

## UNIVERSITY GRANTS COMMISSION

REPORT OF THE EXPERT COMMITTEE WHICH VISITED ~~INSTITUTE OF~~  
~~CHEMICAL TECHNOLOGY~~, FORMERLY UNIVERSITY DEPARTMENT  
 OF CHEMICAL TECHNOLOGY, UDCT), ~~ON~~ ON 26-27 OCTOBER,  
 2007 FOR CONFERMENT OF DEEMED TO BE UNIVERSITY STATUS  
 UNDER SECTION 3 OF THE UGC ACT, 1956

- I. Background of the Institution giving details of teaching, research and extension programme

The Institute of Chemical Technology (ICT) formerly University Department of Chemical Technology, UDCT) was established (1933) as a University Department by an explicit desire and financial support of industrialists and philanthropists, to cater to the requirements of chemical industry. In 1934, it started functioning, as a *University Department*, with only post-B.Sc. two-year B.Sc. (Tech) course in Textile Chemistry and Chemical Engineering with intake of 10 each. In 1941 the foundation stone of the present ICT building in the Matunga Campus was laid and the Building was occupied in 1943.

The ICT is located in the heart of the city of Mumbai, which is the industrial capital of the country. It has a unique status of conducting courses and research in Chemical Engineering, in various branches of Chemical technology, and in Pharmacy. In fact, the ICT pioneered courses in Pharmaceutical Technology and Dyestuff Technology. Over the years it has acquired the status of a premier and renowned institute in education, training and research in Chemical Technology, Chemical Engineering and Pharmacy in India. Right from the inception, research has remained an integral part of the training imparted in the ICT. The ICT has produced a large number of Ph.D.s as well as a large number of publications of international quality, comparable to any University or National Institute in the world, on a per faculty member basis.

Since 1933, the Institute has grown to a level of a full-fledged Institute. There is no academic institute or a University in our country, other than the ICT, except LIT, A.C. College, and HBTI, dedicated to Chemical Engineering and Chemical Technology. ICT has a unique status of conducting courses and research in Chemical Engineering, in various branches of Chemical Technology, and in Pharmacy. The range of courses offered represents some of the major sectors of Organic Chemical Industry. The ICT has a campus of 16 acres, budget of about 11 crores, student strength of more than 1400, out of which the post-graduates are about 500; faculty positions of 109, non-teaching approved positions 250, hostel facilities for about 850 students (60% of the total strength), a separate hostel for ladies' and the Ph.D. output of more than 40 per year.

The output of the ICT with respect to various parameters such as, Ph.D. students produced, research publications, and contribution to the

Industry per faculty member, per unit of money spent is the highest in the country. Through its relationship with the Industry, the ICT has created a large number of endowments catering to library, visiting fellowships, and scholarships to the needy students. In fact, the ICT is the first one in India to create a substantial endowment for the library, which has a reputation by itself. A significant number of the ICT alumni have started own units; majority of them is the first generation of entrepreneurs in their families.

The ICT has exceptionally high standards of intake. The institute provides excellent job opportunities to its graduates, post-graduates, and Ph.D.s. All the "Departments" of the ICT have received support from the UGC under SAP and there are two CAS, two DSA, three COSIST and five FIST programmes ongoing in the Institute. The post-graduate courses of Perfume and Flavour Technology, and Polymer Technology and Engineering are supported by the Industry, while the post-graduate course in Bioprocess Technology is supported by the DBT and in part from the Industry.

II. Composition of the Expert Committee.

**COMMITTEE CONSTITUTED BY THE CHAIRMAN,  
UNIVERSITY GRANTS COMMISSION, NEW DELHI**

Sr. No.	NAME & ADDRESS	WHETHER ATTENDED THE MEETING
1	Professor P. Rama Rao (Chairman) Former Vice Chancellor, University of Hyderabad Flat No.301, Naimisam, Plot No.22, Sri Nagar Colony Hyderabad-500 073	Yes
2	Dr. C.M. Gupta (Member) Director Central Drug Research Institute Chattar Manzil Palace, P.B.No.173, Lucknow-226 001 (U.P.)	Yes
3	Dr. K. Vijay Raghavan (Member) Director National Centre for Biological Sciences GKVK Campus, Bellary Road Bangalore-560 065	No

*Handwritten signature*

4	Dr. T. Ramasamy (Member) Secretary Department of Science & Technology, Technology Bhavan New Mehrauli Road New Delhi 110 016	No
5	Dr. V. Prakash (Member) Director Central Food Technological Research Institute (CFTRI), CFTRI House, Mysore 570 013	No
6	Professor Shri Krishna Joshi (Member) National Physical Laboratory Dr. K.S. Krishnan Road, New Delhi-110 012	Yes
7	Professor A.K. Gupta (Member) Department of Polymer Science Indian Institute of Technology Hauz Khas, New Delhi-110 016	Yes
8	Professor R.K. Kale (Member) School of Life Sciences Jawaharlal Nehru University New Delhi-110 067	Yes
9	AICTE Nominees:  (A) Professor Kesava Rao (Chairman) Department of Chemical Engineering. Indian Institute of Science Bangalore-560012 (Karnataka)  (B) Professor Tapobrata Panda (Member) Department of Chemical Engg. Indian Institute of Technology (Madras) Chennai-60 036  (C) Professor Venkata Reddy (Member) Department of Chemical Engg. NIT, Warangal Warangal 506004 (A.P.)	Yes  Yes  No

	(D) Professor K. Madhu Murti All India Council of Technical Education I.G. Sports Complex I.P. Estate, New Delhi-110 002	Yes
10	Dr.(Mrs.) Pankaj Mittal (Member Secretary) Joint Secretary University Grant Commission Bahadur Shah Zafar Marg New Delhi 110 002	Yes

III. Inspection Report

1. Headquarter of the proposed Institute, which has Applied for Deemed to be University status with full address Institute of Chemical Technology,

N.M. Parekh Road, Matunga,  
Mumbai – 400 019

2. (a) Whether the separate society/trust has been registered in the name and style of the proposed deemed to be university.

