



SELF STUDY REPORT

FOR

1st CYCLE OF ACCREDITATION

LAXMINARAYAN INSTITUTE OF TECHNOLOGY

OPPOSITE BHARAT NAGAR, AMRAVATI ROAD

440033

www.litnagpur.in

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

December 2021

1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

Laxminarayan Institute of Technology, established in 1942 owes its existence to the generous donation of Rao Bahadur D. Laxminarayan, who by absolute hard work became a Manganese mine owner and an outstanding public figure of the Central Province & Berar (Old Madhya Pradesh and Vidharbha Region). He experienced a large deficit of skilled professionals, which was due to a lack of facilities for training in the province. He realized that this deficit will hamper the progress of the industries in the province. With a vision to offer a comprehensive fortune to the students interested in training and education in the field of Applied Science and Chemistry in and around Nagpur, he donated all his property, then estimated as Rs.35,20,540/- to the erstwhile Nagpur University (now renamed as Rashtrasant Tukadoji Maharaj Nagpur University) through his will dated May 03, 1930, for the noble cause of “Teaching of Applied Sciences and Chemistry”.

Laxminarayan Institute of Technology, Central India’s premier Institute in the field of Chemical Engineering and Technology, is a University Managed Conducted College of Rashtrasant Tukadoji Maharaj Nagpur University. Sprawling 78 acre campus in the western part of the city acts as a sanctum of learning. The Institute attracts students with exceptional academic credentials from all over the country and molds them into competent and practicing engineers and technocrats. The Institute has highly qualified faculty, committed to imparting their knowledge in training the students in an effective manner so as to meet the pre-requisite academic and industrial standards that stands up to date.

B. Tech admission is through the MHT CET score for the candidates from Maharashtra State and the candidates from other than Maharashtra State (OMS Quota) are admitted through their JEE Mains score. Both B. Tech as well as M. Tech admissions are done by the Centralized Admission Process (CAP) conducted by the Government of Maharashtra. The Institute arranges placement drives for UG and PG students. The Institute is consistently taking efforts for improving its quality of education through its curricular, co-curricular, and extra-curricular activities so as to satisfy the ever-demanding needs of the industrial sector.

Vision

Rao Bahadur D. Laxminarayan, owner of manganese mines in central India, who donated all his wealth to establish this Institute was a great visionary. It is interesting to note his thoughts on the need for technical education. He wrote:

“Expert knowledge is practically nonexistent in the country and until this defect is remedied, no great improvement of the industrial situation will be possible.” **(His Vision)**

In line with these thoughts, the Institute defined its vision and mission.

The Vision of the Institute

“To provide integrated education of the highest quality at all levels in the field of Chemical Engineering and Chemical Technology and to become a leading Center of Excellence in the country.”

In order to ensure this, the Institute always strives to proffer quality education that is easily accessible, acceptable, and adaptable to all the stakeholders. The academic activities of the Institute are monitored and reviewed on regular basis in the faculty meetings with the Director, and in the meetings, of the board of governors.

Mission

Rao Bahadur D. Laxminarayan, owner of manganese mines in central India, who donated all his wealth to establish this Institute was a great visionary. It is interesting to note his thoughts on the need for technical education. He wrote:

“Every province ought, in my opinion, to have a Technical College for the training of industrial experts, and the supervisors and foremen. The course of study should include all industrial subjects suited to the Province including agriculture, electrical and mechanical engineering.” **(His Mission)**

The Mission of the Institute

"The Institute is committed to provide quality education, to conduct research and development activities to meet the needs of chemical process industry"

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- Outcome Based Education with Choice Based Credit System/wide range of Elective Courses for all UG and PG programs
- Publications in High Impact Factor Refereed International Journals, Books and Book Chapters
- Consistent and Excellent Placement Record and Mandatory Industrial Training
- Remedial Coaching for SC/ST, OBC, and Slow Learners for the students of First Year
- Strong support and donations from LIT Alumni
- Vibrant NSS Unit creating the sense of Social Responsibility and ensuring participation of students in Community Services
- A good number of Research and Consultancy Projects resulted in Revenue Generation and Publications/Patents

Institutional Weakness

- Not able to attract GATE qualified students for M. Tech Courses
- Do not have regular full-time Ph. D. Program offering Fellowships
- Do not have formal linkages with National/International Institutions for research
- Interdisciplinary research needs strengthening
- Vacant positions of Teaching Faculty and Non-Teaching Staff
- No Chemical Process Industries in the vicinity of the Institute

Institutional Opportunity

- To adopt Model Curriculum suggested by AICTE
- To establish Faculty-Exchange Programs and Research Collaborations with International Institutes and Universities
- To obtain NBA Accreditation for all UG & PG Programs
- To improve NIRF Ranking (2020 Ranking 144)
- To obtain Autonomous Status
- To establish a Center of Excellence in Industrial Safety in collaboration with Gexcon Norway

Institutional Challenge

- To obtain the permissions from the Government of Maharashtra to fill up vacant positions of Teaching Faculty and Non-Teaching Staff
- To fetch good start-up projects and funding for the proposed Incubation Center
- To inspire the graduating students to join Ph. D. program in IITs and ultimately join the Teaching Profession
- To attract Ph. D. candidates from IITs and Top Ranking Foreign Universities to join the Institute as a member of the Teaching Faculty.

