

**NATIONAL INSTITUTE OF TECHNOLOGY
(DEEMED UNIVERSITY)
KURUKSHETRA**

**AGENDA
OF
SENATE**



**2nd MEETING
TO BE HELD ON 29.11.2003**

**NATIONAL INSTITUTE OF TECHNOLOGY,
(DEEMED UNIVERSITY)
KURUKSHETRA-136119**

Agenda	:	For the 2 nd meeting of the Senate.
Place	:	Board Room, National Institute of Technology, Kurukshetra.
Date & Time	:	29.11.2003 at 11.30 A.M.

Item	Subject	Page No.
2.1	To confirm the minutes of the 1 st meeting of the Senate of the Institute held on 16.4.2003.	1-4
2.2	To note the action taken on the minutes of the 1 st meeting of the Senate of National Institute of Technology, Kurukshetra held on 16.4.2003.	5
2.3	To note the decision of Board of Governors of the Institute taken in its 3 rd meeting held on 6.10.2003.	6-7
2.4	To consider the Regulations regarding Convocation, award of degrees, medals, certificates and prizes, programme of presentation and citation, academic procession and use of academic costumes/robes.	8-14
2.5	To note the name of all students who have become qualified for the award of degrees of the Institute.	15-30
2.6	To consider the syllabi of B.Tech. 1 st semester and 2 nd semester (common to all branches) - from the academic session 2004-05 onwards.	31-37

~~Tabled~~

Items

2.7	To consider a proposal to award a medal along with Cash prize of Rs.5,000/- <i>a.o.f.</i> the year 2003 onwards to the topper of B.Tech.Electrical Engg. Branch in the memory of Late Shri Shyam Sunder Dhillon, a student of this Institute, 1981-86 batch.	38-40
2.8	To consider Degree Formats to be awarded to the students of the Institute.	41

Item 2.1 TO CONFIRM THE MINUTES OF THE 1ST MEETING OF THE SENATE OF THE INSTITUTE HELD ON 16.4.2003.

The minutes of the 1st meeting of the Senate of the Institute held on 16.4.2003 were circulated to all the members of the Senate vide letter No. NITK/Senate/1st/2692-2712 dated 16.5.2003 and Endst. No. NITK/Senate/1st/2713-22 dated 16.5.2003 duly considered by the BOG in its 3rd meeting held on 6.10.2003. The minutes are enclosed as Appendix ___ containing pages 1-5, Appendix-A 1-10, Appendix-B 1-16 along with the supplementary note No. Dean/Acad.CBS-2 dated 29.9.2003 containing 3 pages 18(i) to 18 (iii) also considered by the BOG.

Dr. Krishan Gopal, Dean (Planning & Development), NITK vide letter No. Dean (P&D)/82 dated 27.5.2003, Appendix I, Page 3 and Dr. R K Arora, Professor, Elect. Engg. Deptt., NITK vide letter dated May 23, 2003, Appendix II, Page 4 have made the following comments in respect of the Item 1.2 & 1.5 respectively

Comments made by Dr. Krishan Gopal

Senate Item	Comments made by Dr. Krishan Gopal	Decision taken by the Senate
Agenda Item 1.2 To consider constitution of the Senate approved by the Board of Governors.	The Senate decided that Professor-in-Charge (Senate) if required will be from amongst the members of the Senate.	The Senate considered and noted the constitution as approved by Board of Governors in its 1 st meeting held on 19.10.2002. The Director informed that all Deans are ex-officio members of the Senate as per MOA/Rules approved for the Institute. The Senate decided that Professor-in-Charge (Senate), if any will be a special invitee on the Senate.

Suggestions made by Dr. R K Arora

Senate Item	Comments made by Dr. R K Arora	Decision taken by the Senate
<u>Agenda Item 1.5</u>	<u>R 3.5</u>	<u>R 3.5</u>
Appendix B (Ordinances & Regulations for the Degree of Doctor of Philosophy).	Relevant documents in support of eligibility for the concerned categories with no listing of relevant documents makes the regulations as incomplete. A corrigendum may be issued so as to make the regulations complete.	Relevant documents in support of eligibility for the concerned categories.

As regards comments sent by Dr. R K Arora it may be mentioned that the clause **R 3.5** under reference may be treated as redundant and hence may be deleted. It is implied that all relevant documents in support of eligibility for the concerned categories are invariably required.

No other comments have been received from any member.

The Senate may consider and confirm minutes of the 1st meeting of the Senate held on 16.4.2003.

**NATIONAL INSTITUTE OF TECHNOLOGY,
(DEEMED UNIVERSITY)
KURUKSHETRA-136119**

**Minutes of the 1st meeting of Senate of National Institute
of Technology (Deemed University), Kurukshetra held on
16.4.2003 at 11.30 A.M. in the Board Room of National
Institute of Technology, Kurukshetra.**

The following were present:-

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| 1. | Dr. N P Mehta,
Director,
NIT, Kurukshetra. | In Chair |
| 2. | Er. Surya Kant,
Vice-President,
Tata Consultancy Services,
PTI Building, 5 th Floor, Parliament Street,
New Delhi-1. | Member |
| 3. | Dr. Krishna Gopal,
Professor, EED & Dean (P&D), NITK. | Member |
| 4. | Dr. D V S Verma,
Professor, CED, NITK. | Member |
| 5. | Dr. R K Arora,
Professor, FFD, NITK. | Member |
| 6. | Dr. R K Bansal,
Professor, CED, NITK. | Member |
| 7. | Dr. T K Garg,
Professor, MED & PPSW, NITK. | Member |
| 8. | Dr. I P Singh,
Professor & Chairman, MED, NITK. | Member |
| 9. | Dr. M K Soni,
Professor & Chairman, EED, NITK. | Member |
| 10. | Dr. S P Jain,
Professor, EED, NITK. | Member |

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| 11. | Dr. V K Arora,
Professor & Chairman, CED
& Chief Warden, NITK. | Member |
| 12. | Dr. S K Sharma,
Professor, MED, NITK. | Member |
| 13. | Dr. K C Goyal,
Professor, MED, NITK. | Member |
| 14. | Dr. A K Gupta,
Professor & Chairman, ECED, NITK. | Member |
| 15. | Dr. H M Rai,
Professor, EED, NITK. | Member |
| 16. | Dr. K S Kasana,
Professor, MED, NITK. | Member |
| 17. | Dr. K B Singh,
Professor & Chairman, Hum. Deptt., NITK. | Member |
| 18. | Dr. A Swarnop,
Prof. & Chairman, Computer Engg. Deptt., NITK. | Member |
| 19. | Dr. D V Singh,
Professor, Mathematics Department, NITK. | Member |
| 20. | Dr. O P Vermani,
Assistant Professor & Chairman,
Chemistry Department, NITK. | Member |
| 21. | Dr. V K Aggarwal,
Asstt. Prof. & Chairman,
Mathematics Department, NITK. | Member |
| 22. | Shri R P S Lohchab,
Registrar, NITK. | Ex-officio Member-Secretary |

Following members could not attend the meeting:-

1. Prof. C V Hanakrishnan,
Professor,
Department of Applied Mechanics,
Indian Institute of Technology,
New Delhi-110016.

RK

2. Prof. N. Gupta,
Principal,
Nemi Chand College of Engineering,
Israna,
Distt. Panipat (Haryana).
3. Dr. M P Kapoor,
Director,
Thapar Centre for Industrial Research & Development,
Thapar Technology Campus, Post Box No. 68,
Patiala-147001 (Punjab).
4. Prof. Samresh Kar,
(Retired Professor, IIT Kanpur),
House No. 501,
IIT Campus,
Kanpur-208016 (UP).
5. Er. V K Sachdeva,
Executive Director,
The Sanswati Sugar Mills,
Yamuna Nagar-135001. (Haryana).
6. Prof. K R Sharma,
(Former Prof. & Head, EE, IIT Kanpur),
Vice-President, Samtel Colour Ltd.,
Ghaziabad (UP).
7. Shri V K Raizada,
(Former Member Rly. Board),
Managing Director, IRWO,
58, Rail Vihar, Sector 33,
NOIDA (UP).
8. Dr. A K Bhatnagar,
Petrotech Chair Professor,
Department of Chemical Engineering,
Indian Institute of Technology, Hauz Khas,
New Delhi 110016.
9. Dr. V K Sehgal,
Professor, CED, NITK.
10. Dr. S K Chakarvarti,
Professor & Chairman, Physics Department, NITK.

Before the Senate, NIT, Kurukshetra started deliberations, Shri R P S Lohchab, Registrar & Member-Secretary on behalf of the Institute, on behalf of the Senate and on his own behalf warmly welcomed Dr. N P Mehta, the Chairman of the Senate and Director of the Institute. Shri Lohchab also extended hearty welcome to the members of the Senate on behalf of the Institute as well as on his own behalf. Then Dr. N P Mehta, the Chairman of the Senate and Director of the Institute addressed members of the Senate on various academic activities of the Institute.

The following decisions were taken:-

Item 1.1 **To note declaration by the Govt. of India to make REC, Kurukshetra as the National Institute of Technology, Kurukshetra with Deemed University Status,**

The Senate noted that the Govt. of India declared REC, Kurukshetra as the National Institute of Technology, Kurukshetra with Deemed to be University Status w.e.f. 26.5.2002 as mentioned in the agenda item.

Item 1.2 **To consider constitution of the Senate approved by the Board of Governors,**

The Senate considered and noted the constitution as approved by Board of Governors in its 1st meeting held on 19.10.2002.

The Director informed that all Deans are ex-officio members of the Senate as per MOA/Rules approved for the Institute.

The Senate decided that Professor In-Charge (Senate), if any, will be a special invitee on the Senate.

Item 1.3 **To consider powers & working/functioning of the Senate and constitution of various Boards and their powers & functions,**

The Senate noted the powers and working/functioning of the Senate as contained in Appendix-I of the agenda item 1.3.

RPZ

The Senate noted Board's decision of constituting the six BOS and their constitution as given in the agenda item 1.3.

The constitution of any Board of Studies may be amended/changed by the Senate.

Item 1.4 To consider the Academic Regulations for Under-graduate and Post - graduate programmes at National Institute of Technology, Kurukshetra

The Senate had detailed deliberations on the agenda item 1.4 and the Academic Regulations for Under-graduate & Post-graduate Programmes duly modified on the basis of deliberations made during the course of meeting are enclosed as Appendix-A (containing 10 pages).

Item 1.5 To consider the Ordinances and Regulations for the Degree of Doctor of Philosophy.

The Senate had detailed deliberations on the agenda item 1.5 and the Ordinances and Regulations for the Degree of Doctor of Philosophy duly modified on the basis of deliberations made during the course of meeting are enclosed as Appendix-B (containing 16 pages).

Item 1.6 To consider the fee structure of NIT, Kurukshetra.

The Senate noted the proposed fee structure of NIT, Kurukshetra.

The tuition fee and evaluation fee for the Ph.D Programme may be included at the rate of Rs. 5000/- P.A. and Rs. 5000/- respectively.

The meeting ended with a vote of thanks to the Chair.


(R P S Lohchab)
Registrar & Member-Secretary

APPENDIX-A

ACADEMIC REGULATIONS

for

UNDER GRADUATE & POST GRADUATE
PROGRAMMES



**NATIONAL INSTITUTE OF TECHNOLOGY
(DEEMED UNIVERSITY)
KURUKSHETRA-136119**

2003

APPENDIX A

A. Academic Regulations

All academic regulations contained herein both for Undergraduate and Postgraduate programmes shall come into force w.e.f. new semester starting in July/August, 2003 and applicable to all such Candidates as admitted in this Semester.

A-1 Academic regulations shall cover the following courses of study at the Institute:

I Undergraduate Programmes

Four years Bachelor of Technology (B.Tech.)

II Postgraduate Programmes

Master of Technology (M.Tech.)

A-2 Detailed Regulations are given in the following Schedules:

Schedule A-I Regulations for Undergraduate programmes.

Schedule A-II Regulations for Postgraduate programmes.

ADMISSIONS

The Institute will have the following Admission Committees:

A-3 Admission Committee for B.Tech.

- i) Director shall appoint Admission Committee for B.Tech.
- ii) Powers and duties of the Admission Committee shall be to select the candidates for admission to B.Tech. Course in accordance with the approved procedure & rules of admission to the Institute, as decided by the Senate/Board of Governors/Govt. of India from time to time.

A-4 Admission Committee for M.Tech.

- i) There shall be one Committee for each Department of the Institute.
- ii) The M.Tech. Admission Committee of each Department/School/Centre shall consist of:
 - a) Chairman of the Department/School/Centre Chairman
 - b) Faculty-in-charge of Post-graduate Programme
(To be appointed by the Chairman of the Department) Member
 - c) Senior most Professor/Assistant Professor in the Department. Member
 - d) One member from outside the Department to be nominated by the Dean Academic. Member
- iii) Powers and duties of the Committee shall be to select the candidates for admission to M.Tech. in accordance with the approved procedure for M.Tech. admission to the Institute, by the Senate/Board of Governors/Govt. of India from time to time.
- iv) The admission of the candidates on the recommendation of Admission Committee shall be approved by the Dean Academic.

A-5 Fee Deposits and Others Dues for the Admissions

The tuition fee and other dues will be as approved by the Board of Governors from time to time.

A-6 SCHOLARSHIPS

1. MERIT-CUM-MEANS AND OTHER SCHOLARSHIPS

Subject to availability, a small number of Merit-cum-Means scholarships and financial assistance may be awarded to the students, as decided by the Institute and given in the Information Brochure.

A-7 UNFAIR MEANS CASES (UMC) COMMITTEE

The Dean Academic shall appoint an Unfair Means Committee each year to deal with the cases of alleged misconduct and use of Unfair Means in the mid-semester and at the end of semester examinations.

As soon as a student is suspected by the invigilator or any authorized person of having resorted to unfair means, his/her answer book shall be seized. The papers etc. duly signed by the invigilator and Superintendent found in possession of the student shall be stitched with his/her answer book in his/her presence. The Superintendent shall ask the candidate to make a statement in writing, explaining his/her conduct. In case the candidate refuses to do so, the fact of his/her refusal shall be recorded by the Superintendent, which should be attested by atleast one Supervisor on duty.