Yes (Copy Enclosed) **ANNEXURE 1**

- (b) If yes, name of the Society/Trust promoting the proposed institute(s) for Deemed to be University Status which should be one for all Institutions if the proposal is for more than one Institution.

Institute of Chemical Technology,

The Society is registered under the Societies Registration Act: Reg. No.1029 of June 28, 2004, Greater Bombay region.

(ANNEXURE--, Copy of the Registration certificate)

3. Details of the individual Institution i.e. year of establishment, No. of PG Departments, Faculty (Professors, Readers, Lecturers) etc.

*pm*

Department	No. of UG courses	No. of PG courses	Approved UG Intake	Professor	Reader	Lecturer
Department of Chemical Engineering	1	1	75	7	7	7
Department of Dyestuff Technology	1	1	20	1	2	2
Department of Fibers and Textile Processing Technology	1	1	34	3	2	2
Department of Food Engineering and Technology	1	2	16	2	3	3
Departments of Oils, Oleo chemicals and surfactant Technology	1	1	16	2	2	2
Department of Pharmaceutical Science and Technology	2	2	16+30	3	6	7
Department of Polymer Engineering and Technology	1	1	16	1	2	2
Department of Surface Coating Technology	1	1	16	1	2	1
Department of Chemistry				2	3	5
Department of General Engineering		1	5	1	5	4
Department of Mathematics				1	3	1
Department of Physics		1	5	2	2	5
Interdisciplinary courses		2				
<b>Total</b>				<b>26</b>	<b>39</b>	<b>41</b>

\* Some faculty members have been promoted under career advancement scheme.

\*\* The total number of seats for all the Master's courses as approved by the University of Mumbai is 200. In addition the approved intake for Ph.D. is 300Z

*Handwritten signature*

### Doctoral Programmes

The Institute offers Doctoral programmes in the following areas:

- (1) Chemical Engineering
  - (2) Chemical Technology - All the above branches
  - (3) Pharmacy
  - (4) Pure Sciences - Chemistry, Physics, Microbiology, Biochemistry
- Total Number of students registered for Ph.D. in 2006-07 = 72  
No. of Ph.D.s awarded during 2006-07 = 47

### Number of Teachers

Professors:	Readers:	Lecturers:	Total
26	39	41	106

Library: Senior Librarian in the scale of Reader : 1  
Librarian in the scale of Lecturer : 1

4. Whether Movable and immovable assets have been legally transferred in the name of the society/trust seeking recognition as Deemed to be University.

As per Government Resolution of Maharashtra Government No. WBP - 2004/(341/04)/(1)/TE - 6 dated March 31, 2004 under clause 3(2) "The ownership of all the movable and immovable properties of the Government and Aided institutions shall be of the Government. However, the new society can make use of the currently available land, buildings, machinery, furniture, books, etc

5. Territorial jurisdiction of the Institution.

Mumbai

6. Thrust areas of the proposed Institution(s) indicating special or innovative features.

6.1. Thrust Areas: Chemical Engineering, Chemical Technology (different branches), and pharmacy.

6.2. The details of special or innovative features in teaching and research in the institute.

- (1) The course contents: The course contents are so selected that the alumni should be entrepreneurs. A significant number of the alumni of the Institute have started their own industries; most of them are having no family background of Industry.

*[Handwritten Signature]*

- (2) Teaching: Many teachers are teaching subjects using multimedia and other teaching aids. Majority of the teachers are consultants to Chemical Industries. This practice brings lot of relevance to their teaching. The external revenue generation to salary grant ratio of the Institute is 4.4, and the ratio of post-graduate students to the total number of students is 0.8, both the ratios are the highest in the country.
- (3) Semester pattern:
- (a) All the courses are semesterised. The examinations are entirely conducted by the Institute.
  - (b) There is a provision of repeat examinations within a month for those who perform poorly in the regular examinations.
  - (c) The examinations are conducted on a strict basis and ATKT provision is allowed for the failure in only one subject and the candidate is not admitted to any year unless he/she has cleared the previous to previous year.
- (4) In-Plant training: All the undergraduate students undergo in-plant training of six weeks during the course and acquire hand-on experience in the industry of their specialization.
- (5) Projects and Seminars: In the final year of the UG courses the student complete a small research project which has direct relevance to the Industry. The students also give a seminar on any topic of current interest after studying the pertinent literature.
- (6) Research projects: The projects handled by the research students are mainly of industrial relevance. They are sponsored by various funding agencies as well as by the Industry. The Institute charges 15-25% overheads on these grants. The overheads collected during 2004-05 were Rs.35 lakhs. The students are well accepted by the industry immediately after completing their work. Placement through campus interviews is very common.
- (7) Merit-cum-Means Scholarship: Merit-cum-Means Scholarships: There are about 212 Merit-cum-Means scholarships for the needy students, instituted by the alumni, well-wishers, and Industry. They help the students to pursue education smoothly.
- (8) Research Grant to the faculty: Through endowments research grants are given to junior faculty members to initiate research.
- Tm