1.3 CRITERIA WISE SUMMARY**Curricular Aspects**

This Institute is a University Managed Conducted College of Rashtrasant Tukadoji Maharaj (RTM) Nagpur University and hence, all departments implement the syllabus as prescribed by the University. The institution prepares the academic calendar and plans for the delivery of the curriculum. The faculty members try to give their best to students in an effective and efficient manner by utilizing various means such as e-books, NPTEL video lectures, SWAYAM courses, Power Point presentations, etc.

All the students after the examination of the sixth semester are placed for four to six weeks of industrial training in core chemical process industries. This provides the opportunity for the students to see the unit processes, unit operations, and the process equipment which they study in their theory classes. This training gives them firsthand experience regarding the job of a chemical engineer/chemical technologist in the chemical process industry.

The institution strongly believes in integrating cross-cutting issues such as equity and social inclusion, gender sensitivity, professional ethics, universal human values, communication skills, environment, and sustainability, etc. with the curriculum which creates a positive impact on the students towards societal responsibility. As ethical values, environment and sustainability are of prime concern to the Institute, these issues are covered at length through various theory and practical courses. Such courses expose them to various aspects like intellectual property rights, organizational ethics, industrial psychology, social engineering, sustainable development, the Indian constitution, etc.

On the birth anniversary of Rao Bahadur D. Laxminarayan, two Lecture Series are organized. Distinguished alumni are invited to deliver these lectures and share their Success Story which could inspire the students to

plan their career path and set a goal for their professional destination. The Institute presents the top achievers from its alumni as the role models to its students.

Feedback on curriculum is obtained from the various stakeholders, analyzed and the required modifications/action that can improve the system are informed to the concerned authorities so as to ensure the academic enrichment of the students. These initiatives elevated the performance of the students at the University examination that showcases the quality education imparted by the institution.

Teaching-learning and Evaluation

The admission process of the institution is well-publicized and transparent. Selections are solely on a merit basis. The Institute conducts regular remedial classes for slow learners and enrichment classes for advanced learners. The Institute organizes University level competitions like techno fest, REACT to improve their academic knowledge, to develop leadership qualities and management skills.

The 21st century is described as the “Knowledge Century and is an era of e-learning”. To accomplish this, ICT tools were acquired and blended Blackboard to Tech-board methods are employed in order to make the Teaching and Learning process more effective and interesting.

The Institute has its Moodle website <http://moodle1litnagpur.in>

The purpose of Outcome-Based Education (OBE) in education is to measure and map –

- Course Outcomes (COs) - Knowledge & skills acquired via course/curriculum
- Program Outcomes (POs) - Expertise developed after completion of the program
- Program Specific Outcomes (PSOs) - Expertise of graduates of a certain program

The program outcomes have been defined on the basis of the guidelines regarding Graduate Attributes (GAs) prescribed by concerned apex bodies of higher education such as UGC, AICTE, NBA, etc. POs and PSOs are prepared by the departmental committees and approved by the Director. Bloom’s Taxonomy has been referred to while defining the Cos.

Case study-based teaching methodologies, industrial visits, expert talks, real-time exposure to the working of chemical process industries, discussion on emerging research areas, provide an experimental learning experience to the students. It broadens their vision, intellect and opens up new vistas for acquiring knowledge in a particular domain. This helps in bridging the gap between theory and practice. The Institute provides dedicated and well-equipped laboratories to enhance their experimental and computational skills. The students are also encouraged to take an active part in organizing various co-curricular and extra-curricular events which help them in developing their management skills. The industrial visits and mandatory 4-6 week internships (monitored industrial training) broaden the outlook of the students and they get a clear idea about the role of chemical engineer/technologist in a chemical process industry. Few advanced learners get job offers from renowned industries after the assessment of their internship.

Research, Innovations and Extension

The Institute provides a conducive environment for research-and-technology-driven innovations with a focus on

five key constituents of the ecosystem for innovations: Research, Innovation, Technology, Industry, and Entrepreneurship. All innovative and extension activities are student-centric, conducted to nurture and nourish young minds. The Institute Innovation Cell and other R & D activities inculcate research culture and encourage innovative thinking amongst the students and teachers.

Recently LIT Alumni Association (LITAA) has started the process of setting up an incubation center with financial support from the alumni. The main objective of the proposed incubation center is to create a vibrant and sustainable ecosystem to nurture and enrich Creativity, Innovation, and Entrepreneurship. Faculty members regularly interact with the industry and also take up consultancy and sponsored research projects.

The entrepreneurship development workshops, organized by the Institute encompass Industry-Institute interaction. In the last six years, the Institute implemented the work plan of promoting entrepreneurship activities through workshops. The Institute gives priority to research collaboration, MOUs, and consultancy activities. The faculty members received grants to carry out Major/Minor Research Projects from AICTE, UGC, DST, etc. The outcome of these R&D activities is evident in the form of patents, research publications in peer-reviewed journals, thereby elevating the h-index, i-10 index, RG score, and citations.

In order to sensitize the students towards social issues, the Institute has taken several initiatives for the holistic development of students. Activities like surveying the slum areas in and around Nagpur, donation camps to serve the deprived and orphans, awareness on the need of recycling the waste, the importance of cleanliness and hygiene with respect to self and environment are carried out.

The students take these activities as a platform to know and understand the real meaning of empathy, develop compassion towards the needy people, and enhance their practical knowledge, life skills, and critical thinking, which in turn sensitize them to numerous social issues that help in their holistic development. The Institute always aims to pursue excellence towards creating manpower with a high degree of intellectual and professional competence.