After completing all above formalities, a fresh answer-book shall be given to the student for completing the examination. After a particular test/examination session is over, these answer books (duly marked I, II) shall be sent or delivered separately to the Controller of Exams along with the report. A committee will be appointed by the Director annually to enquire into the cases of attempt of unfair means in the test/examination. The Committee shall submit its recommendations after identifying clearly the category and nature of the offence as listed in regulations to the Dean Academic for consideration and necessary order.

A student whose guilt is established shall be dealt with under the provisions of the disciplinary regulations.

The recommendations of the Unfair Means Committee shall be submitted to the Dean Academic. If the Dean Academic finds that the recommendations needed reconsideration, he/she may return the case(s) to the Committee for reconsideration and thereafter award suitable punishment as recommended originally or recommended after reconsideration after reference by the Dean Academic. The appeals, if any, against such punishment will be decided by the Chairman, Senate, whose decision shall be final. All punishment cases under UMCs would be reported to the Senate.

Schedule A-I

ACADEMIC REGULATIONS FOR UNDER GRADUATE PROGRAMMES

1.0 Admissions

- 1.1 The examination for the degree of Bachelor of Technology will be open to candidates admitted to the privileges of the Institute. Each academic year will comprise of two semesters, each of 16 to 18 weeks duration.
- 1.2 The minimum academic qualifications and age for admission to B.Tech. shall be as decided by the competent authority.
- 1.3 The qualifying marks/Merit list in the Entrance Test will be as prescribed and notified by the competent authority conducting the Entrance Test.

- 1.4 Distribution of seats including reservations shall be as approved by the MHRD, Govt of India, from time to time.
- 1.5 All seats except those for NRI candidates will be filled exclusively on the basis of merit in Entrance Test of eligible candidates under each category taking into account the choice exercised by the candidates.

2.0 Examinations

- 2.1 The examination in each semester will be held according to the syllabi prescribed by the Senate. Each course will carry credits as per the scheme of courses. A student must study all the courses given in the scheme approved by the Senate.
- 2.2 The examination will be held at the end of each semester on such dates as may be fixed by the Dean Academic.
- 2.3 In order to be eligible to sit for End Semester Examinations in paper(s) of any semester, a student must have registered for concerned paper(s) and must have attended not less than 75% of total classes separately in Lectures (including Tutorials) and Practicals in concerned paper(s). If a student falls short of the required attendance in Lectures (including Tutorials) or Practicals in concerned paper(s), he/she will automatically be awarded "E" Grade and will have to repeat the studies whenever offered in concerned paper(s).
- 2.4 The weightage of the End Semester Examination and evaluation during the semester in different courses will be as approved by the Senate.

3.0 Evaluation/Results

- 3.1 At the end of the Semester the students will be awarded a Letter Grade in each of the course taken during the semester depending on the total performance (which may consist of mid-semester examinations, quizzes-announced and unannounced, laboratory exercise, tutorial work, seminars, home assignment etc.) as well as in the End Semester Examination.
- 3.2 Letter Grades will be awarded to the students as indicated below. Each Letter Grade indicates the level of performance in a course and has a Grade point for purposes of computing the Cumulative Grade Point Average (CGPA) as given below. CGPA is defined in Clause 4.2.

Letter Grades	Performance	Grade Point
A	Excellent	10
B	Good	8
C	Fair	6
D	Poor	4
E	Fail	2

A student who earns an E Grade in a course shall have to re-appear in that course in the subsequent examination(s), subject to the following:

Provided that a candidate shall not be allowed to attend classes and appear in the

Semester examination(s) mentioned in column (a), unless he/she has passed in the Semester Examinations mentioned in Column (b).

(a)	(b)
5 th semester onwards	1 st Semester
6 th Semester onwards	2 nd Semester
7 th Semester onwards	3 rd Semester
8 th Semester	4 th Semester

- 3.3 The Course Co-ordinator assisted by other teachers concerned of the course will compile all the marks and will award the Grades. He/she will submit a copy of award list to Dean Academic for the preparation of result.

Once Grades are submitted, any correction thereafter will only be made with the approval of the Director on the recommendation of the Dean Academic.

- 3.4 For the theory component of a course, the Course Co-ordinator (assisted by the team of teachers) will award the marks through continuous evaluation of the students during the semester as well as in the End Semester Examination.

For each theory paper, the question paper for all Examinations will be set by the Instructor(s) of the course. The Instructor(s) along with the tutors, if any, will evaluate the Answer Books.

- 3.5 (a) For the practical (Laboratory/design/drawing/survey camp/workshop and/or vocational training/project) course and the practical component of a course, the marks will be awarded by the Course Co-ordinator (assisted by the team of teachers) through continuous evaluation of the students during the Semester.

(b) The Project Semester evaluation will be done by Project Evaluation Committee as per the guidelines issued by the Institute from time to time.

- 3.6 The Controller of Examination shall publish the final result indicating the Grades and the ultimate CGPA obtained by each student.

4.0 General

- 4.1 All academic problems of the students other than those affecting the Institute rules and regulations framed from time to time may be looked into by the Dean Academic.

- 4.2 A student is required to maintain a Cumulative Grade Point Average (CGPA). The CGPA is the weighted average of all the Letter Grade obtained by the student since his/her entry into the Institute upto and including the latest semester and computed as follows:

$$CGPA = \frac{\sum C_i G_i}{\sum C_i}$$

Where C_i denotes credits assigned to i th course and G_i indicates the Grade point equivalent to the Letter Grade obtained by the student to the i th course. Provided that when a student re-appears in/repeats a course as per Clause 3.2 and Clause 2.3, the new Grade will replace the earlier one in the calculations of the CGPA.

If a student after obtaining pass Grades (A/B/C/D) in all the courses at the end of the programme obtains a CGPA less than minimum CGPA=4.5 required for the award of

degree, he/she may be allowed by Dean Academic to improve the CGPA by studying the course(s) in which he/she has earned 'D' Grade(s) provided the said courses are offered in the semester under consideration. First preference will be given to the professional course(s). This concession of additional semester(s) for improvement will be counted within maximum duration permissible for the programme.

Note:

The Percentage of marks obtained by a student if so required, can be calculated as - CGPA multiplied by 9.00.

- 4.3 At the end of each semester (i.e. after End Semester Examination), students will be supplied a Grade Card indicating the Grades secured in each course and up to date CGPA.
- 4.4 A Student is deemed to have completed the requirements for graduation and is eligible for the award of degree if:
 - (a) he/she has satisfied all the academic requirements as per the regulations.
 - (b) he/she has paid all fees due from him/her.
 - (c) there is no case of indiscipline pending against him/her.

5.0 Absence/ Dropping of Semester

- 5.1 If a student absents from the Institute with due permission of the Dean Academic due to illness, he/she will be permitted to rejoin provided the period of absence does not exceed one semester. If the period of absence is more than one semester or the absence is for reasons other than illness, the case will be referred to the Director by Dean Academic with his/her recommendations.

The student will, however, be charged the prescribed fee even for the period of absence.

In no case, the total period of absence shall exceed two semesters during student's stay in the Institute. In that eventuality, the student's name shall be struck off from the rolls of the Institute.

- 5.2 Notwithstanding the above the Senate may at its discretion, on appeal, relax any of the conditions of Clause 5. Its decision shall be final and binding.

6.0 Re-admission/Duration

- 6.1 In case a student absents from the Institute without prior permission, he/she may be permitted to join back with the permission of the Director on payment of penalty of Rs. 5000/- in addition to the prescribed fee for the period of absence.

In no case, the period of unauthorized absence will exceed one semester. If the period of unauthorized absence exceeds one semester, the student's name will be struck off from the rolls of the Institute.

The maximum period in which a student must qualify for the award of B.Tech degree will be eight years, failing which a student will not be allowed to continue his/her studies for B.Tech Degree

- 6.2 The gap of one/two semesters missed by the student(s), as the case may be, will count towards the total duration of the Programme permissible under the Regulations.

ACADEMIC REGULATIONS FOR POST-GRADUATE PROGRAMMES**1.0 Admissions**

- 1.1 The admissions for the regular postgraduate programmes will be open to candidates admitted to the privileges of the Institute. The duration of the course will be two years (Four semesters) for M.Tech. programmes. Each academic year will be divided into two semesters, each of 16-18 weeks duration.
- 1.2 The admission to the first semester will be open to the candidates on merit and as per rules given in the Information Brochure. The Candidates must have passed the qualifying examination with minimum 60% marks from Universities recognized by the Institute in the disciplines prescribed by the Senate. GATE qualified Candidates shall be given preference over other candidates as per rules.
- 1.3 Relaxation of 5% marks in the eligibility conditions will be allowed to Scheduled Caste/Tribe candidates. In case of special circumstances, the Director in consultation with Chairman of the Deptt. concerned may further relax this condition for these reserved category candidates.

2.0 Examinations

- 2.1 The examination in each semester will be held according to the syllabi prescribed by the Senate. Each course will carry credits as per the scheme of courses approved by the Senate. A student must study all the courses given in the scheme approved by the Senate.
- 2.2 The examination will be held at the end of each semester on such dates as may be fixed by the Dean Academic.
- 2.3 In order to be eligible to sit for End Semester Examinations in paper(s) of any semester, a student must have registered for concerned paper(s) and must have attended not less than 75% of total classes separately in Lectures (including Tutorials) and Practicals in concerned paper(s). If a student falls short of the required attendance in Lectures (including Tutorials) or Practicals in concerned paper(s), he/she will automatically be awarded "F" Grade and will have to repeat the studies whenever offered in concerned paper(s).
- 2.4 The weightage of the End Semester Examination and the Sessional work in different courses/papers will be approved by the Senate.

3.0 Evaluation/Results

- 3.1 At the end of the Semester the students will be awarded a Letter Grade in each of the course taken during the semester depending on the total performance in the Sessional Work (which may consist of class test, quizzes-announced and unannounced, laboratory exercise, tutorial work, seminars, home assignment etc.) as well as in the End Semester Examination.
- 3.2 Letter Grades will be awarded to the students as indicated below. Each Letter Grade indicates the level of performance in a course and has a Grade point for purposes of

computing the Cumulative Grade Point Average (CGPA) as given below. (CGPA is defined in Clause 4.1).

Letter Grade	Performance	Grade Point
A	Excellent	10
B	Good	8
C	Fair	6
D	Poor	4
E	Fail	2

Student who earns an E Grade in a course shall have to re-appear in that course again when it is offered.

- 3.3 The Course Co-ordinator of the course will compile all the marks and will award the Grades. He/she will submit a copy of award list to Controller of Examinations for the preparation of result. Once Grades are submitted, any correction thereafter will only be made with the approval of the Director on the recommendations of the Dean Academic.

4.0 General

- 4.1 CGPA is the weighted average of all the Grades awarded to a student since his/her entry into the Institute upto and including the latest semester and computed as follows:

$$CGPA = \frac{\sum C_i G_i}{\sum C_i}$$

Where C_i denotes credits assigned to i th course and G_i indicates the Grade point equivalent to the Letter Grade obtained by the student to the i th course.

Provided that when a student repeats a course, the new Grade will replace the earlier one in the calculations of the CGPA.

Note:

The Percentage of marks obtained by a student if so required, can be calculated as -CGPA multiplied by 9.00.

- 4.2 At the end of each semester (i.e. after End Semester Examination), students will be supplied a Grade Card indicating the Grades secured in each course and up to date CGPA.

- 4.3 A Student is deemed to have completed the requirements for graduation and is eligible for the award of degree if:

- (a) he/she has satisfied all the academic requirements as per the regulations.
- (b) he/she has paid all fees due from him/her.
- (d) there is no case of indiscipline pending against him/her.

5.0 Absence/ Dropping of Semester

- 5.1 If a student absents from the Institute with due permission of the Dean Academic due to illness, he/she will be permitted to rejoin provided the period of absence does not exceed one semester. If the period of absence is more than one semester or the absence is for reasons other than illness, the case will be referred to the Director by Dean Academic Affairs with his/her recommendations.

The student will, however, be charged the prescribed fee even for the period of absence.

In no case, the total period of absence shall exceed two semesters during student's stay in the Institute. In that eventuality, the student's name shall be struck off from the rolls of the Institute.

- 5.2 In case a student absents from the Institute without prior permission, he/she may be permitted to join back with the permission of the Director on payment of penalty of Rs. 10,000/- in addition to the prescribed fee for the period of absence.

In no case, the period of unauthorized absence will exceed one semester. If the period of unauthorized absence exceeds one semester, the student's name will be struck off from the rolls of the Institute.

A student will be allowed to study the courses as defined by a department carrying prescribed credits. The total period of stay at the Institute for award of M.Tech. degree will not, in any case, exceed 5 years (Ten Semesters).

- 5.3 The gap in studies, if any, will count towards the total duration of the Programme permissible under the Regulations.
- 5.4 The minimum CGPA required for the award of degree is 5.50. If a student after obtaining pass Grades (A/B/C/D) in all courses at the end of the programme obtains a CGPA less than minimum CGPA=5.5 required for the award of degree, he/she may be allowed by Dean Academic to improve the CGPA by studying the course(s) in which he/she has earned 'D' Grade(s) provided the said courses are offered in the semester under consideration of additional semester(s) for improvement will be counted within maximum duration permissible for the programme.

5.5 **Appeal**

Notwithstanding the above, the Senate may at its discretion on appeal, relax any of the conditions of Clause 5.1 and 5.2.

6.0 **Eligibility for admission**

- 6.1 Admission to M.Tech regular courses shall be made on the basis of joint merit in lower exam (B.Tech/A.E.) and GATE in the relevant discipline.

Part-Time M.Tech. programme is open only to the faculty members of the Institute.

- 6.2 Every student will be required to offer for examinations:

6.2.1 Prescribed number of papers (exclusive of seminar/Minor project) out of the list of subjects approved by the Senate from time to time.

6.2.2 A thesis properly typed or printed and prepared as per the standard format approved by the Institute.

- 6.3 The students will work for and prepare his/her thesis under the supervision of a teacher of the Institute. However, if the Director on the recommendation of the Chairman of the Department concerned, is satisfied that the work can be fruitfully carried out at another institute/organization/industry of repute, he/she may allow the student to do his/her thesis at an alternate Institution and this period will count towards the requirements for the Master's degree, but the student will spend for completing his/her thesis a minimum of one month in the Institute under his/her supervisor.