- (9) Best Doctoral thesis awards: A committee selects best Ph.D. and Ph.D. (Tech) theses every year for these awards.
- (10) Visiting faculty / Scientists: The Institute has 45 endowments instituted by alumni and well-wishers for visiting fellowships, Professorships, lectureships. Eminent scientists visit the ICT under these schemes, interact with the faculty and the students and deliver lectures. It is a unique feature of the ICT. The honorarium paid to these experts is high.
- (11) Travel Grant to the faculty: Through endowments travel grant is given to the faculty members for attending National and International conferences to present their research work.
- (12) Library Endowment: The ICT has an excellent library. To cater the needs of the library, a special Library Endowment has been created.
- (13) Welfare Grant: There is a special provision of ICT staff welfare endowment, through which financial assistance is given to needy employees of the Institute.
- (14) Sophisticated instruments: In the Departments of the ICT, some of the modern sophisticated equipment are available like, Laser-Doppler anemometer, LC-MS, GC-MS, NMR, FT-IRs, HP-TLC, HPLCs, GCs, XRD, DSC, DTA, Atomic absorption, Computer work-stations, etc.
- (15) Bombay Technologist: The Institute has a separate technical journal - "The Bombay Technologist", which was started in 1951.
- (16) Doctoral Programmes:
  - a. The Institute is well-known in the country for its Ph.D. programmes. In fact, the first PhD in Engineering and Technology disciplines in our country passed out from this Institute.
  - b. A large number of PhD fellowships are available to the students. The students admitted in 2007-08 till October is 102.
  - c. At present the Institute has more than 550 post-graduate students, out of which 320 are doctoral students.
  - d. For several years in the past, ICT has been producing more than 40 Ph.D. students per year, which accounts for about 7% of the national output of Ph.D.s in all branches of Engineering and Technology. This is also

T2



the highest when considered on the basis of eligible teachers.

- e. The projects handled by the research students are mainly of industrial relevance apart from academic excellence. ICT produces Ph.D. of high quality and these candidates are in high demand in Industry.
  - f. The Indian National Academy of Engineering gives awards for Innovative Projects in Engineering and Technology at Master and Doctoral level. Since the inception of these awards, i.e. for last three years, ICT has received the best Ph.D. awards, and for two years the best Master thesis awards.
  - g. Recently the Department of Science and Technology, New Delhi, selected the six best projects out of all the projects funded by the DST since 1980 in the area of Chemical Engineering and Chemical Technology. Out of these three are from the ICT. The Indo-US collaborative project in the ICT was considered as the best. An Indo-French project in the ICT was considered as an excellent.
  - h. The quality of research work can also be adjudged on the basis of the quality of publications. With respect to the quality and number of publications, the ICT is the best in the country right from its inception. Prof. Y.T. Sommerfield of Georgia Institute of Technology, USA, has carried out a survey of research publications coming from different schools of Chemical Engineering in the world (outside the USA). According to this report, in 1989 the ICT was the best in the world outside the USA comparable to the very best in the USA. The surveys in 1999 and 2002 pertained to the India only. As per these surveys the ICT was the best in the country. Based on these reports, Sommerfield has commented that - *The UDCT (ICT) occupies a pinnacle position in the country as well as in the world in terms of publications in international reputed journals.*
- 6.3. Consultancy: The Institute was founded in 1933 by the desire and support of the Industry. Therefore, since the inception the partnership between ICT and Industry has been strong and of mutual benefit. The faculty from the ICT acts as advisors (consultants) to Industry for the development of new and novel products, processes or designs. They are also involved in process improvements, cost reduction, energy conservation and reduction/elimination of pollution. The faculty works with Industry only in an advisory capacity for which no facilities of the Institute are used. The faculty is permitted to spend one day per week for this activity. The consultation fee is shared between

Tor

the Institute and the faculty in the ratio of 1:2. This linkage with the Industry helps them to get exposed to the state-of-the art industrial practice and make their projects more oriented towards the industry and society.

6.4. Technical Education Quality Improvement Programme (TEQIP): The Government of India is implementing a programme called Programme of Sub Sector Development Programme for Technical Education/Technical Education Quality Improvement Programme (TEQIP). It is funded by the World Bank. The aim of the programme is to introduce excellence in Technical Education. The ICT has been selected as a Lead Institution under the TEQIP. The Institute has decided to enhance the PhD activity under this programme in the following areas of excellence: Process intensification, Herbal technology, Biotechnology, Food technology and engineering, Polymers and composites. 25 PhD fellowships have been created.

7. Date(s) of visit of the Expert Committee.

**October 26 and 27, 2007**

8. Is the proposal under General De Novo Category? if yes, please give justification.

**No**

9. Whether accredited by NAAC, if yes, rating?

**YES. Rating: Five Star, Accredited as a part of University of Mumbai. Has already applied for NBA accreditation.**

10. Whether the proposed institution is affiliated to any University under Section 2(f)/12B UGC Act? If yes, the name of the University

**YES, University of Mumbai, Mumbai**

11. Whether the affiliating university willing to examine and confer degree or other awards of students already enrolled with Institution(s) seeking Deemed to be University Status

**YES**



12. Source of finance and quantum of funds available (2006-07)

Source	Rs. Lakhs
From fees	315
From State Govt	544
UGC, AICTE, DST, DBT	274
Donations and Interest on Endowments	342
Consultation	253
Other Research Projects	1195
<b>Total</b>	<b>2923</b>

13. Whether the institution(s) is financially and academically viable to run the institution(s) as Deemed to be University

**YES**

14. Receipt and expenditure of the Institution(s) for the last 3 years

**See ANNEXURE 2**

15. Whether the permission from the concerned State Govt. has been obtained if yes, please attach a copy of the permission letter/views of the State Government.