Infrastructure and Learning Resources

The infrastructure of the Institute comprises classrooms, laboratories, computing facilities, a centralized library, workshop, central stores, hostels, and canteen. The buildings of various departments, library, hostels, etc. are well connected with bituminous roads and paver blocks and equipped with a ramp for differently-abled (divyang) students. Adequate comfort facilities such as washrooms, drinking water coolers, boys' common room, and girls' common room, and sick room are made available on the campus. Institute has a separate canteen block and the provision of covered as well as open parking facilities for faculty, staff, and students.

The collection of books in the Institute central library includes a wide range of textbooks and specialized reference books for basic engineering subjects, all the subjects of chemical engineering, and chemical technology. The library is equipped with LMS and has a spacious reading hall and reference section. Integrated cloud-based library management system software, "LIB-MAN" enabled with internet and barcode scanner is in place. The popular magazines and daily newspapers are made available in the reading hall.

RTM Nagpur University Library is equipped with Integrated Library Management System called LIBSYS. The faculty members have been given access to this library for IT-based services like OPAC, WebOPAC, e-Resource, etc. University Library has subject-specific search engines/databases such as INFLIBNET, SciFinder, etc.

The Institute has a playground where students play cricket, football, and volleyball, etc. This ground is also used for cultural programs, like the Annual Social Gathering and Ganapati Utsav. Institute has a fully air-conditioned auditorium (capacity of 200) and access to Shree Guru Nanak Bhavan (capacity of 400) which are used for hosting various functions/events. Institute publishes Annual Student Magazine “Clock Talk”. The Institute’s magazine won the third prize in the year 2018 and first prize in the year 2019 in the magazine competition organized by the RTM Nagpur University.

The Institute has specific mechanisms and arrangements to maintain and utilize its physical and academic infrastructure. Surveillance and CCTV cameras and other security equipment are maintained by the equipment providers/vendors. Firefighting equipment is installed and maintained in various blocks, classrooms, laboratories, hostels, offices, etc.

Student Support and Progression

To achieve overall excellence, students need to participate in various co-curricular, extra-curricular activities throughout the academic session. The Institute organizes various activities under the students’ activity center. To organize technical events like “REACT” and “MERGE”, the preference is given to the top-ranking students from the final year.

In Anti-ragging and Mentoring Committee, faculty members, student representatives shoulder the responsibility of making the first semester students comfortable in the Institute campus. The Institute’s motto is to maintain its campus free from ragging. Counseling skill enhancement programs, intercollegiate competitions, seminars for students, Group Discussions, Mock personal interviews, workshops are conducted to enhance employability. Government Freeships and Scholarships are made available to the students.

LIT Alumni Association LITAA is an independent body of the alumni of **Laxminarayan Institute of Technology, Nagpur**, and is duly registered under the provisions of Societies Registration Act, 1860 and Maharashtra Public Trust Act 1950. LITAA has regional chapters in Delhi, Mumbai, Pune, and also has an NRI chapter. LITAA has contributed in many ways to the development of the Institute. Through 2016-2020, many developmental projects were implemented:

- Borewell and piping project has resolved water scarcity problem which students used to face in summer
- Canteen renovation
- Tree plantation, done during monsoon every year
- LITAA Samvaad, a quarterly magazine
- Air-conditioning, audio system, LCD projector, and furniture for the auditorium
- Jewels of LIT awards function and Annual Alumni Get-Together
- Financial support for various events organized by the students
- Financial support to poor students
- Donation of Process Pilot Plant
- Donation of Pilot Plant for Soap Manufacturing.

An Alumni-funded incubation center is designed to nurture and grow new and small projects at the early stages of development. A well-equipped incubation center for students of LIT is being developed. It will offer access to the resources needed, all under one roof for start-ups and new ventures. It will provide access to expert advisors, mentors, administrative support, laboratory equipment, angel funding, and training to the budding entrepreneurs. The goal of the Institute is to make the individuals aware of the process involved in setting up a

business starting from a feasible concept/idea.

Governance, Leadership and Management

This Institute is a University Managed Conducted College of RTM Nagpur University which is a public university, governed by The Maharashtra Public Universities Act, 2016. The Institute is governed by Ordinance No. 10 of 1996. The Board of Governors is formed as per the provisions of this Ordinance. The Board of Governors (BoG) plays a key role in the fulfillment of the vision and mission of the Institute and helps for the smooth conduct of various activities at the Institute through regular meetings. The BoG chaired by the Hon. Vice-Chancellor, who is the ex-officio chairman of BoG. The BoG is responsible to plan the development of the Institute, both physical and academic, under the control of the Management Council. The BoG also plan, monitor, and guide undergraduate and postgraduate academic programs and the overall development of the Institute.

As per the directions of the Director, the faculty members enthusiastically shoulder the responsibility of event coordinators/ members of various working committees, co-curricular and extra-curricular committees, constituted for the day-to-day functioning of the Institute and proper organization of the planned events. The University approves the budget allocation to the Institute under various heads for the financial year. The Director allocates the budget to all the departments within the provision made in the budget.

Perspective Plan

It involves setting goals, determining actions to achieve the goals, and mobilizing resources to execute the actions. The important components of the strategic plan are:

1. To establish alumni supported incubation center
2. To establish a center of excellence in collaboration with industry
3. To obtain the autonomy for the Institute

The Institute has plans to set up a center of excellence in collaboration with Gexcon Norway in its premises. This center will promote academics, skill-oriented programs relevant to the socio-economic needs of the nation in general, and the region in particular. The Institute has a plan to apply for autonomy which will equip it with dynamism and freedom that is needed to bring about the change in the course structure and curriculum to fit the changing demands of the industry in terms of skilled manpower.