- 6.4 On completion, the student will submit the thesis to the Chairman, BOS through the supervisor. The thesis will present an orderly and critical exposition of the existing knowledge of the subject and will embody results of original investigations

demonstrating the capacity of the student to do independent research work. While writing the thesis, the student will layout clearly the work done by him independently and the sources from which he/she has obtained other information contained in his/her thesis.

6.5 Duration of the Programme

6.5.1 The normal duration of the M.Tech. Programme including thesis for regular students shall be 4 semesters. The maximum duration for regular students shall be 10 semesters, failing which a student will not be allowed to continue his/her studies for the programme.

6.5.2 The normal duration of the M.Tech. Programme including thesis for part-time students shall be 6 semesters. The maximum duration for part-time students shall be 10 semesters, failing which a student will not be allowed to continue his/her studies for the programme.

6.6 The student will submit his/her thesis within the prescribed maximum period as per Clause 6.5 but not earlier than the end of fourth semester for a regular student and the end of sixth semester for a part-time student. The result of the thesis will be declared only after the student has passed the prescribed number of papers and has fulfilled the academic requirements of his/her seminar/Minor project.

6.7 The minimum requirement to pass the M.Tech. examination will be:

- i) D or better Grade in each paper/seminar/Minor Project;
- ii) Cumulative Grade Point Average (CGPA) of 5.50 for the entire degree.
- iii) If a student admitted to the M.Tech. programme is unable to attain the minimum CGPA as per Clause 6.7 (ii), he/she may be permitted to improve his/her CGPA by studying upto a maximum of five courses in which he/she either obtained Grade 'D' earlier or by taking substitute courses with the concurrence of the Chairman of the Department concerned in two semesters only in case of regular students and upto a maximum of three semesters in case of a part-time student.

Provided that this concession of additional semester(s) will be counted for maximum duration permissible as per Clause 6.5.

6.8 The award for the thesis will be either "approved with Distinction" "approved" or "rejected". In case thesis is rejected, the candidate will have to resubmit after a minimum period of three months and subject to Clause 6.5. In case thesis is again rejected, the candidate will be declared ineligible for award of M.Tech degree of this Institute.

6.9 A student fulfilling requirements of the M.Tech. course as per Clause 6.7 and having fulfilled the requirements of thesis as per Clause 6.6 & 6.8 will be eligible for the award of degree.

The result card of the students will show Letter Grades earned by the student in each paper/Seminar/Minor project and the CGPA for the degree and title of thesis alongwith award.

6.10 Sponsored Candidates with 60% marks in the qualifying examination are eligible for admission. Such candidates must have a minimum of two years of full time work experience in a registered firm/company/industry/educational and research institutions/

Government Department/Organization in the relevant field in which admission is being sought. The employer in the sponsorship certificate must indicate that the fee will be borne by the sponsoring organization and the candidate will not be withdrawn before the completion of the programme and absorbed after the completion of the programme.

7.0

Scholarship:

GATE qualified M.Tech. candidates may be awarded GOI Scholarship and contingency grant as per rules, if available. Non-Gate candidates may also be eligible for such assistance if available and also rules permit, from the date they clear the GATE after admission.

The interpretation of any of the regulations contained here in shall lie with the Director of the Institute and shall be final.

The Senate has a right to change/amend/introduce any of the existing and new rules/regulations.

APPENDIX-B

ORDINANCES & REGULATIONS

for

The Degree of DOCTOR OF PHILOSOPHY



**NATIONAL INSTITUTE OF TECHNOLOGY
(DEEMED UNIVERSITY)
KURUKSHETRA-136119**

2003

**NATIONAL INSTITUTE OF TECHNOLOGY (DEEMED UNIVERSITY)
KURUKSHETRA-136119**

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

PREAMBLE

National Institute of Technology (NIT) (Deemed University), Kurukshetra offers postgraduate programmes leading to the award of Ph.D. degree through its Departments. The award of Ph.D. degree is in recognition of high academic achievements, quality research and application of knowledge to the solution of technical and scientific problems in Science, Technology, Humanities & Social Sciences.

The institute also encourages research in interdisciplinary areas through a system of co-supervision and provides excellent opportunities for such programmes. The institute also undertakes sponsored research and development projects from industrial and other organisations in the public as well as private sector.

It is desired that the research work be an original work characterised either by the discovery of facts or by a fresh approach towards the interpretation and application of facts or development of equipment making a distinct advance in instrument technology. It shall evince the candidate's capacity for critical examination and sound judgement and shall represent original contribution to the existing knowledge.

ORDINANCES

1. DEFINITIONS

- (i) **"DRC"** shall mean Department Research Committee.
- (ii) **"Applicant"** shall mean an individual who applies for admission to the Ph.D. programme of the National Institute of Technology, Kurukshetra on a prescribed Application Form.
- (iii) **"BOS"** shall mean the Board of Studies of the National Institute of Technology, Kurukshetra.
- (iv) **"Candidate"** shall mean a person registered for the Ph.D. Degree and who has successfully completed the requirements.
- (v) **"Caretaker Supervisor"** shall mean a member of the academic staff appointed to look after the candidate's research interests in the absence of the Supervisor and after the submission of the thesis.
- (vi) **"Co-Supervisor"** shall mean an additional supervisor approved by the BOS on the recommendations of Department to help in the accomplishment of the research work of the candidate.
- (vii) **"DAe"** shall mean the Dean Academic.

- (viii) **"Degree"** shall mean the Degree of Doctor of Philosophy (Ph.D.) of the National Institute of Technology, Kurukshetra.
- (ix) **"Educational Institution"** shall mean those colleges which offer Bachelor's Degree or higher.
- (x) **"Full-time Research Candidate"** shall mean a person registered for the Ph.D. Degree devoting full time for completing the degree requirements.
- (xi) **"Institute"** shall mean the National Institute of Technology, Kurukshetra.
- (xii) **"Institute Research Candidate"** shall mean a person registered for the Institute Ph.D. Degree as a full time research candidate.
- (xiii) **"Minimum Registration Period"** shall mean the minimum period for which a candidate must be registered.
- (xiv) **"ORG"** shall mean PSU/ Govt. depts./ R&D units.
- (xv) **"Part time research Candidate"** a person who is registered for the Ph.D. degree and will devote part of his/her time towards this pursuit and devote part of time towards the discharge of his/her official obligations.
- (xvi) **"Registration Period"** shall mean the length of time span commencing with the date of initial registration at the Institute on full-time basis.
- (xvii) **"Residency"** shall mean the minimum period for which a candidate must attend the institute on full-time basis.
- (xviii) **"Sponsored Research Candidate"** shall mean a full time research candidate except that he/she receives complete financial support from the sponsoring organizations/ his/her (her) employer.
- (xix) **"Supervisor"** shall mean a member of the academic staff of the Institute approved by BOS on the recommendation of Department/ Centre to guide/supervise the research/ academic work of the candidate.

NOTE: 'He/she' & 'His/her' imply 'he/she'/'she' and 'his/her'/'her' respectively.

2. 0.1 The minimum entry qualification for admission to the Ph.D. programme shall be:
A Master's degree in Engineering/ Technology/ Science/ Humanities and Social Sciences/ Management or any other equivalent qualification recognized by the Institute.
- 0.2 A candidate registered for the Ph.D. programme shall be required to satisfy a minimum registration period requirement, as laid down in the Regulations.
- 0.3 A candidate shall be required to work at the Institute, under the guidance of approved supervisor(s). In special circumstances, a full-time candidate may be permitted by the BOS to carry out his/her research outside the institute.
- 0.4 A candidate will be required to complete all the requirement for the award of the degree within a period specified in the regulations.
- 0.5 The date of initial registration shall normally be the date on which the student formally registers and deposits the fee for the first time in the beginning of a Semester for the Ph.D. programme, which shall also be the date of his/her joining the programme for all intents and purposes.

- 0.6 For a student to become a candidate for the degree, he/she shall have to satisfy the requirements as laid down in the Regulations and be accepted by DRC.
- 0.7 For the purpose of minimum residential requirement in the case of change of status from full-time to part time, the time spent as full time will be taken into account.
- 0.8 If a candidate withdraws from his/her Ph.D. programme or his/her registration is terminated, his/her status as a candidate ceases.
- 0.9 The award of the Ph.D. to an eligible candidate shall be made in accordance with the Regulations of the Institute.

REGULATIONS

The following Regulations shall apply to all categories of candidates pursuing courses of study and research leading to the Ph.D. degree:

R.1 CLASSIFICATIONS

R.1.1 The applicant for admission to the Ph.D. programme shall be classified under any one of the following categories which will be decided and recommended by DRC.

(i) Full-time Research Candidate:

a) Institute Research Candidate

Institute Research Candidate getting Institutional Fellowship, if available

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

Research scholars receiving fellowship and contingency grants from outside organizations such as CSIR, UGC, QIP, DST, AICTE etc.

c) Sponsored Candidates

An employee of a Government Department/organization/industry/institution, with a minimum of two years relevant working experience duly sponsored by employer for the period of study. Such candidates will be considered for admission only if concerned DRC accepts the sponsorship.

d) Self-financed (Indian/ Foreign)/ Study Leave/ College Teacher

- Indian: Indian national.
- Foreign: Foreign nationals admitted through Embassy of the respective Govts. after getting approval from the Ministry of External Affairs and No Objection Certificate from the Ministry of Human Resources Development, Department of Education, Govt. of India or admitted under an MOU.
- Study Leave: Candidates on study leave from other organizations/institutions for a period of not less than two years for pursuing Ph.D. programme.

c) ICCR Awardees (Foreign Students)

Candidates sponsored by their Governments and awarded scholarship by ICCR, Govt. of India. Such candidates shall apply for admission through Indian Embassy in their country.

ii) Part-time Research Candidate:

f) Institute Faculty/ Staff

The permanent employees of the Institute/Educational Institutes/ ORG with more than 2 years of service and are admitted to the Ph.D. Programme. Such candidates will work for their Ph.D. Programme in addition to their normal duties.

g) Project Staff

Persons working on various projects undertaken by the Institute where Ph.D. registration is not a requirement but are admitted to Ph.D. programme. Such candidates will work for their Ph.D. Programme in addition to their normal duties and their Ph.D. programme should be related to their project work.

h) External Candidates (Sponsored)

The candidates sponsored by institutions/organizations and pursuing research work in their parent organization by taking supervisor from the Institute and other from parent organization.

R.2. CONSTITUTION OF DEPARTMENTAL RESEARCH COMMITTEE

The DRC shall consist of:

- (i) Chairman of the Department
- (ii) All Professors of the Department
- (iii) Three Assistant Professors of department by rotation provided they are Ph.Ds. The term of Assistant Professors will be 2 years.
- (iv) Supervisor(s) of the candidate

R.3. ELIGIBILITY

R.3.1 Educational Qualifications

An applicant possessing the following qualifications in appropriate areas shall be eligible to apply for admission for Ph.D. programme of the Institute.

Master's degree in an appropriate discipline or equivalent with a minimum Cumulative Grade Point Average (CGPA) of 6.75 on a 10 point scale or equivalent as determined by the Institute wherever Letter Grades are awarded, or 60% marks in aggregate (of all the years/ semesters) where marks are awarded.

R.3.2 Admission of Institute Staff

A member other than teaching faculty of the Institute who satisfies eligibility qualifications may be considered for admission to the Ph.D. programme as a part time student provided he/she has been given administrative clearance by the Director.

R.3.3 Eligibility for Part-time Ph.D.

- a) the applicant possesses the minimum entry qualifications(R.3.1).
- b) the applicant proves to the satisfaction of the BOS that his/her official duties permit him to devote sufficient time to research;
- c) facilities for pursuing research are available at the applicant's place of work in the chosen field of research;.
- d) he/she will be required to reside at the Institute for a period of not less than 6 months after his/her registration for the degree. (This condition of minimum residence period will be automatically waived off for candidates who are working in Kurukshetra or in ORG/ Educational Institutions located within a radial distance of 200 km from the Institute).

R.3.4 Eligibility for Institute Fellowship to teachers of Engineering/ Science colleges

The faculty of Engineering/ Science Colleges may be considered for the award* of Institute Fellowship for pursuing Ph.D. Programme at NIT, Kurukshetra subject to the following terms and conditions:

- (a) The concerned faculty member of the Engineering/ Science College must be sponsored by their respective Institutions to pursue the Ph.D. Programme at NIT, Kurukshetra.
- (b) The sponsored faculty member of the Engineering/ Science Colleges should satisfy the eligibility as per R 3.1.
- (c) The number of Fellowship should be within the sanctioned limit of a particular Department.
- (d) The DRC should examine each case on merit before making recommendations to the DAe for the award of Institute Fellowship.

* Subject to availability of such fellowships

R 3.5 Relevant Documents in support of eligibility for the concerned categories.

R.4 RESERVATION/ RELAXATION

R.4.1 Fifteen percent (15%) fellowships (of the total sanctioned Institutional fellowships) shall be reserved for Scheduled Caste applicants and 7.5% for Scheduled Tribe applicants in each of the categories of Research Candidates. A total of 3% fellowships, over and above the sanctioned strength, will be reserved for physically handicapped applicants in all the Ph.D. programmes of the Institute put together.

R.4.2 For the SC/ST/ physically handicapped applicants, the eligibility requirement of CGPA may be relaxed to 6.25 on a 10 point scale or equivalent, or to 55% marks.

R.4.3 Applicants with master's degree in English, seeking admission to Ph.D. English, eligibility requirement of CGPA may be relaxed to 6.25 on a 10 point scale or equivalent or to 55% marks.

R.5 SHORTLISTING

- (a) The short listing of applicants for the purpose of admission test/ interview will be done by the DRC of concerned department.

- (b) The DRC of the concerned department may set the shortlisting criteria, if considered necessary, higher than the minimum eligibility defined above.
- (c) The basic guidelines/ instructions for short listing will be issued by DRC with a copy to Director.

R.6 REGISTRATION

R.6.1 Every candidate will be deemed to have been registered on completion of admission for the 1st semester of the course. Every candidate will be required to renew the registration every semester till the submission of the thesis. The renewal of registration every semester shall be subject to satisfactory progress in his/her research work as recommended by DRC.

