mm down the top edge of the page. The subsequent type-setting begins four spaces below the heading.

### **3.2 Preliminaries**

The preliminaries consist of the following in the sequence as mentioned below:

- Title Page
- Certificates
- Acknowledgement and/or Dedication
- Table of Contents
- List of Figures, Tables, and Illustrations
- Symbols used
- Preface

#### **3.2.1 Title Page**

The outer cover and the inner title page should be on light blue Board for Ph.D. Thesis and on Light CREAME Colour Board for M.Tech./M.Pharm./IDD/IMD Thesis. Refer to the Format given in **Appendix – B.**

#### **3.2.2 Certificates**

Refer to **Appendix - C**.

### 3.2.3 Acknowledgement and/or Dedication

As per a student's desire, they should contain only text and no photographs.

### 3.2.4 Table of Contents

The Table of contents should list all material that follows it, and no preceding material should be listed. Chapter, Section, Sub-section should be mentioned with proper indent along with corresponding page numbers. For sub-sub-sections, only the title without page numbers may be mentioned (not mandatory). Three levels of indenting are preferred, and **in any** case, the indenting should not exceed 4 levels.

### 3.2.5 List of Figures, Tables, Illustrations

Tables, figures, and illustrations (if used in the thesis) should be listed under separate headings.

### 3.2.6 Symbols used

Various symbols used in the Thesis should be listed along with their meaning.

### 3.2.7 Preface

The Preface should contain a brief introduction of the thesis, stating its subject, scope, and aims of the research work undertaken, and the philosophy of approach.

## 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, the general character of the research, and a review of the investigations already carried out in the field of the thesis.

### 3.3.2 The body of the 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 a half spacing between two different references (see Section 2.5).

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 the 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, and page number of the article in the book being referred to.
- **Referencing a thesis:** The suggested format should contain the author, the title of the thesis, where the 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 the 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.

## **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 brackets.

## **3.6 Appendices**

3.6.1 Supplementary illustrative materials, original data, and quotations too lengthy for inclusion in the text or which are not immediately essential to an understanding of the subject can be presented in Appendix or Appendices (as Appendix - A, Appendix - B, *etc.*).

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.

#### **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 the style of writing and presentation, have not been discussed in great detail. The student should follow appropriate ideas from standard literature of his/her area of research, and adopt a uniform style and format throughout the thesis, such as in the structural divisions/subdivisions of the thesis, in the mode of citing references and footnotes in the text, in using dimensions, units, and notations, and in preparing tables, figures, *etc.* It is mandatory to use the SI system of units.

Presentation & style of writing should be in impersonal voice (i.e., to be in third person).