Institutional Values and Best Practices

LIT is known for its value-based education besides covering the prescribed university syllabus. It has also been inculcating human values among the students and staff through programs like personality development classes and motivational lectures, organizing lectures to make the students aware of Gandhiji's philosophy and its relevance in today's world. The Women's forum actively conducts programs to bring Gender Equality. It conducts special lectures by renowned medical practitioners on health and hygiene-related issues. The Institute has always shown concern about environmental issues, hence regularly conducts programs like Plastic-free campuses, Plantation drives, etc.

The Institute is very conscious about sustainable development and hence, generates the least amount of waste with motivation towards conserving natural resources and an eco-friendly environment. It has established mechanisms for collecting solid, liquid, and electronic waste as well as for disposing of such waste as per prevailing regulations.

Solid waste management- segregating solid waste, converting plant leaves to compost, Microbial digestion of vegetable waste from Hostel Mess into Organic Manure.

Liquid waste management- reuse, dilution, ECOBIN to minimize the toxicity of the chemical effluents to different levels, waste is given to Government approved agency

e-waste management- electronic equipment is disposed of on regular basis and is handed over to an NGO/scrap dealer who recycles/disposes of it appropriately.

Best Practices

Development of Research Culture in B. Tech and M. Tech Students

This practice proved to be very effective and has resulted in some of the projects with tangible outcomes like SCI publications, publications in journals of the repute with high impact factor, book chapters in international edited books by reputed publishers like CRC Press, Elsevier, Springer, etc. and also the grant of patents.

Revenue Generation through Testing and Consultancy

During the last five years, the Institute managed to fetch consultancy projects and successfully delivered the results to the satisfaction of the sponsoring organizations/ industries. The Institute has generated revenue of Rs. 33.51 Lakhs in the last five years.

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	LAXMINARAYAN INSTITUTE OF TECHNOLOGY
Address	Opposite Bharat Nagar, Amravati Road
City	NAGPUR
State	Maharashtra
Pin	440033
Website	www.litnagpur.in

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Director	Raju B. Mankar	0712-2561107	8788713619	0712-2561107	director@litnagpur.in
IQAC / CIQA coordinator	Pratibha S. Agrawal	0091-9763844660	9763844660	0712-2447001	iqac_director@litnagpur.in

Status of the Institution	
Institution Status	Grant-in-aid

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minority institution	No

Establishment Details	
Date of establishment of the college	01-08-1942

University to which the college is affiliated/ or which governs the college (if it is a constituent college)

State	University name	Document
Maharashtra	The Rashtrasant Tukadoji Maharaj Nagpur University	View Document

Details of UGC recognition

Under Section	Date	View Document
2f of UGC	02-09-2005	View Document
12B of UGC	02-09-2005	View Document

Details of recognition/approval by stationary/regulatory bodies like AICTE, NCTE, MCI, DCI, PCI, RCI etc (other than UGC)

Statutory Regulatory Authority	Recognition/Approval details Institution/Department programme	Day, Month and year (dd-mm-yyyy)	Validity in months	Remarks
AICTE	View Document	30-04-2020	12	Extension of Approval Granted by AICTE

Details of autonomy

Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?	No
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Recognitions

Is the College recognized by UGC as a College with Potential for Excellence (CPE)?	No
Is the College recognized for its performance by any other governmental agency?	Yes
If yes, name of the agency	NIRF Ministry of Education Government of India
Date of recognition	09-04-2019

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Opposite Bharat Nagar, Amravati Road	Urban	77.78	41794.74

2.2 ACADEMIC INFORMATION

Details of Programmes Offered by the College (Give Data for Current Academic year)						
Programme Level	Name of Programme/Course	Duration in Months	Entry Qualification	Medium of Instruction	Sanctioned Strength	No.of Students Admitted
UG	BTech,Chemical Engineering	48	Higher Secondary Certificate	English	75	75
UG	BTech,Food Technology	48	Higher Secondary Certificate	English	12	12
UG	BTech,Oil Technology	48	Higher Secondary Certificate	English	12	12
UG	BTech,Petrochemical Technology	48	Higher Secondary Certificate	English	12	12
UG	BTech,Pulp And Paper Technology	48	Higher Secondary Certificate	English	12	10
UG	BTech,Plastic And Polymer Technology	48	Higher Secondary Certificate	English	12	12
UG	BTech,Surface Coating Technology	48	Higher Secondary Certificate	English	15	15
PG	Mtech,Chemical Engineering	24	B. Tech	English	12	12
PG	Mtech,Food Technology	24	B. Tech	English	12	5
PG	Mtech,Oil Technology	24	B. Tech	English	12	3
PG	Mtech,Petrochemical Technology	24	B. Tech	English	12	0
PG	Mtech,Surface Coating Technology	24	B. Tech	English	12	1

Position Details of Faculty & Staff in the College

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned by the UGC /University State Government	10				14				38			
Recruited	4	0	0	4	5	3	0	8	23	4	0	27
Yet to Recruit	6				6				11			
Sanctioned by the Management/Society or Other Authorized Bodies	0				0				0			
Recruited	0	0	0	0	0	0	0	0	0	0	0	0
Yet to Recruit	0				0				0			

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				16
Recruited	10	2	0	12
Yet to Recruit				4
Sanctioned by the Management/Society or Other Authorized Bodies				0
Recruited	0	0	0	0
Yet to Recruit				0