R.6.2 Time Period Requirement for Submission

- a) The minimum period of registration shall be 24 months for a full time candidate and 36 months for a part time candidate.
- b) The candidate of all categories shall normally submit their thesis within a period of five years from the date of their initial registration for the Ph.D. Programme. However, as a special case, this limit may be extended up to a maximum period of seven years by the Director after which the registration shall stand cancelled automatically.
- c) Notwithstanding above, the senate may relax the conditions under (a), (b) above in exceptional circumstances and in individual cases, as per the recommendations of DRC and BOS.

R.7 THESIS SUPERVISOR(S)

R.7.1 Every registered candidate shall be assigned a Research Supervisor(s) by the Department as per preference of the candidate, subject to approval of DRC & BOS.

R.7.2 Supervisor(s) can be any full-time faculty member of the Institute with a Ph.D. degree.

R.7.3 The Director on the recommendations of the DRC, may appoint more than one Supervisor(s) not exceeding a total of three. These may be from inside or outside the Institute and normally, there should not be more than two supervisors from within the Institute. Appointment of any other Supervisor(s) would not be made after the lapse of 18 calendar months from the date of initial registration of the candidate. However, if appointed, he/she will be designated as co-supervisor.

R.7.4 Appointment of Supervisors and Caretaker Supervisor for Ph.D. students

A faculty member appointed as Ph.D. supervisor is normally expected to be available to a research candidate in the Institute till the thesis is submitted. However, under unavoidable circumstances, such as: long leave of more than 12 months; resignation; retirement; or death; a supervisor may not be available to the scholar. In such special cases, appointment of supervisor(s) will be regulated as under:

R.7.4.1 A Supervisor proceeding on long leave of more than 12 months.

- (i) Where more than one supervisor exists, the supervisor proceeding on leave can continue to be a supervisor.

- (ii) Where only one supervisor exists, another supervisor may be appointed by the DRC in cases where a candidate has not yet submitted his/her synopsis.
- (iii) If the thesis/synopsis of the thesis has been submitted before the supervisor proceeds on leave, he/she will continue to be the supervisor and only a caretaker supervisor will be appointed.
- (iv) Further, if major revision becomes necessary, and the sole supervisor is on leave, he/she should be asked to specifically state whether he/she would effectively help the student carrying out the major revisions within a reasonable period. In case the sole supervisor expresses his/her inability due to one reason or the other, the caretaker supervisor, if he/she provides the required help in carrying out the major revision, will automatically be treated as a co-supervisor of that candidate.
- (v) If a supervisor proceeds on leave for a period less than 12 months initially, but later extends his/her leave beyond 12 months, the above procedure (i-iv) will be followed. The extension granting authority will inform the DRC/BOS accordingly.
- (vi) If the supervisor proceeds on leave for more than 24 months he/she will cease to be supervisor.

R.7.4.2 A Supervisor retires

A faculty member who is due to retire within the next two years can be appointed as a supervisor and can continue to be the supervisor even after his/her retirement provided the Director is convinced of his/her availability/continued guidance to the student. In other cases, a faculty member on retirement may continue as a supervisor, if reemployed or appointed Emeritus Fellow; or, if the synopsis of the thesis has been submitted. Appointment of another Supervisor, if necessary, will be as per Clause R.7.4.1.

R.7.4.3 A Supervisor resigns

A new Supervisor will be appointed, if necessary, as per Clause R.7.4.1.

R.7.4.4 A Supervisor expires

A new Supervisor will be appointed, if necessary.

R.7.5 The maximum number of students which can be supervised by a faculty member at any time at NIT, Kurukshetra will be as under:

Professor-08, Assistant Professor-06, Lecturer-04

R.8 COURSES AND CREDITS

The Candidate shall have to meet the requirements of courses and credits as decided by the Senate from time to time.

R.9 COMPREHENSIVE EVALUATION

- R.9.1 Each candidate will be required to take a comprehensive examination after admission & registration which will test candidate's comprehensiveness of his/her broad field of

research and his/her academic preparation and potential to carry out the proposed research plan. The comprehensive evaluation may be a combination of written and oral examination and may be separately conducted before evaluation of the research proposal. The examination will be conducted by a DRC, of the concerned department.

R.9.2 The following procedure is to be uniformly followed by all the Departments in conducting the comprehensive evaluation of Ph.D. candidates.

- (a) The written examination should be conducted by the DRC within the specified guidelines.
- (b) The result of the written examination should be declared within two weeks as passed/failed.
- (c) After the student has passed the written examination, the oral examination should be conducted by the DRC of the candidate within the broad guidelines.
- (d) After passing in the oral examination, research proposal will be evaluated by DRC through seminar.

R.9.3 (a) Written and oral examination

If a candidate fails in written/oral examination, he/she has to reappear in examination after a period specified by DRC.

(b) Research Plan

In case research plan is not approved by DRC, the candidate will have to improve the research plan as per the suggestion of DRC and get it reevaluated.

R.9.4 A student will be provided a maximum of two attempts to pass the comprehensive evaluation.

R.9.5 All candidates must qualify the comprehensive evaluation between 3-12 months, failing which their registration will be cancelled.

R.10 PERFORMANCE MONITORING

R.10.1 The academic/research progress of each candidate will be monitored by DRC. For this purpose, each candidate will be asked to submit a progress report at the end of each semester to Chairman DRC through Supervisor(s).

R.10.2 The Chairman-DRC in the Department will be coordinating collection of progress reports written and signed by the candidate and forwarded by the supervisor(s) every semester.

R.10.3 The Supervisor(s) and DRC will evaluate the progress report of the candidate.

R.10.4 If the progress is 'unsatisfactory' a warning would be issued to the candidate. Subsequently, the fellowship (in case of regular scholar) of the candidate would be withheld, if approved so by BOS, Director. The candidate may be given two chances to improve upon the progress.

R.10.5 The cases where some action is required will be reported to Director.

R.11 SEMINAR/ SYNOPSIS/ PANEL OF EXAMINERS

R.11.1 Seminar

- a) DRC shall assess the work of candidate through a pre-synopsis seminar which will be held not earlier than the 18 months for full time and 24 months for part time candidate from the date of passing comprehensive evaluation.
- b) The candidate will submit the synopsis only on the satisfaction of quality of the work.
- c) Details of the pre-synopsis seminar shall be notified well in advance so as to enable the interested staff members and students to attend it.

R.11.2 Synopsis

- a) The synopsis should be submitted normally within 2 months after the presentation of pre-synopsis seminar. In case the synopsis is not submitted in the specified period, the student may be asked to present another pre-synopsis seminar.
- b) The students shall submit the synopsis of his/her work normally at least one month before submitting the thesis.
- c) On completion of the research work the candidate shall submit to DRC through supervisor(s), 8 copies of the synopsis. The DRC will forward the synopsis with its recommendations to the DAe.
- d) The candidate shall be required to submit fresh synopsis if he/she fails to submit his/her thesis within 8 months of the submission of the earlier synopsis. However, in case a candidate fails to submit his/her thesis within the stipulated time and has suitable justification for the same, the Director may on recommendations made by the DRC and on individual merits of each case grant his/her extension in time by not more than two months, i.e. the candidate may be allowed to submit his/her thesis within a period normally not exceeding 10 months from the date of the submission of the synopsis. However, the thesis should be submitted within the prescribed time limit as per regulations and approved by BOS.

R.11.3 Panel of Examiners

- a) A panel of at least ten external experts in the area of the Ph.D. thesis would be suggested by the Supervisor(s) and recommended by the DRC while forwarding the title and synopsis of the thesis. The panel so recommended may include the examiners from outside India. The recommended panel will be considered and approved by BOS.

R.12 BOARD OF EXAMINERS

On receipt of the title and synopsis of the thesis, the Director will appoint a Board of Examiners for each candidate from the list approved by the BOS. The Board will consist of one internal examiner, normally the Supervisor as recommended by DRC & BOS and two external examiners, who shall be experts in the subject of the thesis. These external examiners shall be chosen normally from the panel of examiners recommended and approved by the DRC and BOS as aforesaid. A person working in the same laboratory (ies)/ Institution(s) where Research Candidate is employed cannot, however, be appointed as External Examiner for evaluating the Thesis of that Research

Candidate. Further no person can be appointed as External Examiner from Laboratory/Institution to which the Co-Supervisor(s) of the Research candidate belongs.

R.13 THESIS SUBMISSION

- R.13.1 The candidate will submit the thesis along with the prescribed evaluation fee.
- R.13.2 The thesis shall be written in English and shall contain a critical account of the candidate's research. It should be characterised by discovery of facts or fresh approach towards interpretation of facts and theories or significant contribution to knowledge or development or a combination of these. It should bear evidence of the candidate's capacity for analysis and judgement as well as ability to carry out independent investigation, design or development.
- No part of the thesis or supplementary published work, shall have been submitted for the award of any other degree or diploma.
- R.13.3 A candidate may submit his/her thesis within the time period as stipulated in regulations provided that he/she has completed the minimum period of registration.
- R.13.4 The candidate for the degree shall submit four unbound copies of the thesis with a soft cover.

R.14 THESIS EVALUATION

- R.14.1 Each examiner will be requested to submit to the Controller of Examinations a detailed assessment report and his/her recommendation on the prescribed proforma within six weeks of the date of receiving the thesis.
- R.14.2 In the event of the thesis report not being received from an examiner within a period of three months, the Director may appoint another examiner in his/her place for evaluating the thesis from the approved list of examiners.
- R.14.3 (i) Examiners will examine the thesis individually with a view to judge that the thesis is a piece of research work characterised by:
- The discovery of facts, or
 - A fresh approach towards interpretation and application of facts or theories, or
 - A distinct advancement in technology.
- (ii) The examiner will be required to give his/her opinion about candidate's capacity for critical examination and sound judgement. Each examiner will submit the reports on the prescribed form clearly stating that:
- The thesis is recommended for the award of Ph.D., or
 - The thesis is recommended for the award of Ph.D. Degree subject to the candidate giving satisfactory answer to queries specifically mentioned in the report at the time of Viva-Voce examination, or
 - The candidate be allowed to resubmit his/her thesis in the revised form, or
 - The thesis be rejected.

- (iii) a) If all the three examiners recommend acceptance of the thesis, their recommendations shall be accepted.
- b) If two of the three examiners recommend resubmission under (c) above, their decisions would be accepted. In such an event candidate may, however, be allowed to submit the thesis normally within one year, provided the title of the thesis remains unchanged. Normal procedure will be followed for the evaluation of the thesis.
- c) If one of the examiners recommends rejection, the comments made by the examiners be sent to the examiner and his/her clear verdict sought. The examiner may then recommend acceptance, rejection or revision of the thesis.

In case the thesis is accepted, sub-clause (a) above will be applicable. In case recommendation for revision, sub-clause (d) below will apply. However, if the examiner still recommends rejection, a fourth examiner would be appointed from the panel of the examiner already approved by the Director. In such cases sub-clause (e) will apply.

- d) In case one examiner recommends revision of the thesis, the thesis would be revised normally within one year, if the candidate so desires. The revised version of the thesis would be sent to all the examiners for their recommendations.

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

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

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

In case the fourth examiner recommends rejection and the same is not accepted by the candidate, the thesis would be rejected. The candidate may then avail the benefit of sub-clause (b) above.

- f) If two of the three examiners recommend revision of the thesis, the candidate may revise the thesis accordingly and resubmit it normally within a period of one year for the evaluation by the same set of examiners.
- g) The correspondence regarding (c), (d) and (e) above will be done by the DAe.
- h) If one examiner recommends rejection and other examiner recommends revision of the thesis, the candidates may revise the thesis and resubmit it normally within a period of one year for reevaluation by the same set of examiners.

- (iv) Any doubt arising out of the procedure laid down above shall be referred to the Director for a decision.

R.15 RESUBMISSION

In case of resubmission of the thesis, a fresh fee for the examination shall be paid by the candidate.

R.16 VIVA-VOCE EXAMINATION

R.16.1 If the thesis is recommended for the award of degree, the candidate shall be required to defend his/her work/thesis orally (viva-voce examination) before a committee of examiners comprising of one internal and one external examiner. The questions/queries specified by the thesis examiners in their report shall be intimated to the candidate through his/her supervisor at least one week prior to the conduct of the viva-voce examination. Details of the viva-voce examination shall be adequately notified so as to enable interested staff members and students to attend it.

R. 16.2(i) In case of non-availability of the Indian External Examiner for conducting the viva-voce examination, the Director may appoint alternate examiner to conduct the viva-voce examination from the existing panel.

If need be, the DRC may suggest a fresh panel of examiners.

- (ii) The viva-voce examiners shall be provided with the reports of the examiners before the viva-voce examination.
- (iii) Internal examiner shall arrange for the viva-voce examination of the candidate as early as possible.
- (iv) In case of the inability of the internal examiner to have the viva-voce examination conducted due to any reason whatsoever, the Director may appoint another Internal Examiner from amongst the faculty of the department concerned who belongs to the particular field in consultation with DRC and Chairman of the Department concerned to conduct the viva-voce examination. In such cases also, the Ph.D. work will be deemed to have been carried out under the guidance of the supervisor(s) only.
- (v) After the viva-voce examination, both the examiners will prepare a detailed joint report giving one of the following recommendations.
 - (a) recommended for award of degree
 - (b) that thesis be resubmitted after a minimum period of six months incorporating the suggestions of the examiners.
 - (c) not recommended for award of degree
- (vi) Any other matter not explicitly provided herein or of an exceptional nature, may be referred to the Director for his/her decision.

R.17 AWARD OF PH.D. DEGREE

R.17.1 On the completion of all stages of the examination, a committee consisting of Director, Dean Academic and Chairman of the Department concerned shall examine the reports of all the examiners (thesis and viva voce) and decide as under:

(a) that the degree be awarded;

(b) that the degree shall not be awarded. The thesis will be rejected on the conclusion that the thesis is not genuinely the work of the candidate.

In case of (a) the Committee shall also provide to the candidate a list of all corrections and modifications in the thesis (if required) including suggestions made by the examiners during the thesis evaluation and the result of the candidate will be declared after the candidate submits two copies of the corrected thesis.

R.18 FINANCIAL ASSISTANCE (Institutional Fellowship)

R.18.1 Those candidates who are admitted on full-time basis are considered on request, for the award of Institutional Fellowship of the amount as decided by the Board of Governors and directed by the Government of India from time to time.

The students getting Institutional Fellowship will provide 8 hrs of teaching assistance per week.

R.18.2 In addition, the students will be given contingency grant in accordance with the rules of the Institute.