**YES (see ANNEXURE 3)**

16. Details of UG/PG courses started/to be started.

[A] Undergraduate courses:

(1) Bachelor of Chemical Engineering (B.Chem. Engg.):

A post H.S.C. 4-year degree course in chemical engineering.  
Intake per year: 75 students.

(2) Bachelor of Chemical Technology course (B.Chem. Tech.):  
A post H.S.C. 4-year degree course in Chemical Technology  
Intake per year: 136 students

Branches of Chemical Technology: The course is offered in the following seven branches of Chemical Technology:

- (i) Dyestuff Technology
- (ii) Fibres & Textile Processing Technology
- (iii) Food Engineering and Technology

- (iv) Oils, Oleo chemicals & Surfactants Technology
- (v) Pharmaceutical Chemistry and Technology
- (vi) Polymer Engineering and Technology
- (vii) Surface Coating Technology

Table 1: The specialization-wise distribution of the seats

S.No	Specialization	No. of seats
1	Fibres and Textile Processing Technology (Text)	34
2	Food Engineering and Technology (Foods)	16
3	Dyestuff Technology (Dyes)	20
4	Oils, Oleo Chemicals and surfactants Technology (Oils)	16
5	Surface Coating Technology (Paints)	16
6	Pharmaceutical Chemistry and Technology (Pharm)	18
7	Polymer Engineering and Technology (Polymers)	16
	Total	136

- (3) Bachelor of Pharmaceutical Sciences: A post H.S.C. 4-year course in Pharmaceutical sciences

Intake per year: 30 students.

- [B] Post-Graduate Courses:

The admissions to the master courses are done by the Institute as per the UGC norms, considering the GATE score of the candidates.

Total intake for M.Chem.Engg.  
M.Tech./M.Pharm.Sci./M.E.(Plastic Engineering) is 64.

- (1) Master of Chemical Engineering (M.Chem. Engg.) : A post B.Chem.Engg. four-semester course in chemical engineering.
- (2) Master of Technology (M.Tech.): A post B.Tech. four semester course in Chemical Technology.

Branches of Chemical Technology: The courses offered are:

- (i) Dyestuff Technology
  - (ii) Fibres & Textile Processing Technology
  - (iii) Food Engineering and Technology
  - (iv) Pharmaceutical Chemistry and Technology
  - (v) Polymer Engineering and Technology
  - (vi) Oils, Oleo chemicals & Surfactants Technology
  - (vii) Surface Coating Technology
  - (viii) Perfumes and Flavour technology (Intake 5 students per year)
  - (ix) Bioprocess Technology (*with emphasis on downstream processing*):  
(Funded by the Department of Biotechnology, New Delhi)  
(Intake 20 + 10 (industry sponsored))
- (3) Master of Pharmaceutical Sciences (M.Pharm.Sc.): A post B.Pharm.Sc. four-semester course in pharmaceutical sciences.
- (4) Master of Engineering (M.E.) (Plastics Engineering) : A 2-year post graduate course in Plastic Engineering. 78 UGC fellowships are available for courses at (1), (2) (i) to (2) (vii), and (4); and 20 DBT fellowships are available for (2)(ix)
- (5) Master of Science (M.Sc.): M.Sc. courses (partly by papers and partly by research) are offered in Chemistry, Physics, Microbiology and Biochemistry. Intake per year: Variable.
- (6) Certificate course in Chemical Technology Management: (launched in January 2001) 3 semester post-graduate course for the Ph.D. students of the ICT, supported by ICT Alumni Association Intake per year: Variable

[C] Doctoral Programmes

The Institute offers Doctoral programmes in the following areas:

- (1) Chemical Engineering
- (2) Chemical Technology - All the above branches
- (3) Pharmacy
- (4) Pure Sciences - Chemistry, Physics, Microbiology, Biochemistry

17. Whether the Institute has Rs. 5 crore Corpus funds for Engineering Technology, Rs. 3 crore for Science and Social Science and Rs.5.00 crore Corpus Funds for conducting both types of Programmes. Please specify and indicate the amount after verifying the Corpus Fund.

**YES (ANNEXURE - 4)**



18. Whether various authorities and bodies of the Institute are in accordance with the provisions of the UGC Guidelines.
- (a) The UICT is a technical institute dedicated to chemical technology.
  - (b) The UICT has been selected as lead institute under the Technical Education Quality Improvement Programme (TEQIP) of the MHRD, GOI. As per the "Working Document for the States and Institutes" of the TEQIP, published by the MHRD, the institutions selected under the programme, should have Management Structure similar to National Institutes of Technology. The MHRD has found such a model MOA suitable for technical education. A sample of Memorandum of Association (MoU) and Rules of the NITs has been given in the document; see Annexure 8.1 (enclosed as Annexure-3) of the above referred document. The institution should have a Board Of Governors (BOGs) as the apex body, following the Senate looking after academic programme, Finance Committee, Building and Works committee, etc. The head of the institution is Director. This structure is similar to the one adapted by IITs in our country.
  - (c) Some of the other institutions, particularly technical ones, which have been granted the Deemed university status by the UGC, have also adopted similar MOU, for example PEC- National Institute of Technology, Chandigarh; Indian Institute of Information Technology, Allahabad. The UGC has permitted them to accept the same; as such an MOA has also been finalized by MHRD. The MoA has been enclosed to our application for the Deemed University Status.
  - (d) Under the specific guidelines from the MHRD, in the context of the TEQIP, the Government of Maharashtra has issued a Resolution granting autonomy status to the UICT and also asked the institute to formulate and register an MOA as per the MHRD guidelines, format of the same was provided by the GOM the same has been reproduced in our application annexure.
  - (e) UICT prepared our MOA, considering the above facts, with the suitable modifications as per the specific guidelines from the Government of Maharashtra, as currently the Institute is under the State and the salary grant is given by the state government.