Technical Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				36
Recruited	16	4	0	20
Yet to Recruit				16
Sanctioned by the Management/Society or Other Authorized Bodies				0
Recruited	0	0	0	0
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/LLD	0	0	0	0	0	0	0	0	0	0
Ph.D.	4	0	0	5	3	0	16	4	0	32
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	7	0	0	7

Temporary Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/LLD	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Part Time Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/LLD	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0

Details of Visting/Guest Faculties				
Number of Visiting/Guest Faculty engaged with the college?	Male	Female	Others	Total
	0	0	0	0

Provide the Following Details of Students Enrolled in the College During the Current Academic Year

Programme		From the State Where College is Located	From Other States of India	NRI Students	Foreign Students	Total
UG	Male	91	9	0	0	100
	Female	59	1	0	0	60
	Others	0	0	0	0	0
PG	Male	11	1	0	0	12
	Female	9	0	0	0	9
	Others	0	0	0	0	0

Provide the Following Details of Students admitted to the College During the last four Academic Years

Programme		Year 1	Year 2	Year 3	Year 4
SC	Male	15	13	17	18
	Female	11	9	11	14
	Others	0	0	0	0
ST	Male	2	5	5	6
	Female	3	4	1	4
	Others	0	0	0	0
OBC	Male	63	73	56	48
	Female	38	24	34	30
	Others	0	0	0	0
General	Male	31	33	39	51
	Female	18	23	18	23
	Others	0	0	0	0
Others	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
Total		181	184	181	194

1. Multidisciplinary/interdisciplinary:	<p>Concern towards multidisciplinary education is reflected in the CBCS system. Single- stream Institute in a phased manner is turned into multidisciplinary 'clusters'. It is based on the flexible approach of the cafeteria system and the main object is to provide knowledge of different fields to the students at the undergraduate and post-graduate levels. Such CBCS is in existence for all the programs taught with the introduction of open elective subjects. Thus the subjects start losing boundaries and open for students to gain the skill in multi/ interdisciplinary subjects. Also, the introduction of Add On courses gives full right and choice to the student to opt for the courses of individual choice. the responses were found to be extremely significant. It aims to overall development which means now students can have knowledge across fields through access to infrastructure, trained teachers, and other facilities at the Institute with newly introduced interdisciplinary add-on courses.</p>
2. Academic bank of credits (ABC):	<p>The student-friendly National Education Policy (NEP) 2020 has introduced contemporary concepts to improve the quality of education in India. It is focused on individual development by providing flexibility in the course structure. The academic bank of credit (ABC) proposed in NEP 2020 offers flexibility to students and executives to promote liberal education, according to draft rules prepared by the University Grants Commission (UGC). All the credits earned by the students in the CBCS program are stored in the academic bank, concerted to appropriate grades, and are well reflected on the grade sheet provided to them. But the suitable entry and exit points are not implemented yet. Credits acquired by students in the Add On Courses are given in the form of grades on the Add On Certificates only. As those courses are started at the iNstitute level, the credits/ grades earned can not be reflected on the University level grade sheet. The iNstitute is affiliated with Rastrasant Tukadoji Maharaj Nagpur University, Nagpur. The University is planning to ABC in near future, and the students of this institute will be benefitted from the proposed academic bank of credits.</p>
3. Skill development:	<p>NEP states that in addition to proficiency in languages, the skills like scientific temper and</p>

	<p>evidence-based thinking; creativity and innovativeness; a sense of aesthetics and art; oral and written communication, health and nutrition; physical education; fitness, wellness, and sports; collaboration and teamwork; problem-solving and logical reasoning; vocational exposure and skills; digital literacy, etc. should be an integral part of the curriculum. The Institute already gives due importance to developing most of these skills like computational skills, soft skills, life skills, oral and written communication skills, teamwork, problem-solving skills, and vocational exposure, etc. The Institute is preparing for the inclusion of a few more skills like the sense of aesthetics and art, scientific temper and evidence-based thinking; creativity and innovativeness; health and nutrition; physical education, fitness, wellness in its teaching-learning process and co-curricular activities.</p>
<p>4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):</p>	<p>Cultural awareness and expression are among the major competencies which are important in the development of the students, in order to provide them with a sense of identity belonging, as well as, an appreciation of other cultures and identities. It is through the development of a strong sense and knowledge of their own cultural history, arts, languages, and traditions that students can build a positive cultural identity and self-esteem. The arts- besides strengthening cultural identity, awareness, and uplifting societies- are well known to enhance cognitive and creative abilities in individuals and increase individual happiness. The happiness/well-being, cognitive development, and cultural identity of individuals are important reasons that Indian arts of all kinds must be offered to students at all levels of education. In the Institute, all the courses are taught in the English language. The teachers, at times (Particularly in first-year classes), do teach and explain a few difficult topics in Hindi or Marathi particularly for the benefit of the students coming from rural areas. Institute takes due care while conducting various extracurricular activities mostly conducted in Hindi or Marathi to ensure maximum participation of the students. Harmony in various diversity is well maintained and balanced. The faculty members are enthusiastic about the conduct of the teaching-learning process in the local language Marathi.</p>