It is to be noted that admission to the Programmes and award of Fellowship are not linked. Admission to any programme does not guarantee the award of fellowship. Those who are not awarded fellowship can continue with the programmes as a self-financing candidate.

The Institute may provide fee waiver subject to the final approval of Director on the recommendation of DRC & DAe

R.19 LEAVE AND ATTENDANCE

A candidate is entitled to avall leave as per Leave and Attendance Rules formulated and amended from time to time by the Senate. Presently these are as under:

During Course work: A full-time Ph.D. candidate during his/her stay at the Institute will be entitled to leave for 30 days including leave on medical grounds, per academic year. He/she will not be entitled to mid-semester breaks, summer and winter vacations.

Leave beyond 30 days in an academic year may be granted to a Research Scholar in exceptional case, by the Chairman of the Department concerned, subject to the following conditions:

- (i) the leave beyond 30 days will be without Assistantship/ Scholarship; and
- (ii) such an extension of leave upto additional 30 days will be granted only once during the programme of the scholar.

- (iii) The leave may be subject to the approval of the Chairman of Department concerned on the recommendation of the Supervisor; and a proper leave account of each candidate shall be maintained by the Department concerned.
- (iv) The women research candidate will be eligible for Maternity Leave fellowship once during the tenure of the award.

R.20

CANCELLATION OF REGISTRATION

R.20.1 Registration of a candidate shall be cancelled in any one of the following eventualities, after due approval of Director.

- (i) if he/she absents himself for a continuous period of four weeks without prior intimation/ sanction of leave.
- (ii) if he/she resigns from the Ph.D. Programme and the resignation is duly recommended by the Supervisor.
- (iii) if he/she fails to renew his/her registration within 4 weeks of the start of the semester as per provision contained in these Ordinances & Regulations.
- (iv) if his/her academic progress is found unsatisfactory.
- (v) If he/she does not clear the comprehensive evaluation as stipulated.
- (vi) If he/she is found involved in an act of misconduct and/or indiscipline and termination has been recommended by a competent authority.

R.21

GENERAL

R.21.1 Notwithstanding anything contained in these Ordinances & Regulations, all categories shall be governed by the rules and procedures framed by the senate in this behalf, and in force from time to time.

R.21.2 Any doubt or dispute about the interpretation of these Ordinances and Regulations shall be referred to the Director whose decisions shall be final.

R.21.3 Eligibility for admission to Ph.D. programmes in different disciplines may be reviewed from time to time by the concerning department and approved by the Senate.

R.21.4 All exceptions and issues not covered above may be decided by a committee consisting of Director, Dean Academic, Chairman of the Department concerned and supervisor of the candidate concerned subject to subsequent ratification by Senate.

ANNEXURE-A

**NATIONAL INSTITUTE OF TECHNOLOGY
(DEEMED UNIVERSITY)
KURUKSHETRA-136119**

No.
**APPLICATION FOR ADMISSION TO THE DEGREE OF
DOCTOR OF PHILOSOPHY (P.H.D.) COURSE.**



To
The Chairman,
Department of
National Institute of Technology,
Kurukshetra

Sir/Madam,

I hereby apply for admission as a research candidate to the Ph.D. Course in the Department of National Institute of Technology, Kurukshetra and submit the following particulars in support of my application. I have read the Ordinance & Regulations for this course and undertake to abide by it and also the amendments/ additions made therein from time to time. I hereby declare that all the statements made in this application are true, complete and correct to the best of my knowledge and belief and I authorize the Institute to take any action against me in the event of any information given by me in this application having been found false or incorrect subsequently.

Yours faithfully,

Signature of Candidate

Place.....
Date.....

(Particulars to be filled by the Candidate)

1. Name (in block letters) Mr./Mrs./Miss.....
2. Father's Name.....
3. Date of Birth (as given in Matriculation Certificate).....
4. Registration No. (if already registered with Institute)
5. Permanent Address.....
6. Local Address.....
7. Whether belong to Scheduled Caste /Scheduled Tribe/Physically Handicap Category?
8. Academic Qualification: -

Examination Passed	Name of the University/Institute	Year	Roll No	Max. Marks	Marks/ Grade Obtained	% age of Marks	Discipline/ Specialization
Bachelor Degree							
Master's Degree							
National Test/ CASE-NIT etc.							

Title of Dissertation, if any.....

9. Have your ever been disqualified or punished (state Yes/No).....
if -so, Class /Examination..... Session/Year..... Name of the
University and punishment awarded.....
10. Proposed area of research.....
.....
11. Details of previous research experience, if any.....
12. No. of publications, if any (Attach copies)
13. If employed,
(a) Name of employer.....
(b) Nature of work (Teaching/Other).....
(c) Total experience.....year.....months.....

**CERTIFICATE TO BE SIGNED BY THE HEAD OF THE INSTITUTION / EMPLOYER IN CASE
THE CANDIDATE IS EMPLOYED**

I do hereby certify that the application of the above mentioned candidate, who has been serving in the
institution/ department as (designation)since.....on regular/temporary
basis..... is being made with my consent and permission. I further certify that the post on which
he/she is working here is a teaching/Non teaching post.

Place.....
Dated.....

Signature of the Head of the
Institution/employer with

seal.

Note: - The candidate is required to submit one attested photocopy of each certificate/degree with
the application form.

1. Matriculation certificate.
2. Bachelor's Degree and Mark Sheet
3. Master's Degree and Mark Sheet
4. Valid GATE/NET (Grade Card).
5. Migration certificate (in the case of a student coming from other University/Institute).
6. No-Objection- cum-Service Certificate from the employer (in case the candidate is employed).
7. Scheduled Caste/Scheduled Tribe/Physically Handicapped.
8. Nature of employment, Research experience, publications and other related details.

TABLED AT THE MEETING OF THE BOG ON 6.10.2003.

Supplementary note to be considered with the
BOG Agenda Item 3.6 on Page 18 (3rd meeting
of Board of Governors, National Institute of
Technology, Kurukshetra held on 6.10.2003).

18(1)

NATIONAL INSTITUTE OF TECHNOLOGY,
KURUKSHETRA

Ref No: Dean/Aca/BOG-27
Date: Sept 29, 2003

Reference your notification No D/Aca/4603, dated 21.7.2003 on the formation of a Committee with the undersigned as Coordinator, to recommend fine details of the Credit Based System (CBS) to be followed and implemented for B Tech and M Tech students to be admitted in the current semester and onwards. The committee met three times, discussed the issues in details and recommended as under with the understanding that those may support initiating the implementation of the CBS:

1. REGISTRATION

(a) Every student is required to be present and register at the commencement of each semester on the date fixed and notified by Dean Acad. The registration process (both for B Tech and M Tech Students) would be centrally organized by the Academic Branch of the institute. For First and Second Semester B.Tech. Students, Academic Branch would conduct the process whereas for 3rd Semester onwards, respective departments would do the needful. For M Tech programmes, respective departments would register the students for all the semesters.

(b) Only those students will be permitted to register who have:

- (i) Cleared all fees and dues of the Institute, Library and Hostel (if resident).
- (ii) Not been debarred from registering for a specified period on any ground by the competent authority, and
- (iii) Qualified the conditions as laid down under clause 3.2 of the UG Academic Regulations.

(c) Dean Academic may allow late registration with a prescribed late fee within next three working days.

2. CREDIT COUNTS

All courses would have a Credit Count and teaching of subjects would be reckoned in terms of Credits. The number of credits of a course shall ordinarily be calculated as under:

- (a) LECTURES/TUTORIALS: One Lecture per week shall be assigned ONE credit. For one Tutorial period per week, HALF a credit is to be assigned.
- (b) PRACTICALS: One lab period per week shall be assigned HALF a credit.
- (c) SEMINAR/COLLOQUIUM/GROUP DISCUSSION: One credit each.

(d) **MINOR PROJECT** Credits equal to 1.5 times the number of periods per week.

(e) **MAJOR PROJECT** Two credits per period per week for the Project done in Final Semester only. For Pre-final Semester Project work, NO credit counts would be there.

(f) **FIELD TRAINING** Three credits for each training.

(g) **COMPREHENSIVE VIVA-VOCE** Three credits

(h) **GENERAL FITNESS & PROFESSIONAL APTITUDE** Three credits

Fractions would be rounded up to the next higher integer in the final result.

3 GRADING

(a) The Academic Performance of a student shall be graded on a TEN -POINT SCALE. The award of Grades based upon marks obtained out of 100 shall be made as follows:

MARKS	GRADE	MARKS
75 <=	A	< 100
65 <=	B	< 75
50 <=	C	< 65
40 <=	D	< 50
	E	< 40

(b) There will be a **GRADE REVIEW COMMITTEE** for reviewing the Grades obtained by the B.Tech students in a course in each Department Semester wise. The constitution of this Committee shall be as under:

1 Chairman of the Department (Chairman of the Committee)

2 Respective Course Coordinators of courses being offered in the Semester.

The final grades will be submitted through Chairman concerned by the respective Course Coordinators to the **Controller of Examinations** as recommended by the Grade Review Committee.

A similar Committee shall also exist and function for M.Tech.

4 CONTINUOUS EVALUATION SUB-COMPONENTS AND WEIGHTAGE

(a) The weightage to all subcomponents of a theory course is given as below:

<u>SUBCOMPONENT</u>	<u>WEIGHTAGE(%)</u>
1 THREE Class Tests (TWO best to be reckoned)	20+20=40
2 Teacher's Assessment through viva voce, Home	

Assignments, On the Spot Tests, Short Quizzes etc.	10
3 End Semester Examination	50
(b) For Practicals	
1 Mid Semester Evaluation (to be conducted in regular Practical Classes)	30
2 Teacher's Assessment through viva-voce, short quizzes, reports, Class work etc.	30
3 End Semester Examination	40

(c) For Seminars, Projects, Training, Comprehensive viva and General Fitness evaluation, the weightage will be decided by Departmental Review/Academic Committees.

THE CANDIDATES WILL BE REQUIRED TO OBTAIN MINIMUM D GRADE IN THE END SEMESTER EXAMINATIONS.

5 ATTENDANCE CONDONATION

In very special cases, the Director may condone absence of a student up to 10% of total classes held in a semester for 75% requirement.

6 GENERAL

(a) Notwithstanding anything contained in the regulations, the Chairman of the Senate may, in emergent situation, take action on behalf of Senate, as he/she deems fit and appropriate and report it in the next meeting of the Senate for approval.

(b) In case of any dispute, difference of opinion in interpretation of the regulations, the decision of the Chairman Senate shall be final and binding.

These recommendations of the Committee may not be considered in isolation but as extension of the already proposed and approved rules and regulations.

S.K. Chakravarty
 (S.K. Chakravarty)
 Dean Academic and Convener

DIR
Approved
J. B. D.

NATIONAL INSTITUTE OF TECHNOLOGY
(DEEMED UNIVERSITY)
KURUKSHETRA-136119

राष्ट्रीय प्रौद्योगिकी संस्थान
कुरुक्षेत्र-136119
मुख्य कार्यालय
कुरुक्षेत्र संस्था

Dean(P&D) Sir,

Dated : 27.5.2003.

Please refer to letter No. NITK/Senate/1st/2692-2712 dated 16.5.2003 enclosing minutes of the meeting of the Senate. This is bring to your kind notice that the minutes recorded on Item 1.2 on page 4 para 3 are not in order. The correct recording should be as under:

"The Senate decided that Professor I/C (Senate), if required will be from amongst the members of the Senate."

It is requested that the above correction in the minutes may please be made.


(Krishna Gopal)
Dean(Plg. & Dev.)

Registrar & Member Secretary,
Senate, NIT, Kurukshetra

DEPARTMENT OF ELECTRICAL ENGINEERING
NATIONAL INSTITUTE OF TECHNOLOGY, KURUKSHETRA

To
Sh. R.P.S. Folchaly
Registrar & Member-Secretary,
Senate, N.I.T.,
Kurukshetra.

Sub: Minutes of the 1st meeting of the Senate of N.I.T., Kurukshetra-
Comments thereon.

Dear Sir,

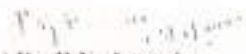
In the minutes cited as subject above I may mention that in

Appendix B

R.3.5 Relevant Documents in support of eligibility for
the concerned categories with no listing of relevant
documents makes the regulation as incomplete.

A corrigendum may be issued so as to make the regulations complete.

Dated: May 31 2001


(Dr. R.K. Arora)
Member Senate, NITK
Professor, EED, NITK

item 2.2 **TO NOTE THE ACTION TAKEN ON THE MINUTES OF THE 1ST MEETING OF THE SENATE OF NATIONAL INSTITUTE OF TECHNOLOGY, KURUKSHETRA HELD ON 16.4.2003.**

The minutes of 1st meeting of the Senate of the Institute held on 16.4.2003 were circulated to all the members of the Senate vide letter No. NITK/Senate/1st/2692-2712 dated 16.5.2003 and Endst. No. NITK/Senate/1st/2713-22 dated 16.5.2003 after these are approved by the BOG in its 3rd meeting held on 6.10.2003.

The follow-up actions on minutes of the 1st meeting of the Senate held on 16.4.2003 are being taken by the concerned Section which will be reported in the next meeting of the Senate.

The Senate may note.

Item 2.3 TO NOTE THE DECISION OF BOARD OF GOVERNORS OF THE INSTITUTE TAKEN IN ITS 3RD MEETING HELD ON 6.10.2003

The Board considered and approved minutes of 1st meeting of the Senate of NIT, Kurukshetra held on 16.4.2003 as per details furnished in the agenda item 3.6 alongwith the supplementary note bearing No. Dean/Acad./CBS-2 dated 29.9.2003 as put up to the Board alongwith the Agenda item with the modification that maximum number of students which can be supervised by a faculty members at any time at NIT, Kurukshetra will be as follows under Rule 7.5 of Ordinances & Regulations for Degree of Doctor of Philosophy:-

Professor	:	04
Asstt. Professor	:	03
Lecturer	:	02

Further, the Board made following observations regarding Academic Regulations for Under Graduate and Post Graduate, which may not be implemented for the time being.

- (a) Maximum time limit to pass B.Tech. Course is 8 years as approved by the Senate which seems to be very long. It may be suitably reduced subsequently.
- (b) Total no. of credits for award of a degree, B.Tech./M.Tech. should be same for all the branches.
- (c) (i) For a class of full strength, grades should be awarded based on the distribution of marks and suitable cut-offs for the award of grades A,B,C,D and E. Norms for these cut-offs should be evolved.

