In exercise of the power conferred by sub-section (1), read with sub-section (4) of section 14 of the West Bengal University of Technology Act, 2000 (West Ben. Act XV of 2000) and in supersession of earlier regulations on the subject, the Executive Council hereby makes the following Regulations, namely:-

## REGULATIONS

Short Title, Application and Commencement No.

- These Regulations may be called the West Bengal University of Technology (Regulation for Degree of Doctor of Philosophy, Ph.D.), Regulation 2012
- (2). Concomitant with the provisions under Clauses (3), (6) and (10) of section 5 of the West Bengal University of Technology Act, 2000 the University shall have the provisions for the award of Doctor of Philosophy (Ph.D.) degree where the thesis can be in the fields of Engineering or Technology or Management or Basic and Applied Sciences or Humanities and Social Sciences or Interdisciplinary subjects relating thereto.
- (3). These regulations shall come in to force on and from the date of this Notification published in the Official Gazette
- (4). Research scholar shall mean a student or a candidate engaged in research with or without scholarship and registered with West Bengal University of Technology.

Award of Degree of Doctor of Philosophy

- 2. (1) The Degree of Doctor of Philosophy (Ph.D.) shall be awarded to a candidate on the basis of original research work of merit incorporated in a thesis, recommended by a board of examiners and successfully defended by the candidate during a Viva-Voce.
- (2) The thesis shall demonstrate that the candidate has technical mastery of the chosen field of investigation and is capable of doing scholarly work. The result of research embodied in the thesis shall be a contribution to existing knowledge either by a discovery of new facts or by a discovery of some new relations between facts already known, or by a critical survey of fact or issues leading to a new interpretation. The thesis is to be ordinarily written in English.
- (3) A Master's Degree such as M.Tech/M.E./M.C.P/M.Arch/M.Pharm/M.Sc /M.Phil/ M.D or M.S/MCA (done after B.Tech/B.Arch/M.Sc or equivalent degrees), MBA or P.G.D.M or P.G.D.I.E or P.G.D.I.M (done after B.Tech/B.Arch/M.Sc or equivalent degrees) or any other degree recognized as equivalent thereto provided the candidate has completed more than five years of undergraduate and post graduate studies in a recognized Institution or University.

Procedure for Admission

- 3. (1) The University shall admit a Ph.D. student through an entrance test. The students who have cleared UGC /CSIR (JRF) Examinations/ NET/SET/SLET/GATE/Teacher Fellowship or have passed equivalent examinations or passed the M.Phil./M.Tech/M.D/M.E/M.Pharm or equivalent examination shall not be required to appear at the Ph.D. entrance test.
- Note I: In case of candidates holding a qualifying degree from other Universities, admission for the Ph.D. Programme will proceed after determination of equivalence by the relevant University body and fulfillment of the admission criteria.
- Note II: Foreign students will be required to produce clearance from the Government of India and /or other appropriate authorities, if any, for admission in the Ph.D. Programme. Enrolment in the Ph.D. Programme may be allowed to only such foreign nationals as have obtained and are holding research visa.
- (2) The number of seats for the Ph.D. programme decided in advance for each department by the University shall be notified in the website of the University. The University shall widely advertise the number of available seats for the Ph.D. studies and conduct admission on a regular basis, the frequency of which shall be determined by the University from time to time in consultation with the concerned departments.
- (3) Ordinarily, a candidate seeking admission to the Ph. D. programme will appear at the Entrance Test in the subject in which he/she has obtained the Masters degree. In case a candidate wishes to apply for admission in the Ph. D. programme in a subject other than the one in which he/she has obtained the qualifying degree he/she will have to seek an endorsement by the Ph.D. committee of the subject in which he/she seeks admission as a Ph.D. student, at the time of the submission of his/her application for admission to the Ph.D. programme.
- (4) The entrance test shall be followed by an interview to be conducted by the concerned department of the University. A candidate who has been exempted from appearing at the entrance test shall also be required to appear at the interview. At the time of interview candidates seeking admission to the Ph. D. programme will be expected to discuss their research interest/area.
- (5) Candidates selected for the Ph.D. programme will be attached to a research supervisor in the Department at the time of their admission and shall be required to enroll as a probationary Ph.D. student on payment of a non-refundable fee determined by the University.
- (6) Wghile granting admission to a Ph.D. student, the concerned Department shall pay due attention to the National/State reservation policy.
- (7) In case of affiliated/sister institutes where admission of Ph.D. fellows is done following UGC guidelines the fellows could apply for registration directly.
- (8) A probationary Ph.D. student will be required to complete his/her Ph.D. registration within two years from the date of his/her enrolment, failing which his/her admission in the Ph.D. programme shall automatically stand cancelled.