5. Focus on Outcome based education (OBE):	<p>The traditional education system is highly dependent on theoretical aspects of learning. It repeats the humdrum way of teaching-learning process that just focuses on memorizing skills of students rather than skill development. It hardly provides any chance for students to develop new skills which might be useful for building their careers. In a traditional system, teachers are more focused on completing the curriculum with the given time frame rather than innovating and developing the students' skills! At present, the Outcome-Based Education (OBE) system is already in place and being implemented by the Institute. Outcome-based education or OBE is the student-centric teaching and learning methodology of an educational program based on a set of goals (outcomes). Throughout the educational experience, all students should be able to achieve their goals. It focuses on measuring students' performance through outcomes. The OBE maps and measures students' performance at every step. The OBE system set at the Institute aims to maximize students learning outcomes by developing their knowledge and skills. Students' performance is assessed continuously through assignments, class tests, and sessional examinations. Continuous assessment is also implemented in laboratory practices. These factors can contribute to raising the standard of education and aid institutes to acquire accreditation from esteemed accreditation bodies such as NAAC and NBA.</p>
6. Distance education/online education:	<p>During the pandemic, the education system went through a phase of realization and learning. To maintain the standards of teaching, Institute hacked its way to find a quick solution to the crisis, by adopting online learning, leaving behind classroom education. Virtual labs were set to give students remote access to hands-on experiment-based learning. Thus, the adoption of these cutting-edge technologies resulted in enhancing the immersive learning experiences. Link to various SWAYAM, NEPTel, e-content courses were also shared to enrich the subject knowledge of the students. Thus blackboard can be shifted to tech board in a hybrid way. A series of online talks were organized for the students for creating awareness about the NEP and related modifications. The smart classrooms provided a strong platform to initiate interactivity through</p>

webinars and live discussions. It is also intended at preparing alternative modes of delivering education, in times of crisis as the current pandemic, when conventional modes of education falter. The Institute is affiliated with Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur. Whenever the University will take the decision to start the various courses in distance education mode, the Institute will also take such initiatives to adopt and run those courses.

NAAC

Extended Profile

1 Program

1.1

Number of courses offered by the Institution across all programs during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
269	269	269	269	269
File Description		Document		
Institutional data prescribed format		View Document		

1.2

Number of programs offered year-wise for last five years

2020-21	2019-20	2018-19	2017-18	2016-17
12	12	12	12	12

2 Students

2.1

Number of students year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
745	723	728	755	748
File Description		Document		
Institutional data in prescribed format		View Document		

2.2

Number of seats earmarked for reserved category as per GOI/State Govt rule year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
102	119	106	100	101

File Description	Document
Institutional data in prescribed format	View Document

2.3

Number of outgoing / final year students year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
218	194	204	207	208
File Description	Document			
Institutional data in prescribed format	View Document			

3 Teachers

3.1

Number of full time teachers year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
39	40	30	32	34
File Description	Document			
Institutional data in prescribed format	View Document			

3.2

Number of sanctioned posts year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
62	62	62	62	62
File Description	Document			
Institutional data in prescribed format	View Document			

4 Institution

4.1

Total number of classrooms and seminar halls

Response: 12**4.2****Total Expenditure excluding salary year-wise during last five years (INR in Lakhs)**

2020-21	2019-20	2018-19	2017-18	2016-17
86.71	109.31	93.04	115.83	145.32

4.3**Number of Computers****Response: 160**

4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curricular Planning and Implementation

1.1.1 The Institution ensures effective curriculum delivery through a well planned and documented process

Response:

Laxminarayan Institute of Technology, Nagpur is a University Managed, Conducted College of Rashtasant Tukadoji Maharaj (RTM) Nagpur University, and hence, it implements the syllabus prescribed by the University. The Institute prepares the academic calendar, and accordingly plans for the delivery of the curriculum. The normal distribution of the weekly workload of 14-16 hours per week is done as per the norms prescribed by AICTE, New Delhi. The extra load is distributed amongst the available faculty members and contributory teachers appointed by the University. The Time Table is prepared by the Time Table Committee and on approval of the Director, it is published on the official website of the Institute <https://www.litnagpur.in> at least a week before the commencement of classes. The faculty members try their best to explain the subject to students in an effective and efficient manner by adopting and utilizing various means such as traditional blackboard and chalk, e-books, NPTEL video lectures, SWAYAM, PowerPoint presentations, and case studies. They also try to enhance the quality of teaching by following Bloom's Taxonomy and Outcome Based Education system (OBE).

Various modes used for effective teaching-learning process are-

Lectures: Lectures delivered in the classroom are utilized mainly to explain the phenomena, related derivations, and solve numerical problems based on the topics discussed. The emphasis is also given on industrial applications of the concepts taught in the theory lectures.

Powerpoint Presentations: The presentations are given by the teachers using an LCD projector particularly to illustrate and explain the intricate design concepts and process flow sheets for a better understanding.

Laboratory (Experimental) Work: The subject teacher distributes the laboratory manuals to the students at the beginning of every semester. The conceptual theory part on which the practicals are based is explained to the students in small batches. Then the demonstration of the procedure to conduct that particular experiment is also given to the students. The journals of the students are checked and evaluated every week by the respective subject teacher.

Industrial Visit/Training: All the students after the sixth semester are placed for four to six weeks of industrial training in core chemical process industries. This provides the opportunity for the students to see the unit processes, unit operations, and the process equipment which they study in their theory classes of various core subjects. It gives them first-hand experience regarding the jobs/duties needed to be performed by chemical engineers/technologists in the chemical process industry.

During the pandemic situation, classes were conducted in online mode with regular interactive sessions on Moodle/Google Meet and Cisco WebEx. Few teachers also uploaded their recorded video lectures on

YouTube and are available in the public domain. The assignments, class tests, and sessional examination and its continuous assessment were done using Moodle platform and/or Google Forms. The teachers were available on dedicated WhatsApp Groups formed for all classes, for resolving the difficulties and queries raised by the students. The University examination is conducted as per Time Table published by the University.