## **Appendix - A**

### **FORMAT FOR THE COVER PAGE OF EXTENDED ABSTRACT**

#### **EXTENDED ABSTRACT**

*TITLE OF THE THESIS*

*INSTITUTE'S LOGO*

**Name of Student .....**      **Roll No. ....**

**Degree for which submitted .....**      **Name of Department/School .....**

**Signature of the Supervisor**

*("NAME OF THE SUPERVISOR")*

## **Appendix - B**

### **FORMAT FOR THE OUTER COVER AND INNER TITLE PAGE OF THE THESIS**

**For M.Tech./M.Pharm./M.Sc.**

*"TITLE OF THE THESIS"*

*"INSTITUTE'S LOGO"*

**Thesis submitted in partial fulfillment**

**for the Award of**

*"NAME OF THE DEGREE"*

**in**

**Discipline or NAME OF DEPARTMENT/SCHOOL**

**by**

*"NAME OF THE STUDENT"*

*"NAME OF DEPARTMENT"*

**INDIAN INSTITUTE OF TECHNOLOGY**

**(BANARAS HINDU UNIVERSITY)**

**VARANASI – 221 005**

*"ROLL NUMBER OF THE STUDENT"*

*"YEAR OF SUBMISSION"*

**For Ph.D.**

*"TITLE OF THE THESIS"*

*"INSTITUTE'S LOGO"*

**Thesis submitted in partial fulfillment**

**for the Award of Degree**

*Doctor of Philosophy*

**by**

*"NAME OF THE STUDENT"*

*"NAME OF DEPARTMENT"*

**INDIAN INSTITUTE OF TECHNOLOGY**

**(BANARAS HINDU UNIVERSITY)**

**VARANASI – 221 005**

*"ROLL NUMBER OF THE STUDENT"*

*"YEAR OF SUBMISSION"*

## Appendix - C

### FORMAT FOR CERTIFICATES

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#### CERTIFICATE

It is certified that the work contained in the thesis titled " *TITLE OF THE THESIS* " by "*NAME OF THE STUDENT*" has been carried out under my/our supervision and that this work has not been submitted elsewhere for a degree.

It is further certified that the student has fulfilled all the requirements of Comprehensive, Candidacy and SOTA.

|                   |                      |                      |                            |
|-------------------|----------------------|----------------------|----------------------------|
| <b>Signature:</b> | <b>Supervisor</b>    | <b>Co-Supervisor</b> | <b>External Supervisor</b> |
|                   | <b>(Affiliation)</b> | <b>(Affiliation)</b> | <b>(Affiliation)</b>       |

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#### DECLARATION BY THE CANDIDATE

I, "*NAME OF THE STUDENT*", certify that the work embodied in this thesis is my own bona fide work and carried out by me under the supervision of "*NAME OF THE SUPERVISOR(S)*" from "*THESIS PERIOD*" to ".....", at the "*NAME OF THE DEPARTMENT/ SCHOOL*", Indian Institute of Technology, Varanasi. The matter embodied in this thesis has not been submitted for the award of any other degree/diploma. I declare that I have faithfully acknowledged and given credit to the research workers wherever their works have been cited in my work in this thesis. I further declare that I have not willfully copied any other's work, paragraphs, text, data, results, *etc.*, reported in journals, books, magazines, reports dissertations, theses, *etc.*, or available at websites and have not included them in this thesis and have not cited as my own work.

Date :

Signature of the Student

Place:

("NAME OF THE STUDENT")

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### CERTIFICATE BY THE SUPERVISOR(S)

It is certified that the above statement made by the student is correct to the best of my/our knowledge.

**Supervisor  
(Affiliation)**

**Co-Supervisor  
(Affiliation)**

**External Supervisor  
(Affiliation)**

**Signature of Head of Department/Coordinator of School(s)**

*"SEAL OF THE DEPARTMENT/SCHOOL"*

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### CERTIFICATE

CERTIFIED that the work contained in the thesis titled ".....  
....." by Mr./Ms. .... has been carried out under  
my/our supervision. It is also certified that he/she fulfilled the mandatory requirement (as per PG  
Ordinance, clause no. 10.3.2) of TWO quality publications / patents arising out of his/her thesis work.

It is further certified that the two publications / patents (copies enclosed) of the aforesaid Mr./Ms.  
..... have been published in the Journals indexed by –

- (a) Patent
  - (b) SCIE/ SCOPUS / AHCI/SSCI/ESCI/Pub Med/ABDC/AMS
  - (c) A\* or equivalent conference proceedings#
  - (d) #Non-indexed Journals
- (# Please enclose the DPGC resolution in this regard)

Signature

Signature

( )

**Name      Name  
Supervisor Co-Supervisor**

( )

**Name  
Convener, DPGC**

( )

**SEAL**

**N.B.:** Please strike out the category (a, b, c, d) that is not applicable.

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## COPYRIGHT TRANSFER CERTIFICATE

Title of the Thesis : .....

.....

Name of the Student : .....

### Copyright Transfer

The undersigned hereby assigns to the Indian Institute of Technology (Banaras Hindu University) Varanasi, all rights under copyright that may exist in and for the above thesis submitted for the award of the "*NAME OF THE DEGREE*".