**INFRASTRUCTURE: (give details)**

19. Details of buildings
- (i) Permanent:
  - (ii) Temporary/Lease property:
    - (a) Land of the Institute: The total area of the campus is about 16 acres
    - (b) Total built-up area: The total built up area of the laboratories, classrooms, offices, hostels, faculty quarters, library, etc. is about 44,873 m<sup>2</sup>.
    - (c) Classrooms: The Institute has 22 classrooms accommodating classes of different sizes, 140 to 30.
    - (d) Administrative facilities: The UDCT has a general office admeasuring approximately 900 m<sup>2</sup>. It has other offices - Finance and Accounts, Examination cell, Faculty common room, Main stores, etc.

Name of the Building	Covered Area in Sq. mts
Main building (Administration, Lecture rooms and Departments)	13,746
Library	2717
Auditorium	865
Godrej Students' Centre (Cafeteria and Recreation)	683
Department of Dyestuff Technology	1,388
Lalwani Centre (Departments)	255
Boiler house	102
Department of General Engineering and Workshop	2056
Department of Oils, Surfactants and Oleo chemicals Technology & Chem. Engg. Labs.	1,927
Animal house and Storage	180
Advanced Centre Building (Departments)	2,378
ICT-DAE Centre	747

Servants' quarters	384
Dining halls/Servant quarters	1,040
Hostel No.1 and Faculty flats	3,465
Hostel No.2 (Ladies) and Faculty flats	3,070
Hostel No.3	1,767
Hostel No.4	718
Hostel No.5 with Guest rooms and Faculty flats	7,398
<b>Total</b>	<b>45,584</b>

Whether the Institutions has the following.

- i. Administrative 1000 sq. mts: YES
- ii. Academic including Library building 3000 sq. mts: YES
- iii. Some teachers' residence and a faculty guest house for at least 10 persons: YES

**Staff Quarters** In the below-mentioned hostel buildings (a), (b), (c) and (e), there are 21 faculty quarters, each of carpet area about 1000-1200 s.f. For the Director, a separate flat is provided. On the campus there are non-teachings employee's staff quarters for 16 families.

- vi. Music/room for performing arts etc.: YES

20. Land if acquired, whether documents verified/land registered in the name of the university and its location:

**Plan approved by Municipal Corporation is enclosed.  
(Annexure - 5)**

21. No. of Laboratories; give details: **Annexure 6**



22. Whether students already admitted, if yes give details course-wise (2007-08):

Course	Total Admitted
Ph.D.(Sci.)	34
Ph.D.(Tech.)	41
M.Chem. Engg.	40
M.Pharm.	20
M. Tech.	59 including BPT
M.E. (Plastic Engg.)	04
M.Sc. (By Research)	05
F.Y.B.Tech.	140
F.Y.B.Chem.Engg.	84
F.Y.B.Pharm.	29

23. Hostel facilities, give details:

**Hostels:** As the students come from all over the country the Institute went on improving the on-campus hostel facilities over the years. On the ICT campus there are five hostel blocks accommodating a total of 824 students.

- (a) **Hostel No. 1 (Boys):** No. of rooms: 96  
 (Single seated 30, double seated 70)  
 Total number of students: 206  
 Office room: 1, Reading room: 1  
 Facilities: Mess, TV room, Sports rooms-2, Internet, Library.
- (b) **Hostel No. 2 (Ladies):** No. of rooms: 60  
 (Single seated 20, double seated 40).  
 Total No. of students: 100  
 Guest room: 1, Reading room: 1  
 Facilities: Solar water heater, Medical facility (part time):  
 Doctor and a nurse, Gymkhana, Internet
- (c) **Hostel No. 3 (Post-Graduate Students' Hostel - Boys):**  
 No. of Rooms: 48(double seated)  
 Total No. of students: 96  
 Guest Room: 1,  
 Facilities: Reading room, In-door game room, Washing machines, Mess (common to this hostel and the ladies

- hostel)
- (d) Hostel No. 4 (Post-Graduate Students):  
No. of rooms: 31 (all double seated)  
Total number of students: 62  
Facilities: Office, Recreation hall
- (e) Hostel No. 5 (Boys): Inaugurated on 8<sup>th</sup> April 2005  
A seven storeyed building with all the necessary facilities. This Hostel was built with donations from Industry and well-wishers.  
Total cost Rs.10 crores.  
No. of rooms: 180 (Double seated);  
No. of Guest rooms: Double rooms - 4, Single rooms - 8  
Total number of students: 360  
Facilities: Mess, Reading rooms, Gymnasium, Indoor games, Health centre, Art-Culture centre
24. No. of class rooms: See the table above
25. Whether Institute has auditorium: YES there are two auditoriums for various functions. One of them is fully air-conditioned and has state-of-art audio visual facilities and can accommodate about 150 persons, while the other can accommodate about 650 persons.

### LIBRARY AND EQUIPMENT

Professor M.M. Sharma Library is housed in a separate two-storeyed building. The library is a completely open-access library. It has a special library status. The library has a specialized collection in the field of science and Chemical Technology/Engineering and possesses some of the rare reports and books. It has a membership with DELNET and INDEST consortia, New Delhi. Electronic journals in Chemical Engineering are made available to the students and the faculty members via Science direct.