File Description	Document
Upload Additional information	View Document
Link for Additional information	View Document

1.1.2 The institution adheres to the academic calendar including for the conduct of CIE

Response:

Laxminarayan Institute of Technology is a University Managed, Conducted College of Rashtrasant Tukadoji Maharaj Nagpur University, which follows the academic calendar published by the University at the beginning of every academic session. The Institute then prepares its own academic calendar and publishes it on its official website. Institute's academic calendar includes the dates for the conduct of class tests, sessional examination, the important annual events, and extra-curricular activities which are organized regularly. The Director of the Institute has the authority to amend the academic calendar due to unforeseen events if any.

The Time Table Committee prepares the time-table which is finally approved by The Director. It is then uploaded on the official website of the Institute and also displayed on notice boards. The head of the department allots the course to individual faculty members in line with his/her expertise/area of specialization. The academic interests of the faculty members are also given due consideration for the allotment of the course. Every faculty member prepares his/her lesson plan before the commencement of the semester, which is first approved by the head of the department and then uploaded on the MIS of the Institute. The lesson plans are also made available to the students.

The proper conduct of two class tests is the responsibility of the respective subject teacher. The head of the department monitors the conduct of class tests and also ensures that the internal evaluation of assignments and class tests. The submission of internal marks is done on MIS of the Institute as well as on examination portal University in time as per the dates mentioned in the academic calendar. The examination committee prepares the Time Table for the sessional examination, which is published well in advance on the Institute website. The examination committee also takes care of the smooth conduct of the sessional examination. Periodic review of the delivery as per the lesson plan is taken by the Director from each head of the department. In case of any discrepancy observed by the Director, appropriate corrective measures are taken. Internal practical evaluation based on their performance throughout the semester is done by the respective subject teachers. The practical examination is conducted as per the Time Table published by the University. An external examiner is appointed by the University to evaluate the performance of the students in practical examinations.

The Director also ensures that the academic calendar published by the Institute is scrupulously followed by

the faculty members and the students and the events like “Rao Bahadur D. Laxminarayan Commemoration Day”, “Rao Bahadur D. Laxminarayan Birth Anniversary”, Independence Day, Republic Day, Teacher’s Day and extra-curricular activities like Annual Social Gathering, Annual Sports, etc. are conducted by the respective committees as per the calendar published by the Institute.

File Description	Document
Upload Additional information	View Document
Link for Additional information	View Document

1.1.3 Teachers of the Institution participate in following activities related to curriculum development and assessment of the affiliating University and/are represented on the following academic bodies during the last five years

1. Academic council/BoS of Affiliating university
2. Setting of question papers for UG/PG programs
3. Design and Development of Curriculum for Add on/ certificate/ Diploma Courses
4. Assessment /evaluation process of the affiliating University

Response: A. All of the above

File Description	Document
Institutional data in prescribed format	View Document
Details of participation of teachers in various bodies/activities provided as a response to the metric	View Document
Link for Additional information	View Document

1.2 Academic Flexibility

1.2.1 Percentage of Programmes in which Choice Based Credit System (CBCS)/ elective course system has been implemented

Response: 100

1.2.1.1 Number of Programmes in which CBCS / Elective course system implemented.

Response: 12

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document
Link for Additional information	View Document

1.2.2 Number of Add on /Certificate programs offered during the last five years

Response: 15

1.2.2.1 How many Add on /Certificate programs are offered within the last 5 years.

2020-21	2019-20	2018-19	2017-18	2016-17
15	0	0	0	0

File Description	Document
List of Add on /Certificate programs	View Document
Any additional information	View Document
Link for Additional information	View Document

1.2.3 Average percentage of students enrolled in Certificate/ Add-on programs as against the total number of students during the last five years

Response: 9.85

1.2.3.1 Number of students enrolled in subject related Certificate or Add-on programs year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
367	0	0	0	0

File Description	Document
Details of the students enrolled in Subjects related to certificate/Add-on programs	View Document
Any additional information	View Document

1.3 Curriculum Enrichment

1.3.1 Institution integrates crosscutting issues relevant to Professional Ethics ,Gender, Human Values ,Environment and Sustainability into the Curriculum

Response:

The Institute strongly believes in integrating cross-cutting issues such as equity and social inclusion, gender sensitivity, professional ethics, human values, communication skills, environment, and sustainability, etc. with the curriculum which creates a positive impact on the students not only in their learning of engineering subjects but also sensitize them towards the societal responsibility.

In order to ensure this, the following courses/ activities are carried out:

Curriculum

As universal human values and ethical values, environment and sustainability are of prime concern to the Institute, these issues are covered at length through various theory and practical courses. Students are exposed to these issues so as to realize their role in sustainable development and addressing societal issues.

Student Induction Program (SIP)

The Institute has imbibed the trend of organizing Student Induction Program (SIP) for the students of the first year as per the directions of AICTE, before the commencement of their regular classes in which the main emphasis is given on Universal Human Values. Ten faculty members have been trained by AICTE and they help in the effective conduct of SIP. The response of the students to SIP was amazing.

Language Skills

At the first-year level, the curriculum is designed to sharpen their language skills comprising of listening, speaking, reading, and writing skills which helps them in improving their vocabulary and fluency in day-to-day communications. The students are also trained in group discussions, interview techniques, small presentations, and report writing, etc.