- (ii) Grade "A" is given to a candidate getting 75% marks upto 100%. This may be increased subsequently as 75% is somewhat very low.
- (d) A student can sit in 5th semester if he has cleared the 1st semester examination. This seems to be quite a lenient proposition. It is desirable to prescribe semester GPA and CGPA for a student to continue in the programme.
- (e) The number of grades A,B,C,D and E which are five may be increased lateron.

Senate may please note the above observation of the Board for further necessary action.

Item 2.4 TO CONSIDER THE REGULATIONS REGARDING CONVOCATION, AWARD OF DEGREES, MEDALS, CERTIFICATES AND PRIZES, PROGRAMME OF PRESENTATION AND CITATION, ACADEMIC PROCESSION AND USE OF ACADEMIC COSTUMES/ROBES.

The proposed Regulations regarding Convocation, Award of Degrees, Medals, Certificates and Prizes, Programme of Presentation and Citation, Academic Procession and use of Academic Costumes/Robes are enclosed as Appendix- III from page 9 to 14 for consideration and approval of the Senate.

The Senate may consider and decide.

REGULATIONS REGARDING CONVOCATION, AWARD OF DEGREES, MEDALS, CERTIFICATES AND PRIZES, PROGRAMME OF PRESENTATION AND CITATION, ACADEMIC PROCESSION AND USE OF ACADEMIC COSTUMES/ROBES

I. CONVOCATION AND AWARD OF DEGREES

- (i) The Convocation of the Institute will be held on a date fixed by the Chairman, BOG.
- (ii) The Dean (Academic) shall, from time to time, report to the Senate the names of all such persons who fulfill the requirements prescribed for various degrees of the Institute and have become qualified under the Regulations for admission to such degrees.
- (iii) A Candidate who has failed to attend the Convocation held may obtain his/her degree in absentia by submitting an application to the Dean (Academic). Such application shall be accompanied by a fee of Rs. 500/- in the form of the crossed Indian Postal Order/Draft in the name of the Director, National Institute of Technology, Kurukshetra-136119. On receipt of such application, the Dean (Academic), shall after satisfying himself that it is in order, issue the degree to the applicant.
- (iv) If the Convocation is not held due to unavoidable circumstances within one year from the passing of examination, the degrees may be awarded after completing necessary formalities.
- (v) Provisional Certificate may be issued by the Dean (Academic) to a candidate, who has fulfilled all the requirements for the award of degree, after obtaining the approval from the Chairman, Senate.
- (vi) Semester examination results may be declared by the Controller's Office after obtaining approval from the Director of the Institute.

II. ACADEMIC PROCESSION

Academic Procession will consist of the Chief Guest, Chairman Board of Governors, Director, Members of the Board of Governors and Senators. Registrar will lead the procession in the following order :-

Registrar

Senators in Two's

Deans in Two's

Members of Board of Governors in Two's

Director

Chairman Board of Governors

Chief Guest

3. **AWARD OF MEDALS, CERTIFICATES AND PRIZES**

Medals to be awarded: -

(i) All Toppers in each discipline of B.Tech Degree Courses

(ii) Best All-Rounder

Cash Prize of Rs. 250/- for the purchase of Books and a Certificate to be awarded.

(iii) Dr. R. P. Singh Medal

To be awarded to the Toppers of 2nd & 3rd year B.Tech Mechanical Engg. Students.

(iv) Private Medal, if any as approved by the Senate and BOG

Merit Certificates & Prizes to be awarded: -

(i) Merit Certificates to the 10% Toppers in each branch of B.Tech. alongwith exemption from Tuition fee and a Cash prize of Rs.100/- to each student.

(ii) Institute Cash Prize of Rs. 250/- for the purchase of Books to be awarded to the toppers of each branch in every semester B.Tech and the toppers of Major Project of B.Tech 8th Semester in each branch.

(v) **PROGRAMME OF PRESENTATION AND CITATION**

(i) The Convocation will be declared open and closed by the Chairman BOG of the Institute.

(ii) The Degrees for B.Tech/M.Tech will be conferred by the Director. The Degrees for Ph.D. and higher and Medals will be awarded by the Chairman BOG of the Institute.

(iii) The programme of presentation of award of Degrees and Medals will be as under:

LEVEL	PRESENTATION
Ph.D	Dean (Academic)
M.Tech/B.Tech Medals & Prizes	Respective Chairmen of Departments Registrar

- (iv) The scroll containing the record of Degrees will be signed by the Chairman, Board of Governors.
- (v) The exhortation will be read by the Director.

4. ACADEMIC COSTUMES/ROBES

- (i) In these Regulations 'Ordinary' Academic Costume includes a black cap and gown without hood or sash and 'Full' Academic Costume, which includes in addition a hood or sash.
- (ii) Members of the Senate and Board of Governors of the Institute and all those persons who will be receiving their degrees shall wear their Full Academic Costumes in Convocation of the Institute.
- (iii) The Chief Guest, Officers and Graduates of the Institute are entitled to wear Academic Costumes as follows: -

(A) CHIEF GUEST'S GOWN

Superior Maroon Velvet with 4 inches Golden Lace on front folds bottom of sleeves. On shoulders with zari work fronts and tufts and zari work on the sleeves with tufts, without Monogram, Cambridge style, fully interlined special padding and material. Special Academic Cap of Superior Maroon Velvet with 1 inch Golden Lace and with Golden Tassel, Mortar band and with special material.

(B) CHAIRMAN'S GOWN

Pure silk, hand woven, hand spun in Maroon colour with the Golden Lace on the front folds, bottom of sleeves, with ½ inch strip of green silk on the front folds and 3 strips on the sleeves in green silk. Oxford style, with two Institute Monograms, if available, fully interlined and with special padding and material. Cap of superior silk, hand woven, hand spun, with 1 inch Golden Lace. Mortar band with Golden Tassel.

Sash: Pure Silk, Hand Woven, Hand spun in Maroon Colour, Golden Lace on the bottom and with Golden Jhaller.

(C) DIRECTOR'S GOWN

Maroon silk with 2 inches Golden Lace on the front folds round neck and on bottom of sleeves, with two strips of ½ inch wide green silk on the front folds and 3 strips ½ inch width of green silk the sleeves with two Institute Monograms, if available, in Golden zari work the fronts with hand made fluting; Oxford style,

fully interlined with special padding and material. Academic cap of pure silk Maroon colour with 1 inch Golden Lace. Mortar band with Golden Tassel.

Sash: Pure Silk, Hand Woven, Hand pun in Maroon Colour, Golden Lace on the bottom and with Golden Shaller.

(D) REGISTRAR'S GOWN

Black Heavy silk with 2 inch silver lace on the front folds round the neck and on the bottom of the sleeves, bottom of the sleeves with ½ inch wide of green silk on the front folds and two strips ½ inch wide of green silk on the sleeves with two Monograms in silver zari work with hand made fluting with Institute Monograms, if available, in silver zari work with hand made fluting with special padding and material. Cap of black Velvet Mortar band ½ inch lace and Material.

(E) SENATE MEMBERS GOWN

Superior silk in Golden Yellow Colour with lacing of 3 inches Green Silk on front folds and with strips of green silk 1 inch wide on the sleeves with one Institute Monogram, if available, on the left front with hand made fluting. Oxford style and with special padding and material. For PhDs Pure Red silk will be used. Caps of superior Golden Yellow Velvet, Mortar band with 1 inch wide green silk border with Golden silk Tassel. For PhDs Red Velvet will be used.

(F) DEPUTY REGISTRARS AND ASSISTANT REGISTRARS

Whatever they are entitled by virtue of the degrees they hold or if they are non-graduates black gown only.

FOR BACHELOR'S DEGREE (B.TECH/B.E.) STUDENTS

Gown - Black
Hood - White with Scarlet lining

FOR MASTER'S PROGRAMME DEGREE (M.TECH.) STUDENTS

Gown - Black
Hood - White with Golden lining

FOR DOCTORATE DEGREE

Gown - Black with Golden Lacing
Hood - Red and Silver Gray

- (iv) All candidate shall wear at the Convocation the Academic Costume of the degree to which they seek admission.

CONFERMENT OF HONORARY DEGREES

- (i) A member of the Senate or a member of the Board of Governors, may suggest the name of a person along with complete biodata for consideration by the Institute for the award of Degree of D.Litt./Doctor of Science/Doctor of Engineering as approved by the Senate. Such nominations will be put up to the Chairman of the Board for consideration. If the chairman is satisfied then he may appoint an Expert Committee to submit its recommendations in the matter.
- (ii) The Expert Committee may recommend to Senate that an Honorary Degree of D.Litt./Doctor of Science/Doctor of Engineering be conferred on the person on the ground that he/she is in their opinion, by reason of eminent position and academic and professional attainments, a fit and proper person for the award. The recommendations of the Expert Committee may be considered by the Senate and forward the same to the Chairman for approval. After the approval of the Chairman is received, the Director as Chairman of the Senate may confer on such person the Honorary Degree so recommended, without requiring him to undergo any examination.
- (iii) The Honorary Degree shall be conferred by the Institute either at Convocation or in absentia.

AWARD OF MEDALS/PRIZES AT THE ANNUAL ACADEMIC PRIZES DISTRIBUTION FUNCTION/CONVOCATION

Award of Medals*/Prizes/Certificates would be based on the merit in Cumulative Grade Point Average (CGPA) earned by the student during the whole period of Degree Course. The Medals* will be awarded discipline wise in all the disciplines of the B.Tech. Degree Course as per rules of the Institute from time to time.

In the eventuality of a tie for award of Medals/Prizes/Certificates in a class/discipline, the tie would be broken by considering the candidate's performance on the basis of percentage of marks/CGPA obtained in all the courses of the last two semesters. If, however, the tie still exists then it will be broken by considering the percentage of marks obtained in the entry level entrance examination.

*The Medals weighing 50 gm (approx.) of Silver.

BEST ALL ROUNDER Medal/Certificate is decided by the Proctor on the basis of performance in all activities.

CONFERMENT OF HONORARY DEGREES

- (i) A member of the Senate or a member of the Board of Governors, may suggest the name of a person along with complete biodata for consideration by the Institute for the award of Degree of D.Litt./Doctor of Science/Doctor of Engineering as approved by the Senate. Such nominations will be put up to the Chairman of the Board for consideration. If the chairman is satisfied then he may appoint an Expert Committee to submit its recommendations in the matter.
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In the eventuality of a tie for award of Medals/Prizes/Certificates in a class/discipline, the tie would be broken by considering the candidate's performance on the basis of percentage of marks/CGPA obtained in all the courses of the last two semesters. If, however, the tie still exists then it will be broken by considering the percentage of marks obtained in the entry level entrance examination.

*The Medals weighing 50 gm (approx.) of Silver.

BEST ALL-ROUNDER Medal/Certificate is decided by the Proctor on the basis of performance in all activities.

Dr. R.P.Singh Medal is awarded to the Toppers of 2nd year and 3rd year in the discipline of B.Tech. Mechanical Engineering only, depending upon the interest on Rs. 10,000/- deposited by Mrs. Singh.

Private Medals, if any, duly approved by the Senate may also be awarded.

Medals to M.Tech. students will be awarded discipline wise and specialization wise in all disciplines on the basis of the recommendation of the Chairman of the Department concerned.

Item 2.5 **TO NOTE THE NAMES OF ALL STUDENTS WHO
HAVE BECOME QUALIFIED FOR THE AWARD
OF DEGREES OF THE INSTITUTE**

The list of students who fulfill the requirement prescribed for various degrees of the Institute and have become qualified under the regulations for admission to such degrees is enclosed as Appendix- IV placed at page from 16 to 30 for consideration and approval of the Senate. In addition to above some of the students can also qualify the requirement, as result of re-evaluation of some of the students is pending.

The Senate may consider and decide.

National Institute of Technology, Kurukshetra

B.Tech 8th Semester (Computer Engineering)

Sr. No.	Roll no.	Name
1	99001	Sandeep Bhatia
2	99003	Geeta Bhayana
3	99004	Garima Jain
4	99005	Imran Khan
5	99006	Amit Ruhela
6	99007	Anrinder Kumar
7	99008	Virendra Bhatia
8	99009	Pawan Kapoor
9	99010	Rakesh G
10	99011	Asheesh Mittal
11	99012	Doian Champa Ballabh
12	99013	V V Kumar Raju G
13	99014	Sumit Goel
14	99015	E Vinod Kumar
15	99016	Vishal Gupta
16	99017	Ranjit Kumar Das
17	99018	Rahul Kumar
18	99020	Sandeep Warikoo
19	99021	Ramnik Dahiya
20	99022	Lav Kumar
21	99023	Prashant Sharma
22	99024	Sumeet Arora
23	99025	Mukesh Jalwal
24	99026	Anil Yadav
25	99028	Deep Dinesh
26	99030	Saran Anubhav Ram
27	99033	Tathagata Mohanty
28	99036	Vaibhav Raheja
29	99172	N Sathish Kumar
30	98330	Syed Mohd. Rizwan Ul-Haq

National Institute of Technology, Kurukshetra

B.Tech 8th Semester (Electronics & Comm. Engineering)

Sr. No.	Roll no.	Name
1	99019	Supriya Singh
2	99031	Arthi Balasubramania
3	99037	Lalit Kumar Goyal
4	99038	Sandeep Wadhwa
5	99039	Puneet Kumar Khara
6	99041	Shilpy Madan
7	99042	Pritika Gupta
8	99043	Sharad Chandra Sharma
9	99044	Akhil Gulati
10	99045	Kulbushan Ashri
11	99046	Kulwinder Saini
12	99047	Amit Kumar
13	99050	Balinder Singh
14	99051	Angada B Sachid
15	99052	Biju Deka
16	99053	H Kaliluar Rahman
17	99055	Prashant Kumar Dusad
18	99056	Asim Kumar Sesmal
19	99057	Raj Kumar Kanodia
20	99058	Suman Mishra
21	99059	Satya Prakash
22	99060	Ranjith Kumar Sajja
23	99061	Parul Sareen
24	99062	Navdeep Singh
25	99063	Sharmila Dalal
26	99064	Vinay Kumar Chaudhary
27	99065	Shweta Garg
28	99066	Nishant Saini
29	99067	Sumit
30	99068	Anand Sai Verma
31	99071	Bhaskar Jyoti Kalita
32	99072	Revant Singh
33	99073	V Ram Prasad