Specialty areas: Chemistry, Applied Chemistry, Chemical Technology, Chemical Engineering, Pharmacy, Energy & Environmental Engineering, Biotechnology, Food Technology & Fermentation, Polymer Science & Technology, Textile Science & Technology, Oils and surfactants, Dyestuff Technology.

26. Area in sq. Meters: 1741 sq.m.
27. Number of Journals: See Annexure - 7
- |                  |   |     |
|------------------|---|-----|
| a. National      | : | 25  |
| b. International | : | 125 |

Library staff:

Senior Librarian	:	1	Librarian	:	1
Senior library assistants	:	2	Junior library assistant	:	1

Library clerk : 1      Library assistants : 2  
Library attendants : 8      Xerox operator : 1

Budget (2007-08):

Books : Rs. 5 lakhs  
Journals : Rs. 1 crore 35 lakhs  
Other Expenditures : Rs. 25 lakhs

28. Is it digital Library?

No

29. Does it have reprographic and bar-coding facilities? **YES**  
Facilities offered: Photocopying, Microfilm reader, Internet facility (for teachers and researchers), Translation (students/teachers), Referral & interlibrary loan

30. Whether Equipment, Books and Journals are worth Rs. 50 lakhs  
**YES**

31. Books/Equipments—give details

Library collection:

Number of books: 37500

Abstracts subscribed: Chemical abstracts, World Textile abstracts, World surface coating abstracts, CEBA, RAPRA.

Microfilms & Microfiche: 15700; CD-ROM 200; Theses around 4000 Reports 925

### FACULTY AND OTHER STAFF

32. Whether teaching staff appointed, if yes give details: **YES**  
**See ANNEXURE - 8**

33. Whether the Institute has five departments—each Department having one Professor two Reader and adequate number of Lecturers along with necessary supplementary staff. If so, please give details department- wise.

Details given below:-

Sr.No	Name of the Department	No. of Prof.	No. of Readers	No. of Lecturers	Lab staff	Admn
1	Department of Chemical Engineering	7	7	7	18	3
2	Department of Dyestuff Technology	1	2	2	10	-
3	Department of Fibres and Textile Processing Technology	3	2	2	12	1

*T*

4	Department of Food Engineering and Technology	2	3	3	9	2
5	Departments of Oils, Oleo chemicals and surfactant Technology	2	2	2	5	--
6	Department of Pharmaceutical Science and Technology	3	6	7	13	1
7	Department of Polymer Engineering and Technology	1	2	2	9	1
8	Department of Surface Coating Technology	1	2	1		
9	Department of Chemistry	2	3	5	10	1
10	Department of General Engineering	1	5	4	37	--
11	Department of Mathematics	1	3	1	---	1
12	Department of Physics	2	2	5	6	

34. Whether the Institute is giving pay scale to teachers as prescribed by UGC. If not, is the institute proposed to bring teachers pay scales at par with University teachers?

**The Institute gives pay scale to teachers as prescribed by the UGC**

35. Whether Non-teaching staff appointed, if yes, give details:

**YES**

**Non-Technical staff**

Sr. No.	Post	No. of Posts Approved
1.	Assistant Registrar	3
2.	P.A. to Director	1
3.	Dy. Accountant	2
4.	Superintendent	2
5.	HG Stenographer	4
6.	LG Stenographer	8
7.	Asstt. Accountant	3(1)
8.	Asstt. Cashier	1

*[Handwritten signature]*

9.	Head Clerk	1 (1)
10.	Sr. Lib. Assistant	2
11.	Auditorium Attendant	1
12.	Jr. Library Assistant	1
13.	Library Clerk	1
14.	Receptionist	1
15.	Sr. Accounts Clerk	2
16.	Sr. Clerk	3
17.	Sr. Clerk (Stores)	2 (1)
18.	Telephone Operator	1
19.	Library Attendant	8
20.	Dafatry	1
21.	Filing-cum-Despatch clerk	1
22.	Jr.Accounts Clerk	2(1)
23.	Jr. Clerk Stores	1(1)
24.	Library Asstt.	2
25.	Store Asstt.	1
26.	Accounts Typist Clerk	1
27.	Typist Clerk	7(2)
28.	Machine Operator	1
29.	Hawaladar	2
30.	Peon	7(1)
31.	Head Watchman	1
32.	Watchman	10 (10)
33.	Sweeper	7
34.	Asstt.Security Officer	(1)
35.	Hamal	(6)
36.	Mali	(3)
Total		91

## Technical staff

Sr. No.	Post	No. of Posts Approved
1.	System Engineer	1
2.	Jr. Engineer	3
3.	Sr. Analyst	1
4.	Micro-Analyst	1
5.	Jr. Analyst	5
6.	Jr. Micro-Analyst	1
7.	Sr. Technical Assistant	7
8.	Technical Assistant	3
9.	Research Assistant	1
10.	Workshop Instructor	1
11.	Draftsman	1
12.	Lab. Technician	3
13.	Glass Blower	2
14.	Chem. Engg. Asstt.	1
15.	Darkroom Asstt.	1
16.	Dye-House Asstt.	1
17.	Engg. Asstt.	1
18.	Instrument Mechanic	5
19.	Pilot Plant Asstt.	1
20.	Mechanic	8
21.	Sr. Lab. Asstt.	3
22.	Boiler Attendant	1
23.	Electrician	3(1)
24.	Carpenter	2(1)
25.	Mason & Fitter	1
26.	Plumber	1(1)
27.	Workshop Asstt.	1
28.	Lab. Assistant	33(4)
29.	Animal House Asstt.	1