Registration

- 4. (1) Any person holding a Master Degree of this University or its equivalent of a recognized University or Institute and has fulfilled the admission requirements stated above, may apply for registration to the Ph.D. Programme in the form prescribed for the purpose along with a non-refundable fee as decided upon by the University.
- (2) The Ph.D. Programme shall be carried out in the University Department or in an affiliated college or in a Research Institute recognized by the University for the purpose.
- (3) If the research programme requires utilization of facilities outside the jurisdiction of the University, a student may avail of such facilities with the permission of the Supervisor
- (4) Application for registration will be considered by the relevant Ph. D. Committee at its meeting in the presence of the Supervisor, if any. On the recommendations of the Ph.D. Committee concerned and with due approval of the Vice-Chancellor, the candidate will be allowed to be registered provisionally for the Ph.D. Programme. The student will have to qualify in three relevant papers of the relevant P.G. Course of the respective department within two years from the date of provisional registration for being registered for the Ph.D. Programme. The proposal of the candidate for appearing at the three papers will be decided by the Supervisor and the Head of the Department with due concurrence from the Ph.D. committee concerned. The student will apply to the controller of Examinations for permission to appear according to usual procedure. There will no bar of minimum attendance for such candidates. After qualifying in the above mentioned three papers, the candidate will apply to the Registrar for approval of his provisional date of registration as the date of Ph.D. registration as per Ph.D. regulations.
- (5) Every application for registration in prescribed form shall state the subject or interdisciplinary field in which the candidate desires to have the degree, chosen area of specialization, the title of the research, the name of the Supervisor as well as the University Department or recognized Research Institution where the Ph.D. programme will be carried out. The application shall be supported by six copies of the synopsis of the proposed research, which shall ordinarily not exceed 1000 words, and shall include a title, short introduction, a brief overview of literature pertaining to the work, Research objectives, Research methodologies and the plan of work, duly countersigned by the Supervisor/Joint Supervisor.
- (6) Application for registration will be considered by the relevant PhD. Committee at its meeting in the presence of the Supervisor/or the Joint Supervisor, if any, who will share the responsibility equally with the Supervisor for guiding the research work. On the recommendation of the PhD. Committee concerned and with the due approval of the Vice Chancellor or his nominee, the candidate will be allowed to be registered for the Ph. D. programme.

If the Ph. D. Committee does not consider a Synopsis/Plan of work as fit for recommendation, it shall again be examined by the Committee ordinarily within three months, after proper revision by the candidate in the light of the suggestions made by the relevant Ph.D. Committee

If, even after this revision of the content, the Ph.D. Committee does not recommend the case, the matter shall be placed at the meeting of the Academic Council.

(7) Ordinarily, a Ph.D. student will be registered for a Ph.D. Programme in a subject in which the candidate has obtained Master's Degree.

In case a candidate applies for Ph.D. registration in a subject other than in which he/she has obtained Master's Degree, registration will be decided by the Ph.D. Committee of the subject in which the candidate desires to be registered for Ph.D. Programme.

(8) In all cases, the date of registration shall be deemed to be the date of approval by the Vice-Chancellor, of the recommendation of the Ph D committee. The registration of a candidate shall remain valid for a period of five years.

In case of failure to submit the thesis within the stipulated time, a Ph. D. student shall have to apply for re-registration before expiry of the tenure of the existing registration. Ordinarily, a student will be allowed to be re-registered for once only. The continuity of the research work will, however, be maintained and the candidate will be exempted from other procedural formalities, if completed earlier.