34	99074	Manoj Joshi
35	99075	Neeraj Agarwal
36	99076	Sravanth Kumar Nagun
37	99077	Mukesh Chand Agarwal
38	99078	Swapnil Meshram
39	99079	Piyush Sharma
40	99080	Pratyush Trivedi
41	99081	Varun Sood
42	99082	Dheeraj Khatter
43	99083	Sumit Khetarpal
44	99084	Sumit Bharti
45	99085	Deepak Agrawal
46	99086	Sumit Verma
47	99087	Karamveer Yadav
48	99088	Rajesh Lal
49	99089	Jagtar Singh
50	99092	K S Madhusudanan
51	99093	Ajay Kumar Mishra
52	99094	Gagandeep S Malhotra
53	99100	Kamlesh Kumar
54	99101	Manish Jain
55	99252	Chandera Bhushan Ray
56	199403	Priya Rashmi K R
57	199404	Rajeev Ranjan
58	199405	Onkar Chand
59	199406	Gaurav Kapoor
60	199407	Dheeraj Khandelwal
61	199408	Anuj Dhingra
62	199409	Manoj Kumar Chaudhary
63	199410	Karunakar Patnaik
64	199412	Jagdish Kumar Kaushik
65	199401	Naveen Shokeen

National Institute of Technology, Kurukshetra

B.Tech 8th Semester (Mechanical Engineering)

Sr. No.	Roll No.	Name
1	99097	Yadav Nitin Dhan singh
2	99098	R. Elamathi
3	99102	Vikram Miglani
4	99103	Akhil Aggarwal
5	99104	Smrat Singh Chauhan
6	99106	Rajbir Saini
7	99107	Praveen
8	99108	Rajinder Singh
9	99109	Satish Kumar
10	99111	Bhupesh Kumar
11	99112	Sowrirajan S
12	99113	Anil Kumar Singh
13	99114	Rajeev Krishna Thakur
14	99115	T.V.S. Ravi Kumar
15	99116	Saurabh Garg
16	99118	Mukesh Bansilal Rohra
17	99119	Vinod Choudhry
18	99121	Pankaj Kumar Mittal
19	99122	Ajit Singh
20	99123	Yasir Ansari
21	99124	Nitesh Kumar
22	99125	Vikas Yadav
23	99126	Kashi Ram
24	99128	Ashish Gundal
25	99129	Chaman Kumar
26	99131	Sanjiv Prasad
27	99132	K. Anand

28	99133	Ankur Agarwal
29	99134	R.R. Ravi Shankar
30	99136	Nimiesh Goel
31	99137	Jitender Singh Chauhan
32	99138	Keshav Prasad
33	99139	Rahul Rathi
34	99141	Kunal Kakkar
35	99142	Deepak Gulati
36	99143	Vikas Dalal
37	99144	Saurabh Bindal
38	99145	Ajay Sikka
39	99146	Harish Yadav
40	99147	Gurjeet Singh
41	99148	Pawan Kumar
42	99149	Anil Kumar
43	99150	Bhaskar Chandra Halder
44	99152	Nirmal Sharma
45	99153	Satish Kumar Prajapat
46	99154	D.Y. Kiran Kumar
47	99155	Akarapu Sreekanth
48	99157	Ashish Kumar
49	99159	Saurabh Mishra
50	99160	Ankit Mittal
51	99161	Amit Jain
52	99162	Vijay Kumar Garg
53	99163	Bhavneshtaneja
54	99164	Vaibhav Garg
55	99165	Rohit Saini
56	99166	Kuldeep Singh Bhinder
57	99167	Pawan Kumar
58	99168	Manpreet Singh

59	99171	P.V. Rajesh
60	99173	Debanjan Ghosh
61	99175	Ashish Kumar Munje
62	99176	Kawal Preet Singh
63	99177	M. Prasanna Venkates
64	99178	Amit Kumar
65	99179	Praveen Joshi
66	99180	Digamber Singh Tomar
67	99181	Anshul
68	99183	Ablishek Sharma
69	99184	Vikas Thakur
70	99185	Mahesh Saini
71	99187	Suresh Kumar
72	99188	Kuldeep Singh
73	99189	Gaurav Sharma
74	99199	Dhiendra Kumar Ojha
75	99200	Ackula Chandra Sekh
76	99216	Piyush Joshi
77	99225	Parveen Kumar
78	99267	Naresh Kumar Arora
79	99285	Mohit Bansal
80	99325	Pragyesh Kumar Ojha
81	J-99413	Irshad Ali Khan
82	J-99414	Amartansh
83	J-99415	Kanhaniya Singh
84	J-99416	Sunil Kumar
85	J-99417	Muneesh Vashist
86	98198	Alok Kumar Singh

National Institute of Technology, Kurukshetra

B.Tech 8th Semester (Electrical Engineering)

Sr. No.	Roll_no	Name
1	99158	Ratandeep Saksena
2	99190	Manish Goel
3	99191	Gaurav Gupta
4	99192	Hitesh Arora
5	99194	Meenu Bala Dhiman
6	99195	Anju
7	99196	Ashok Kumar
8	99197	Rajiv Malik
9	99198	Netram Meena
10	99203	Divya Singla
11	99205	Kuldeep Singh
12	99206	Varsha Rani
13	99207	Shekhar
14	99210	Dinesh Singh Bisht
15	99211	Puneet Pratap Singh
16	99212	Srikanth Matta
17	99213	Tarun Sagar
18	99214	S. Sreevathsan
19	99217	Vaddepally Vijayakum
20	99218	Sanjiva Kumar Singh
21	99219	Akshay Bhole
22	99220	Shweta Singh
23	99221	Shaveta Mehta
24	99222	Urmila Rani
25	99223	Ankur Bareja
26	99224	Rajesh Nandal

27	99226	Suraj
28	99227	Nahid Akhtar
29	99228	Ashok Kumar
30	99230	Sarangapani Goswami
31	99232	Harish Kumar Verma
32	99233	Abhishek Srivastava
33	99235	Sudeshna Guha
34	99236	Kunal Shanker Shriv
35	99237	Manish Saxena
36	99238	Deepak Kumar Arya
37	99239	Abhishek
38	99240	Ashok Sethi
39	99241	Sachin Gupta
40	99243	Ankur Gupta
41	99245	Dhiraj Kumar
42	99246	Naveen Kumar Verma
43	99248	Ram Krishan Maheshwari
44	99249	Praveen Darshanam
45	99250	Sachin Prakash
46	99253	Shailesh Kumar
47	99257	Chennuru Kishore Kumar
48	99261	Shweta Sharma
49	99262	Richa Goel
50	99264	Subroto Mukherjee
51	99266	Manish Singhal
52	99269	Deepika Taneja
53	99270	Gaurave Sehgal
54	99271	Tanuj Sharma
55	99272	Amit Kumar
56	99286	Noopur

57	99287	Abhijeet Dhanda
58	99290	Ashutosh Kumar
59	99302	Mayank Tandon
60	99306	Debasis Borah
61	99307	Krishan Kumar Dhaka
62	99308	Sushant Ranjan
63	99311	Rahul Sharma
64	99312	Nandita Sen
65	99313	Ashish Barthwal
66	99317	Ashok Kumar
67	99320	Veeresh Kumar Agarwal
68	99322	Aartee Sabharwal
69	99324	Prashanth K. Rao
70	99326	Archana Mukherjee
71	98248	Robin Khokha
72	J99418	Kanu Priy Dutta
73	J99419	P. Chaitanya Krishna
74	J99420	Prem Singh
75	99263	Devender Kumar
76	99204	Vikas Garg
77	97189	Rahul Barua

National Institute of Technology, Kurukshetra

B.Tech 8th Semester (Civil Engineering)

Sr. No.	Roll no.	Name
1	99099	Hari Ram P
2	99256	Suniti Biswas
3	99258	Manas Ranjan Pani
4	99259	Sai Krishna M
5	99260	Santoshi P Mishra
6	99265	Gaurav Bansal
7	99268	Vijay Verma
8	99274	Rakesh Kumar
9	99275	Ashwani Kumar
10	99276	Samta
11	99277	Manoj Ranga
12	99278	Vinay Sabharwal
13	99281	Vikas Singroha
14	99282	Amanpreet Singh Ahuja
15	99283	Manisha Chawla
16	99288	Shivani Gupta
17	99289	Dipender Malik
18	99292	Pradeep Kumar
19	99293	Pooja Dhiman
20	99294	Ravinder Kumar
21	99295	Narender Singh
22	99296	Rajiv Kumar
23	99298	Sateesh Maddineni
24	99300	Abhishek Srivastava
25	99301	P V Anil Kumar
26	99309	Jitendra Singh

27	99310	Pradyumna Sharma
28	99315	Manish Kumar Udeniya
29	99318	Tathagata Dhole
30	99321	Saurabh Survit
31	99323	Vivek Kumar Sinha
32	99332	Shakti Singh
33	99333	Rajat Sharma
34	J-99421	Soumi Dey
35	J-99422	Aditya V Singh
36	J-99423	Ashif Hussain
37	J-99424	Ajay Kumar Das
38	J-99425	Rahul Yadav
39	98331	Rajiv Kumar
40	99035	R Sujatha
41	98289	Anand

National Institute of Technology, Kurukshetra

B.E. 6th Semester (Mechanical Engineering)

Sr. No.	Roll_no	Name
1	32K541	Hemant Arora
2	32K542	Jasdeep Singh
3	32K543	Kamal Arora
4	32K544	Rajesh Madan
5	32K545	Bhupesh Kumar
6	32K546	Pardeep Singh
7	32K547	Ranbir Singh
8	32K548	Poonam Saini
9	32K549	Virender Kumar
10	32K550	Amitesh Goswami
11	32K551	Naveen Bhardwaj
12	32K552	Brjendra N Tripathi
13	32K553	Sanjeev Mehta
14	32K555	Mayank Agrawal
15	32K556	Shivecharan Sharma
16	32K557	Vineet Kumar
17	32K558	Brijender Malik
18	32K559	Parag Saxena
19	32K560	Ashok Kumar

National Institute of Technology, Kurukshetra

B.E. 6th Semester (Electrical Engineering)

Sr. No.	Roll_no	Name
1	22K521	Vijay Kr Garg
2	22K522	Rajiv Prabhakar
3	22K523	Prakash Mana
4	22K524	Kuldeep Singh
5	22K525	Ravi Kumar Bajaj
6	22K526	Ravinder Kumar
7	22K527	Deepak Verma
8	22K528	Manoj Kumar
9	22K529	Sunil Kumar
10	22K531	Sukhbir
11	22K532	Pratyush Kumar
12	22K533	Vikas
13	22K534	Rajesh Madan
14	22K536	Parveen Mukhija
15	22K537	Puneet Dhawan
16	22K538	Yashpal Singh
17	22K539	Virender Singh

National Institute of Technology, Kurukshetra

B.E. 6th Semester (Civil Engineering)

Sr. No.	Roll_no	Name
1	12K501	Rajesh Tanwar
2	12K502	Gurmeet Singh
3	12K503	Ramesh Ahuja
4	12K504	Sanjeev Rana
5	12K505	Vishal Arora
6	12K506	Rajesh Vashisht
7	12K507	Arjun Kumar
8	12K508	Suresh Kumar
9	12K509	Rahul Vashistha
10	12K510	Thakurlal Kaushish
11	12K511	Umesh Kumar
12	12K512	Raj Pal Singh
13	12K513	Shri Krishan
14	12K514	Ramesh C Dahiya
15	12K515	Ramesh Chand
16	12K516	Ankur Garg
17	12K517	Mamta
18	12K518	Rajiv Bhatia
19	12K519	Saurabh Sharma
20	12K520	Narayan Dutt

NATIONAL INSTITUTE OF TECHNOLOGY, KURUKSHETRA

M.TECH(MECHANICAL ENGINEERING)

Sr. No.	Roll No.	Name
1.	301784	Pankaj Mehta
2.	301785	Pawan Kataria

**ITEM 2.5 TO CONSIDER THE SYLLABI OF B. TECH. 1ST SEMESTER
(COMMON TO ALL BRANCHES) - FROM THE ACADEMIC
SESSION 2004-05 ONWARDS.**

Dr. O P Vermani, Chairman of the Chemistry Department has sent syllabi of B.Tech. 1st semester (CHT - 105 & CHT - 107) and 2nd semester (CHT-106 & CHT - 108) to be effective from the Session 2004-05 onwards as recommended by the BOS of the Chemistry Department in the meeting held on 10.11.2003. The syllabi is enclosed as Appendix V on pages from 32 to 37.

The Senate may consider and approve the syllabi as mentioned above.

B.Tech. Ist Semester(Common to all branches) APPENDIX- V
CHT-105 Chemistry-I
(2004-05 on wards)

L	T	Class tests	: 40 marks
3	1	Teacher's assessment	: 10 marks
		End Sem. Exam.	: 50 marks
		Time	: 3 hrs.

1. **Chemical Equilibrium:** pH, buffer solutions and salt hydrolysis. **03**
2. **Chemical Kinetics:** Second order reactions, derivation of velocity constant with same and different concentrations of the reactants, half life period, basic concepts of complex reactions, Collision theory & absolute reaction rate theory.. **04 L**
3. **Electrochemistry including Corrosion:** Half-reaction concept, reversible cells, galvanic cells, concentration cells. Theories of corrosion, types of corrosion(water-line corrosion, stress corrosion, pitting corrossions, microbiological corrosion). Factors affecting the rate of corrosion and corrosion control (design, cathodic protection, modification of environment, protective coatings) **08 L**
4. **Photochemistry:** Photochemical and dark reactions, laws of photochemistry, quantum efficiency, classification of photochemical reactions on the basis of their quantum efficiencies. Non-radiative processes (isc & ic), fluorescence, phosphorescence (Jablonski diagram), chemiluminescence, photosensitization, technology based on photochemical processes. **06 L**
5. **Phase Rule:** Description of various terms(phase, component and degrees of freedom). One component system(water system), freeze drying. Two components system with simple eutectic formation(Pb-Ag and KI-H₂O systems), solders, safety plugs, freezing mixtures. **05L**
6. **Organic Chemistry & Polymers:** Covalent bond cleavage(homolytic and heterolytic), reaction intermediates(carbocations, carbanions, carbenes and free radicals).