30.	Asstt. Stores Keeper (Pharma)	1
31.	Machine Minder	1
32.	Lab. Attendant	61(2)
33.	Helper	(4)
Total		156

**Hostel No.1**

Sr. No.	Post	No. of Posts
1.	Clerk	1
2.	Watchman	4
3.	Hamal	2
4.	Sweeper	2
Total		9

**Hostel No.2 (Ladies)**

Sr. No.	Post	No. of Posts
1.	Jr.Accounts Clerk/Ty. Clerk	1
2.	Watchman	3
3.	Sweeper	2
4.	Maidservant cum peon	1
Total		7

**Hostel No.3**

Sr. No.	Post	No. of Posts
1.	Sr. Clerk	1
2.	Hamal-cum-Peon	2
3.	Watchman	4
4.	Sweeper	2
Total		9

**Hostel No.5**

Sr. No.	Post	No. of Posts
1.	Watchman	4
2.	Hamal	1
3.	Sweeper	2
Total		7

36. Is the Deemed University running Distance Education Programme, if yes, has it been approved by DEC/UGC.

**NO**

*TP*

37. Whether the Institution established any off campus or study centre or admission centre outside the State of its jurisdiction specify, if so, has it been approved by UGC

**NO**

38. Whether the Institution has undertaken any research activities, if so, please give details.

**YES. The Institute is well known for research. A large number of students are enrolled every year for master and doctoral courses in Chemical Engineering, Chemical Technology, Pharmacy and Sciences. At present there are 260 students registered for master's courses and 320 for doctoral courses. The institute has been producing more than 45 Ph.D. per year for last many years. There are currently 89 sponsored research projects ongoing undergoing in the Institute and funded by bodies like UGC, DST, DBT, AICTE, CSIR, ICAR, ICMR, MHRD, DAE, and by the Industry. The institute published 195 publications during 2006-07. In the same year 47 PhD, 140 Masters Degrees were awarded.**

39. Whether the faculty members organized or attended International/National Conferences/Workshops, if so, give details.

**The faculty members presented a large number of papers in national and international conferences. They also arranged many conferences and workshops at the Institute.**

40. Other facilities available at the Institute(s) (give details) which are necessary to support Deemed to be University Status.

**The Institute has separate Administrative, Financial and Academic systems like a separate University. The Institute has developed its own Statutes, Ordinances, Regulations and Rules for smooth functioning.**

41. Fee Structure: give details

Sr. No.	Type of Fees	B.Chem. Engg. /B.Tech./ B.Pharm.	M.Chem.Engg./ M.Tech./ M.Pharm. / M.E. (Plastics)	Ph.D. (Tech)	Ph.D. (Sci.)	M.Sc. (By Res.)
1	Caution Money	500	500	500	500	500
2	Tuition Fees	16,000	16,000	16,000	16,000	16,000
3	Development Fees	7,000	7,000	7,000	7,000	7,000
4	Activity Fees	1,775/-	1,775/-	1,775/-	1,775/-	1,775/-
5	Technological Association	125/-	125/-	125/-	125/-	125/-
6	Library Fees	1,600/-	1,600/-	1,600/-	1600/-	1600/-

*for*



7	Disaster Relief Fund	30/-	30/-	30/-	30/-	30/-
8	Sports Fees	150/-	150/-	150/-	150/-	150/-
9	Enrolment fees	220/-	220/-	220/-	220/-	220/-
	TOTAL	27,400/-	27,400/-	27,400/-	27,400/-	27,400/-

1. The above given fee structure for different courses is likely to change for the current year 2007-08. The candidates are expected to pay the fees at the beginning of the academic year in full in the specified time only.
2. Enrolment Fee: At the time of taking admission to any undergraduate course, the students have to pay one-time Enrolment Fee of Rs. 220/- (Which includes the cost of the application form).
3. Each student shall pay Rs. 150/- towards sports activities, Rs. 10/- towards the Disaster Relief Fund and Rs. 20/- towards Group Insurance, per year.
4. Registration fee: The students enrolling for post-graduate courses have to pay Registration fee of Rs. 1025/- for Ph.D. (Tech) and Ph.D. (Sci) courses and Rs. 825/- for Master's courses.
5. The students admitted to any course shall have to take readmission for the second and subsequent years by paying the readmission form fee of Rs. 100/- for any undergraduate course and Rs. 200/- for any post-graduate course, in addition to the tuition fees and other fees every year and submitting the readmission form.
6. Each student shall pay a library deposit of Rs. 500, which will be refunded at the time of leaving the Institute.
7. Concession in Fees The POSTMATRIC scholarship will be available to backward class students as per the Govt. of India rules. The scholarships for Physically Handicapped students will be available from the Govt. of Maharashtra.

Tor

42. Admission Policy/Procedure in brief

- (1) 70% admissions to the first year of all Bachelor's courses are done centrally by the Directorate of Technical Education, Government of Maharashtra on the basis of State Level Central Eligibility Test (CET).
- (2) 30% admissions to the first year of all Bachelor's courses are done by the institute on All-India Basis on merit on the basis of AIEEE score.
- (3) All the post graduate admissions are done by the Institute as per the Institutes norms on the basis of merit alone. The Master's admissions are done on the basis of GATE score and a written test. The PhD admissions are done on the basis of a Written Test and Interview.