- (9) The title of the thesis and the synopsis may be modified, if necessary, by the student and duly forwarded by the Supervisor with due concurrence of the Ph.D. Committee concerned. However, such modification will not be permitted after submission of the seminar report by the Ph.D. Committee. In exceptional circumstances, the Vice-Chancellor may, in consultation with the relevant Ph.D. Committee, allow a student to pursue a Ph.D. Programme independently.
- 5. (1) The criteria for the faculty to be recognized as Research Supervisor shall be:

Eligibility criteria for Ph.D. Supervisor

- (a) each Ph.D. Committee shall maintain a list of Research Supervisors. The committee shall send the list(s) and also the subsequent changes/additions to the Registrar;
- (b) all whole time, re-employed and retired teachers of this University with research work to their credit are entitled to be enlisted as Research Supervisors, Joint Supervisors or Associate Supervisors;
- (c) in addition, academic staff and retired academics of recognized research Institutes and of Colleges, affiliated to this University and part time teachers of this University are entitled to be enlisted as Supervisors, Joint Supervisors or Associate Supervisors provided they have record of research as evidenced by publications in referred journals. Where refereed journals are not available, available journals in the related discipline may be considered by the departmental committee;
- (d) In case of collaborative research work, teachers of other recognized Universities/ Institutes may be allowed to act as Joint Supervisors, if deemed fit by relevant Ph.D. Committee.
- (2) The Ph.D. Programme shall be pursued by a candidate ordinarily for a minimum period of two years after registration in Departments or Institutions maintained or recognized by or affiliated to this University, under the supervision of the recognized Research Supervisor(s).

(3) If after registration, a change of Supervisor or of the Joint Supervisor or of both is considered necessary, the candidate may apply to the Convener of the relevant Ph.D. Committee through the proposed Supervisor for the purpose, and with the concurrence of the previous Supervisor, ordinarily within one year from the date of registration.

The Convener of the relevant Ph.D. Committee will forward such applications to the Vice-Chancellor for approval.

In case of continuous non-availability of the Supervisor(s), the Ph.D. Committee may, on the request by the candidate, recommend suitable replacement(s) to the Vice-Chancellor.

The Vice-Chancellor may also allow such candidates to submit their thesis independently.

In the event of the death of a Supervisor, the Ph.D. Committee, on being requested by the student, shall recommend to the Vice-Chancellor another recognized Supervisor for supervision of the research work.

- (4) In addition to the Supervisor and/or Joint Supervisor, an Associate Supervisor may also be recommended by the Supervisor at the time of theregistration or at a later stage in special cases, where the research work involves study or investigation in more than one subject or area of knowledge, and the student needs guidance from an expert in an allied area of knowledge for part of the research work. The Supervisor, while recommending the name of an Associate Supervisor, shall indicate the part of the research work for which the help of the Associate Supervisor is required.
- (5) The number of Ph.D. candidates of this University annually shall be such or may be determined by the concerned department from time to time in accordance with U.G.C. regulation. A supervisor shall not have, at any given point of time more than 8 Ph.D. students.

Allocation of Supervisor 6. The allocation of a supervisor for a selected student shall be decided by the departmental committee in a formal manner depending on the number of students working under the supervision of each supervisor, the available specialization among the faculty supervisors, the research interest of the student as indicated during the interview by the student and finally in consultation with the respective student and the faculty member. The allotment/allocation of supervisor shall not be left to the individual student or teacher except where the terms and conditions of the research fellowship/grant enjoyed by the student determine the choice of the supervisor.

Course Work

(7) (1) Each Ph.D. student during the tenure of his/her registration shall be required to undertake course work for a minimum period of one semester. The syllabi to be formulated by the University departments from time to time will include courses on research methodology, quantitative methods and computer applications besides assignments by way of review of existing research in the relevant field. The concerned Department shall decide on the minimum credit/qualifying requirement for enabling a student to submit the 5000 words summary of his research at the pre Ph.D. seminar.

- (2) Only upon the satisfactory completion of course work, the department will provide a completion certificate to the Ph.D. student allowing him to make a pre-Ph.D. presentation in the Departmental seminar that may be open to all faculty members and research students.
- (3) The Course work may be carried out in a sister Department either within or outside the University/Institutes or in an affiliated college for which due credit shall be given to Ph.D. students. The Course work from other Institutes must get the equivalence clearance from the Ph D committee concerned.