Date :

Signature of the Student

Place:

("NAME OF THE STUDENT")

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## **Option A**

Appendix - D

**INDIAN INSTITUTE OF TECHNOLOGY  
(BANARAS HINDU UNIVERSITY)**

**\* \* \***

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

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

Roll No. : \_\_\_\_\_ Term of Registration: \_\_\_\_\_

Category of Registration : \_\_\_\_\_

Fulfilled required Minimum Residence period: 4 Semesters / 5 Semesters / 6 Semesters (Pl.tick)

Supervisor/Co-Supervisor \_\_\_\_\_

Department/School \_\_\_\_\_

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

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### **ATTENTION**

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

- |                                                                             |               |
|-----------------------------------------------------------------------------|---------------|
| • Minimum Residence Period completed : 4 Sem./5 Sem./6 Sem.                 | <b>YES/NO</b> |
| • Course Credit requirements fulfilled                                      | <b>YES/NO</b> |
| • Thesis Credits requirements fulfilled                                     | <b>YES/NO</b> |
| • Passed the Comprehensive Examination                                      | <b>YES/NO</b> |
| • Admitted to Candidacy (Certificate enclosed)                              | <b>YES/NO</b> |
| • SOTA has been completed satisfactorily (Certificate enclosed)             | <b>YES/NO</b> |
| • Open Seminar completed satisfactorily (Certificate enclosed)              | <b>YES/NO</b> |
| • At least 2 Research Publications in reputed Journals (Published/accepted) | <b>YES/NO</b> |
| • TWO copies of ABSTRACT of the thesis in about 600 words                   | <b>YES/NO</b> |

**P.T.O.**

: 2 :

- ONE CD containing Abstract **YES/NO**
- ONE CD containing Thesis **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
- Copyright transfer certificate **YES/NO**
- Whether Thesis Evaluation Board constituted and communicated to the Dean (Academic Affairs) **YES/NO**

Convener, DPGC of the  
Department/School

Supervisor/Co-Supervisor

## **Option B**

Appendix - E

**INDIAN INSTITUTE OF TECHNOLOGY  
(BANARAS HINDU UNIVERSITY)**

\* \* \*

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

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

Roll No. : \_\_\_\_\_ Term of Registration : \_\_\_\_\_

Category of Registration : \_\_\_\_\_

Fulfilled required Minimum Residence period: 4 Semesters / 5 Semesters / 6 Semesters (Pl.tick)

Supervisor/Co-Supervisor \_\_\_\_\_

Department/School \_\_\_\_\_

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

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**ATTENTION**

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

- |                                                                 |               |
|-----------------------------------------------------------------|---------------|
| • Minimum Residence Period completed : 4 Sem./5 Sem./6 Sem.     | <b>YES/NO</b> |
| • Course Credit requirements fulfilled                          | <b>YES/NO</b> |
| • Thesis Credits requirements fulfilled                         | <b>YES/NO</b> |
| • Passed the Comprehensive Examination                          | <b>YES/NO</b> |
| • Admitted to Candidacy (Certificate enclosed)                  | <b>YES/NO</b> |
| • SOTA has been completed satisfactorily (Certificate enclosed) | <b>YES/NO</b> |
| • Open Seminar completed satisfactorily (Certificate enclosed)  | <b>YES/NO</b> |

- Minimum research publication / patent as mentioned in the PG Ordinance (clause 10.3.2) **YES/NO**
- TWO copies of ABSTRACT of the thesis in about 600 words **YES/NO**
- ONE CD containing Abstract **YES/NO**
- ONE CD containing Thesis **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
- Copyright transfer certificate **YES/NO**
- Whether Thesis Evaluation Board constituted and communicated to Dean (Academic Affairs) **YES/NO**

Convener, DPGC of the  
Department/School

Supervisor/Co-Supervisor