43. Examination system in brief

- (1) All the courses are semisterized
- (2) All the exams are conducted by the Institute
- (3) For each subject head there is internal assessment in the form of periodic test (theory)/ class work (practical) for which 30 % (theory) and 30% or 50% (practical) marks are assigned.
- (4) At the conclusion of a semester, respective semester examinations are conducted for 70% (theory), 30% or 50 % (practical) marks.

44. Whether the Institute is following standard/norms prescribed by statutory councils like AICTE, MIC etc. as the case may be in respect of professional courses.

**YES**

45. Whether the Institute has given necessary undertakings/assurance as per UGC Guidelines; please attach the same.



## OBSERVATIONS OF THE COMMITTEE

The Institute of Chemical Technology (ICT), Mumbai, is in its 75<sup>th</sup> year of existence. In the course of its evolution there have been significant milestones at each of which, in recognition of its outstanding academic performance, the institute was accorded an increased degree of autonomy. In 1985, UDCT received functional autonomy enabling the institute to take research projects on its own and accept donations directly. In 1994, UDCT was given autonomous status within the university framework. The academic autonomy offered to the institute was a significant recognition of the Institute's impressive outputs in research and in industrial consultancy. It is important to mention that UDCT was the first university unit in the country to get such an autonomous status within the framework of a university system. In 2004, the Institute was made fully autonomous in academic, administrative, and financial matters. Consequently, the Institute began to be governed by a separate Board of Governors. The Committee observed that at each of these stages, with an enhancement in autonomy, the performance of the Institute improved markedly. Thus, in the opinion of the Committee the Institute has arrived at a point in time in its history to be considered for a "deemed- to- be university" status.

Presently, the Committee finds that the Institute has excelled in every aspect of its academic role, i.e., in teaching, in research and in industrial collaboration. It was pleasing to know that the faculty loved their teaching responsibilities and as a result the feed back from students on the commitment of their teachers towards teaching was extremely positive. In the area of research, the Institute has produced consistently around 45 PhDs annually for the last four years. This works out to a little over 0.86 PhDs per faculty per year which is well above that of the other engineering institutions. The Institute published 577 research publications during 2000-2004. That the Institute has been continually increasing its research output is reflected in the fact that in 2005-06, the Institute published nearly 260 research papers. With this commendable record, the Institute ranks No.1 in the country in the field of Chemical Engineering and Chemical Technology. In the field of Industry interaction, the Institute has carried out over 60 sponsored research projects in the last 5 years. Besides, the Institute has had on an average 50 assignments per year as consultancy projects. The Institute has also demonstrated successfully the development of technology and its transfer. The Institute has filed 77 patents in the US and India in last ten years.

Over the years, many members of the faculty of the Institute have been decorated with several coveted awards and fellowships of various academies.

P. Ramesh Rao

Yet another unique feature of the Institute is its strong bonds with the alumni, several of whom are luminaries in industry, administration and management. They have in a variety of ways generously supported the Institute with substantial funding as well as by making innovative interventions which have contributed immensely in the development of the Institute.

The Committee has during the course of its visit to the Institute interacted with Vice Chancellor of the University of Mumbai, members of the Board of Governors, Director of Technical Education of Government of Maharashtra as well as the Institute faculty, students, non teaching staff and the representatives of alumni association. It was extraordinary that the Institute enjoys unbounded support from every quarter. It is a tribute to the present and past leadership of the Institute that the Institute has been able to function as a cohesive unit.

Clearly, the unparalleled performance of the Institute on every front has attracted admiration from every member of this committee.

## **SUGGESTIONS OF THE COMMITTEE**

The Institute can now look forward to the future with confidence. As it goes forward, the Institute will do well to expand progressively in its faculty size, student strength and in enlarging its academic envelope. In so doing the Institute can fruitfully collaborate with distinguished academic institutions and national laboratories in India and abroad. The Institute also needs to consider widening their electronic library facilities and in using more and more technology in their operations. Given the limited space available to them at its present location, the Institute may consider the possibility of establishing satellite campuses. Besides Chemical Engineering, the Institute has seven other technology departments some of which are unique in the country. While the outputs of these departments is significantly better than their counterparts in other places, there is a noticeable differential when compared with the outputs of the Department of Chemical engineering of the Institute. These technology departments deserve to receive augmented support and expansion of their faculty. The Institute has provided to the Committee, an impressive road map for its future. The Committee strongly feels that the Institute deserves every possible support to enable it to realize its aspirations.

The Committee felt privileged to have been given the task of evaluating an eminent Institute like ICT. This Institute has generated phenomenal outputs comparable to the best in the world in the field, notwithstanding the meager funding it received from the state government and the UGC. The returns on the investments made on this Institute have been exceptional. The Committee urges the UGC and the State Government of Maharashtra to continue and enhance the funding to the ICT in every possible way.

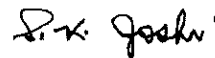
*P. Rama Rao*

## Recommendations of the Committee

The Committee unanimously recommends the grant of "Deemed to be University" status to Institute of Chemical Technology, Mumbai, alongwith a special request to the Ministry of Human Resource Development, Government of India to bring this Institute into the group of Deemed Universities which receive full financial support from MHRD.



Professor P. Rama Rao  
(Chairman)



Professor Shri Krishna Joshi  
(Member)



Professor A.K. Gupta  
(Member)



27/10/07

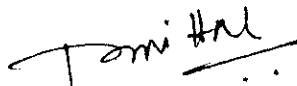
Dr. C.M. Gupta  
(Member)



Professor R.K. Kale  
(Member)



Professor Kesava Rao  
(AICTE Nominee)



Dr. (Mrs.) Pankaj Mittal  
(Member Secretary)