Submission and Evaluation

- 8. (1) Ordinarily, six months prior to submission of thesis, the candidate shall through the Supervisor forward to the convener of the Ph.D. Committee six copies of the summary of work preferably within 5000 words. The Convener of the Ph.D. committee shall circulate the summary to the members of the Ph.D. Committee at least fifteen days before holding a Departmental Seminar. At the pre PhD seminar, the candidate shall report the research work in the presence of at least three members of the Ph.D. committee and the Supervisor. The Head of the Department, the Joint Supervisor and the Associate Supervisor, if any, should be invited to the seminar. Notice of the Seminar shall be circulated amongst teachers and the same be put up on the Departmental Notice Board and may also be sent to the Heads of allied Departments.
- (2) During the seminar any member of the Ph.D. Committee may put forward specific suggestions, if any, to the candidate, and if necessary, in writing. The candidate will be required to work upon the suggestions given by the committee.
- (3) If required, the Ph.D. Committee may ask the candidate to reappear at the seminar.
- (4) Immediately after the Seminar, the convener of the Ph.D. Committee shall forward to the University a report in the prescribed form, on the performance of the candidate.
- (5) At least three months prior to submission of the thesis, the Supervisor and the members of the Ph.D. Committee shall meet to prepare a panel of six experts for the written part of the thesis (preferably from outside the state) and a panel of three experts for the Viva-voce. The Convener of the Ph.D. Committee shall forthwith send to the Registrar the recommended panel of experts may be along with their consents for adjudication of the thesis and a panel of three examiners for the Viva-voce, along with eight copies of the abstract of the thesis of the candidate, not exceeding 350 words (Submission in electronic format may also be allowed).
- (6) Ph.D. candidates shall at least publish one research paper in a referred journal before the submission of the thesis/monograph for adjudication, and produce evidence for the same in the form of acceptance letter or the reprint. Where referred journals are not available, Departmental committee will submit the names of available journals in the related discipline to the Research Advisory committee for consideration in place of referred journals.
- (7) The candidate shall submit four (five, in case there is a Joint Supervisor) typewritten or printed copies of the thesis along with electronic version (CD in pdf. Format) within five years but not ordinarily earlier than two years from the date of Ph.D. registration.

- (8) The candidate shall also deposit a fee, as decided upon by the University, along with a prescribed form duly filled in by the candidate, a certificate from the Supervisor as well as attested copies of necessary documents at the time of submission of the thesis.
- (9) The candidate may also submit in support of the thesis the contents of any work which may have been done previously by him/her, but the candidate shall not submit any work for which a degree or distinction has been conferred on the candidate by this or by any other University. The candidate will not, however, be precluded from incorporating any such work in a thesis covering a wider field, provided a clear statement of the work so incorporated is given.
- (10) The Vice-Chancellor shall appoint a panel of three experts including the Supervisor ( or four experts, if there is Joint Supervisor),out of which at least one shall be from outside the State, after considering the suggestion of the relevant Ph.D. Committee for adjudication of the thesis (The adjudicators/examiners shall send the report in the prescribed format).
- (11) When a thesis is unanimously and unconditionally recommended for the Degree by all the examiners, the candidate will be eligible for appearing at the Viva-Voce.
- (12) If there is any ambiguity or conditionality in the reports of the examiners, the Vice-Chancellor may consider the appointment of a third external examiner.
- (13) In case of non-recommendation by one of the external examiners, the Vice-Chancellor may consider the appointment of a third external examiner from the existing panel of examiners or if necessary, from a new panel recommended by the Ph.D. Committee.

The Vice-Chancellor may also, if necessary, refer such and other cases to the Research Advisory Committee, as decided by the Executive Committee, constituted for the purpose.

The Ph.D. programme shall be monitored by the relevant Faculty Council with the help of the Ph.D. committee.