Organic polymers-types and mechanism of polymerisation(free radical, anionic, cationic and coordination), thermoplastic(low and high density polythenes, PMMA) and thermosetting resins(bakelite, epoxy).
Inorganic polymers-preparation, properties and uses of silicones. **09 L**

7. Transition Elements and Coordination Chemistry: General characteristics of transition elements, coordination compounds, introduction to various theories of bonding, applications of coordination compounds.	04 L.
8. Water: Demineralization, desalination, formation of deposits in boilers, scale and sludge formation: their composition, properties and methods of prevention.	05 L.
9. Spectroscopy: Introduction (excluding instrumentation) and applications-UV-visible, IR and NMR spectroscopy.	04 L.
Total:	48 L.

Books Recommended:

1. Physical Chemistry, P.W. Atkins.
2. Principles of Physical Chemistry, B.R.Puri, L.R.Sharma & M S Pathania.
3. Organic Chemistry, Morrison and Boyd.
4. Reactions Mechanism in Organic Chemistry, S.M.Mukherji & S.P.Singh.
5. Inorganic Chemistry, J.D. Lee.
6. Principles of Inorganic Chemistry, B.R.Puri, L.R.Sharma & K.C.Kalia.
7. Spectrometric Identification of Organic Compounds, R.M.Silverstein, G.C.Bassier and T.C.Morrill.
8. Chemistry in Engg.& Tech. Raja Ram & J.C.Kuriasose.
9. Engineering Chemistry, Jain & Jain.

Note for Paper-setter: Eight questions should be set in all. The students should be asked to attempt any five questions.

B.Tech. Ist Semester(Common to all branches)
CHT-107 Chemistry-I Practical
(2004-05 on wards)

L T P
- - 2

Mid Sem. Evaluation : 15 marks
Teacher's assessment : 15 marks
End Sem. Exam. : 20 marks
Total : 50 marks
Time : 3 hrs.

S.No. List of Experiments

1. Determination of total hardness of water by EDTA titration.
2. Determination of temporary and permanent hardness by water by EDTA titration.
3. Determination of calcium and magnesium hardness of water separately by EDTA titration.
4. Determination of copper in copper alloy/ore solution.
5. Determination of ferrous and ferric iron present in the given ore solution with $K_2Cr_2O_7$ using external indicator method.
6. Determination of ferrous and ferric iron in given ore solution with $K_2Cr_2O_7$ using internal indicator method.
7. Determination of total iron in a solution of iron ore by $KMnO_4$ method.
8. Determination of calcium as calcium oxide volumetrically in cement.
9. Determination of the available chlorine in bleaching powder suspension and to find out the chlorine demand of the given water sample.
10. Analysis of coal for moisture and ash contents.
11. Determination of ion exchange capacity of a given cation exchanger/anion exchanger.
12. Determination of manganese dioxide in pyrolusite.
13. Determination of the composition of a liquid mixture by surface tension method using Stalagmometer.
14. (i) Conductometric determination of hydrochloric acid with standard NaOH.
(ii) Conductometric determination of acetic acid with standard NaOH.
15. Conductometric determination of the composition of a mixture of acetic acid and hydrochloric acid with standard NaOH.

B.Tech. 2nd Semester
(Common to all branches)
CHT-106 Chemistry-II
(2004-05 on wards)

L.	T	Class tests	: 40 marks
2	1	Teacher's assessment	: 10 marks
		End Sem. Exam.	: 50 marks
		Time	: 3 hrs.
1.		Biomolecules: Elementary knowledge of Enzymes and coenzymes, Carbohydrates, Proteins, Lipids and their biodegradation.	05 L.
2.		Environmental Chemistry: Segments of Environment, Earth's radiation balance, horizontal and vertical dispersion of pollutants, temperature inversion, Green House Effect, Acid Rains, Ozone Layer, Photochemical Smog, Bhopal gas release accident.	05 L.
		D.O., B.O.D.,C.O.D. and their significance, surface water pollution and self purification, Waste water treatment-Sedimentation & Biological Methods.	07 L.
3.		Coal: Proximate and ultimate analysis, liquification and gassification.	03 L.
4.		Petrochemicals: Sources of petrochemicals, CNG. Basic building block processes-thermal cracking(mechanism, production of ethylene and co-products, petrochemicals from ethylene and propylene) and catalytic reforming(mechanism, production of BTX aromatics), petrochemicals from BTX aromatics.	06 L.
5.		Lubricants: Principle and mechanism of lubrication, dewaxing of oil fraction, acid and solvent refining, properties of refined oils(viscosity, viscosity index, acid value, saponification value, iodine value, pour point, cloud point, aniline point) and their determination, lubricating greases and their penetration and drop point tests, solid lubricating greases and their penetration and drop point tests, solid lubricants, their structure and uses.	06 L.
		Total:	32 L.

Books Recommended:

1. Chemistry for Environmental Engineering, Sawyer & McCarty.
2. Chemistry in Engg. & Tech. Raja Ram & J.C.Kuriascose.
3. Environmental Chemistry, A.K.De.
4. Applied Chemistry, Theory and Practice, O.P.Vermani & A.K.Narula.
5. Introduction to Petrochemicals, Sukumar Maiti.
6. Engineering Chemistry, Jain & Jain.
7. Petrochemicals, Peterwiseman.

Note for Paper-setter: *Eight* questions should be set in all. The students should be asked to attempt any *five* questions.

B.Tech. 2nd Semester(Common to all branches)
CHT-108 Chemistry-II Practical
(2004-05 on wards)

L T P
- - 2

Mid Sem. Evaluation : 15 marks
Teacher's assessment : 15 marks
End Sem. Exam. : 20 marks
Total : 50 marks
Time : 3 hrs.

S.No. List of Experiments

1. Determination of Alkalinity of Irrigation water.
2. Determination of Nitrite in $\text{KNO}_2/\text{NaNO}_2$.
3. Determination of D.O. in the given sample of water.
4. Determination of C.O.D. of a waste water. Absorption of Oxalic acid on charcoal.
5. Determination of percentage of acetic acid in vinegar sample/Analysis of antacid tablets.
6. Preparation of phenol-HCHO resin. Cellulose-acetate resin/urea-HCHO resin.
7. Determination of acid value of an oil.
8. Determination of iodine value of an oil.
9. Determination of saponification value of an oil.
10. Determination of saponification value of an oil.
11. Determination of flash point by Abel's flash point apparatus and Pensky Marten's apparatus.
12. Determination of viscosity of Lubricants by Redwood Viscometers.
13. Determination of the amount of combined and free chlorine residuals present in the given sample of water.
14. Spectrophotometric determination of cobalt chloride & verification of Lambert's Beer's law.
15. (i) Acrolein test for glycerol.
(ii) Test for unsaturation of fatty acids in lipid sample.
16. Identification of the nature of carbohydrates in a given sample.

Tabled Item 2.7 To consider a proposal to award a medal along with Cash prize of Rs. 5,000/- w.e.f. the year 2003 onwards to the topper of B.Tech., Electrical Engg. branch in the memory of Late Shri Shyam Sunder Dhingra, a student of this Institute, 1981-86 batch.

Late Shri Shyam Sunder Dhingra, Roll No. 112/81 S/O Shri Dina Nath had obtained his B.Sc. Engg. Degree in the discipline of Electrical Engg. in the year 1986 from this Institute in first division with Honours. Shri Ankur Gupta, IAS, Managing Director, Haryana Agro Industries Corporation Ltd., Chandigarh on behalf of other classmates, requested through his letter dated 28.11.2003 (copy enclosed as Appendix VI on pages 39 to 40) that a medal be awarded to the top ranker of B.Tech. Electrical Engineering w.e.f. the year 2003 onwards in memory of Late Shri Shyam Sunder Dhingra. The medal will be accompanied by a cash prize of Rs. 5,000/-. Shri Ankur Gupta has mentioned that a sum of Rs. 1.00 lac. (Rupees One lac. only) would be collected and kept in the fixed deposit in the Institute bank and annual interest accrued would provide for the cost of Shyam Sunder Dhingra Medal along with a cash prize of Rs. 5,000/-.

The Senate may decide.



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Haryana Agro Industries Corporation Ltd.

S.C.O.811-17, Sector 22-A, Chandigarh

Phone : 706419, 710952 Fax : (0172) 701501

Appendix - 02

Ankur Gupta, I.A.S.
MANAGING DIRECTOR

D.O. No. : 14562

Dated : 17-11-2003

Dr. S.N.Mahendra,
Director,
National Institute of Technology,
Kurukshetra
(Formerly RECK)

Sub: Proposal to start a Medal for Topper of Electrical Engineering Branch,
in memory of Late Shri Shyam Sunder Dhingra, a student of 1981-86
batch.

Dear Dr. Mahendra,

I am writing this letter on behalf of a group of ex-students from the class
of 1986, who are located in various parts of the world.

We had a batchmate, Shyam Sunder Dhingra, who was the most lively
person of the batch and personified cheerfulness. Naturally he was very
popular too, for he spread the maximum smiles during our five years stay in the
RECK campus, 1981-1986. He worked with a few companies initially and then
single handedly set up a Distributorship of Electrical goods for Industrial use.
He was Distributor for companies like Tata-Honeywell, Crompton Greaves,
MDS, Bhartiya Cutler Hammer, etc. and went on to employ over half a dozen
Engineers. After starting his business from scratch as a first generation Techie
Entrepreneur, he was on a stable growth trajectory had started visiting abroad to
take his business to a higher plane, when catastrophe struck. Last summer he
was detected with Non-Hodgkin's Lymphoma - Cancer of the Lymphatic
System. He bravely fought the disease but, he left us this Summer. He was a
shining example for all of us for his achievements as a Techie Entrepreneur and
his contagious cheerfulness which make it difficult to believe even today that
his no more.

His remarkable qualities have motivated us- his RECK batchmates - to
keep his memory alive in the Campus where we all had met and spend the most
enriching years of our lives. With this background, we request you to consider
the following proposal.

A medal may be given to the Topper of the Electrical Engineering
Branch (the branch Shyam Sunder Dhingra specialized in) Memory of Shri
Shyam Sunder Dhingra, every year. The medal will be accompanied with a
Cash Prize of Rs. 5,000/-. We have got commitments from our batchmates to

R
S.N.M.
21/11



— 1/2 —
Haryana Agro Industries Corporation Ltd.
S.C.O.811-12, Sector 22-A, Chandigarh
Phone : 706489, 710862 Fax : (0172) 701181

Ankur Gupta, I.A.S.
MANAGER, DIRECTOR

D.O. No. :
Dated :

collect an amount of over rupees One lakh and keep it in a Fixed Deposit Account in the College Bank. Its annual interest would provide for the cost of the SHYAM SUNDER DHINGRA MEDAL and the Cash Prize, thereby making it perpetual.

Kindly accept our proposal so that we can go ahead with collecting contributions from our batchmates located in various parts of the country and abroad and deposit the same in an F.D. Account to be operated by Institute Authorities for SHYAM SUNDER DHINGRA MEDAL.

Thinking you in anticipation and waiting for an early response.

Yours sincerely,


(ANKUR GUPTA)

on behalf of students of 1981-1986 batch.

**Tabled Item 2.8 To consider Degree Formats to be awarded
to the students of the Institute.**

Consequent upon the up-gradation of Regional Engineering College, Kurukshetra to the National Institute of Technology, Kurukshetra with Deemed University Status, we have to print our own degree formats for award of various degrees to the students such as B.Tech., M.Tech. and Ph.D degree. Accordingly two formats of each degree are placed with the agenda item.

The Senate may consider and decide.

क्रम नं./Sr.No.

अनुक्रमांक/Roll No.

राष्ट्रीय प्रौद्योगिकी संस्थान
कुरुक्षेत्र (भारत)

एतद्वारा

बैचलर ऑफ टैक्नोलोजी

की उपाधि को प्रदान करता
है। जिन्होंने निर्धारित पाठ्यक्रम एवं संबद्ध परीक्षा सफलतापूर्वक
श्रेणी में उत्तीर्ण की है।

यह मुद्रित उपाधि को प्रदत्त की गई।



National Institute of Technology
Kurukshetra (India)

herby confers the degree of
Bachelor of Technology

in
on
who has successfully completed the course of studies and passed the
prescribed Examinations in Class.
Given this day, the of 20 under
the seal of the Institute.

Director

Chairman
Board of Governors

Registrar

Roll No.....



**National Institute of Technology
Kurukshetra (India)**

hereby confers the degree of

Bachelor of Technology

in

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Given this day, the of
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Director

Chairman,
Board of Governors

Registrar

क्र. प./Sr.No.

अनुक्रमांक/ Roll No.

राष्ट्रीय प्रौद्योगिकी संस्थान
कुरुक्षेत्र (भारत)

एतद्द्वारा

मास्टर ऑफ़ टैक्नोलोजी

की उपाधि को प्रदान करता
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श्रेणी में उत्तीर्ण की है।

यह मुद्रित उपाधि को प्रदत्त की गई।



National Institute of Technology
Kurukshestra (India)

hereby confers the degree of
Master of Technology

in
on
who has successfully completed the course of studies and passed the
prescribed Examinations in Class.

Given this day, the of 20 under
the seal of the Institute.

Director

Chairman
Board of Governors

Registrar

क्र. सं./Sr.No.

अनुक्रम/ Roll No.

राष्ट्रीय प्रौद्योगिकी संस्थान
कुरुक्षेत्र (भारत)

अभिषद् की अनुशंसा पर

को उनके शोध प्रबन्ध

के लिए

डॉक्टर ऑफ फिलासफी
की उपाधि से
विभूषित करता है

यह मुद्रित उपाधि

को प्रदत्त की गई।



National Institute of Technology
Kurukshetra (India)

on the recommendation of the Senate
herby confers the degree of
Doctor of Philosophy

on
for thesis entitled

Given this day, the
the seal of the Institute.

of 20 under

Director

Chairman
Board of Governors

Registrar

Regn. No.....



**National Institute of Technology
Kurukshetra (India)**

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Doctor of Philosophy

on

for thesis entitled

Given this day, the _____ of
20 _____ under the seal of the Institute.

Director

Chairman,
Board of Governors

Registrar