Submission and Evaluation

- (2) The Vice-Chancellor shall constitute Ph.D. committees on various subjects or distinct specializations within subjects and inter-disciplinary fields in consultation with the relevant Departmental Committee.
- (3) A Ph.D. Committee shall consist of five distinguished scholars of whom ordinarily at least three shall be whole time teacher of this University and at least one shall be an external expert in the subject. The Vice-Chancellor shall ordinarily nominate one of the whole time teacher-members as the Convener of the Ph.D. Committee. The Head of a University Department, if such a Head of Department is not a member of the Ph.D. Committee, shall be a permanent invitee to all meetings of the Ph.D. Committee.
- (4) For a subject in which there is no University Post-Graduate Department or in which a sufficient number of University teachers is not available, the vice- Chancellor, in consultation with the Faculty Council concerned, may constitute a Ph.D. Committee with five experts in

the subject. The Vice-Chancellor shall nominate one of them as the Convener of the Ph.D. Committee. This PhD committee will take all the necessary decisions regarding admission/supervision/course work/and other matters which in other cases will be monitored by departmental committee.

- (5) The tenure of a Ph.D. Committee shall be for a period of four years unless otherwise decided by the Vice-Chancellor. The Ph.D. Committee shall ordinarily meet once a month and resolutions of such meetings shall be maintained by the Convener with the secretarial help provided by the Head of the Department concerned.
- (6) Three regular members will constitute the quorum of the meeting. If two consecutive meetings fall through due to lack of quorum the matter will be referred to the Vice Chancellor for appropriate action.

Viva-voce

- 10. (1) At the Viva-Voce, the candidate shall be examined by the Supervisor (if there is any) and an expert to be appointed by the Vice-Chancellor from the panel recommended by the Ph.D. Committee. Copies of reports of the adjudicators on the written part of the thesis shall be sent to the examiners conducting the Viva-Voce and also to the candidate prior to the Viva-Voce. During viva-voce the candidate shall respond to the suggestions made by the examiners, if any, in writing which will be forwarded by the viva voce examiners to the Registrar along with the viva voce report.
- (2) The examiners of the Viva-Voce shall jointly submit a report to the Registrar on the performance of the candidate at the said examination, clearly indicating whether the candidate deserves to be admitted to the Ph.D. Degree. If the candidate fails to satisfy the examiners at the Viva-Voce, the candidate shall be allowed by the Vice-Chancellor to appear again at a Viva-Voce after a period of three months from the date of the first Viva-Voce.
- (3) The Vice-chancellor, after considering the reports on the thesis and the viva-Voce, shall recommend to the Syndicate the award of the Ph.D. Degree to the candidate.
- (4) A diploma under the seal of the University and signed by the Vice-Chancellor in the following format will be given to each successful candidate at the next annual convocation of the University:—

"This is to certify that (name of the awardee) obtained the Degree of Doctor of Philosophy in (name of the subject: within parentheses, broad field of specialization, if any) under the Faculty (name of the Faculty) of this University in the year (year of admittance to the degree)".

- (5) In case a candidate is not awarded the Degree on the basis of reports of the adjudicators or of the Viva-Voce examiners, the Vice-Chancellor on the recommendation of the Ph.D. Committee concerned, may permit the candidate to resubmit the thesis after necessary corrections or modifications after six months but within two years from the date on payment of usual fee for submission.
- (6) A copy of the thesis accepted for the Degree of Doctor of Philosophy, with necessary corrections or modifications, if there be any, shall be retained in the University Library.

- (7) Abstracts of the thesis of all candidates admitted to the Degree by the University will be published in the "Calcutta University Dissertation abstracts."
- (8) Abstracts, written in English, of all thesis, accepted by the University, will also be sent by the Registrar to the 'Dissertation Abstracts International' for publication, immediately after the candidate is admitted to the Degree.

## Depository with UGC

- 11 (1) Following the successful completion of the evaluation process and announcement of the award of Ph.D, the University shall submit a soft copy of the Ph.D thesis to the UGC within a 'period of thirty days, for hosting the same in INFLEBNET, accessible to all Institutions/Universities.
- (2) Along with the Degree, the University shall issue a Provisional Certificate certifying to the effect that the Degree has been awarded in accordance with the provisions of these Regulations of the UGC.

By Order,

Chancellor of the West Bengal University of Technology