Professional Ethics

As a part of the syllabus, first-year UG students study "Ethical Sciences", which exposes them to various aspects like intellectual property rights, organizational ethics, industrial psychology, social engineering, sustainable development, Indian constitution, etc. Faculty members also discuss ethics-related issues like plagiarism, while completing their minor and major projects. Faculty members, research scholars, and UG and PG students adopt professional ethics while writing their research papers and book chapters.

Alumni Interaction

Every year, the Institute celebrates the birth anniversary of the late Rao Bahadur D. Laxminarayan and organizes Two Memorial Lecture Series in which, distinguished alumni are invited to deliver the lectures and share their Success Story which could inspire them to dream about their future and set a goal for their professional career. Institute presents the top achievers from the alumni as role models to its students. Over

the years, it has been observed that this initiative has really inspired the students and helped them in the proper planning of their careers following their role models.

Gender Issues

Gender equality is ensured in the Institute by facilitating a gender discrimination-free environment by giving equal opportunity to all the students and encouraging their participation during annual social gatherings, co-curricular and extra-curricular activities, internship, and industrial visits.

NSS Activities

National Service Scheme (NSS) unit of the Institute, with a capacity of 150 volunteers helps in the holistic development of the students. NSS unit organizes cleanliness drives, blood donation camps, tree plantation, yoga activities, street plays, and various social awareness programs in the neighboring communities.

File Description	Document
Upload the list and description of courses which address the Professional Ethics, Gender, Human Values, Environment and Sustainability into the Curriculum.	View Document

1.3.2 Average percentage of courses that include experiential learning through project work/field work/internship during last five years

Response: 25.65

1.3.2.1 Number of courses that include experiential learning through project work/field work/internship year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
69	69	69	69	69

File Description	Document
Programme / Curriculum/ Syllabus of the courses	View Document
MoU's with relevant organizations for these courses, if any Average percentage of courses that include experiential learning through project work/field work/internship	View Document
Minutes of the Boards of Studies/ Academic Council meetings with approvals for these courses	View Document

1.3.3 Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year)**Response:** 81.07**1.3.3.1 Number of students undertaking project work/field work / internships****Response:** 604

File Description	Document
List of programmes and number of students undertaking project work/field work/ /internships	View Document

1.4 Feedback System**1.4.1 Institution obtains feedback on the syllabus and its transaction at the institution from the following stakeholders 1) Students 2)Teachers 3)Employers 4)Alumni****Response:** A. All of the above

File Description	Document
Any additional information (Upload)	View Document
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management (Upload)	View Document
URL for stakeholder feedback report	View Document

1.4.2 Feedback process of the Institution may be classified as follows: Options:

- 1.Feedback collected, analysed and action taken and feedback available on website
- 2.Feedback collected, analysed and action has been taken
- 3.Feedback collected and analysed
- 4.Feedback collected
5. Feedback not collected

Response: A. Feedback collected, analysed and action taken and feedback available on website

File Description	Document
Upload any additional information	View Document
URL for feedback report	View Document

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average Enrolment percentage (Average of last five years)

Response: 89.05

2.1.1.1 Number of students admitted year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
181	184	181	194	195

2.1.1.2 Number of sanctioned seats year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
210	210	210	210	210

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

2.1.2 Average percentage of seats filled against reserved categories (SC, ST, OBC, Divyangjan, etc. as per applicable reservation policy) during the last five years (exclusive of supernumerary seats)

Response: 81.39

2.1.2.1 Number of actual students admitted from the reserved categories year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
76	93	86	87	87

File Description	Document
Average percentage of seats filled against seats reserved	View Document
Any additional information	View Document

2.2 Catering to Student Diversity

2.2.1 The institution assesses the learning levels of the students and organises special Programmes for advanced learners and slow learners

Response:

The students from various strata of the society belonging to economically and socially backward classes also are admitted to the Institute on the basis of their rank obtained in the Common Entrance Test (CET) conducted by the Government of Maharashtra. The Institute conducts a well-planned Student Induction Program (SIP) for first-year students in order to familiarize them with the work culture of the Institute and, University examination system. Faculty help to make them comfortable in the new environment. After about one month of regular teaching, the class test is conducted to identify the slow learners. At the same time, the Institute takes due care that these students are not branded as slow learners. The Institute started a remedial coaching center for the socially backward, and non-creamy layer category, in the year 2007 with financial support from RTM Nagpur University, in order to raise their overall academic performance. In remedial coaching classes, the teachers teach them in small groups and try to enhance their level of understanding. Institute also allows students other than identified slow learners to attend remedial coaching classes. It plays an important role in helping slow learners. Large numbers of students enroll themselves every year and take advantage of this scheme. Their progress is continuously monitored and assessed by the subject teachers based on classroom discussions, performance in class tests, etc.

The following methodology is followed by the Institute:

- Counseling is done by the teacher mentors, subject teachers, and heads of the departments in order to make the students adjust to the new surroundings with the new people around them.
- Slow learners are encouraged to meet their respective subject teachers to get their difficulties solved and to improve their understanding of the subjects.
- The teacher mentor, who acts as a friend, philosopher, and guide for these teenagers and helps in resolving the difficulties faced by them in getting acquainted with the new atmosphere.

From the second year onwards, confidence in slow learners is boosted by involving them in organizing committees of various workshops, conferences. The advanced learners are identified from their scores in-class tests and discussions. They are encouraged to participate in paper presentations in seminars, model-making competitions, quiz competitions, etc. Recently, the Institute started offering add-on-courses to give the students advanced knowledge beyond the prescribed syllabus of the University. These students are encouraged to take up small projects going a step ahead to demonstrate their ability to apply the knowledge gained in theory and practical sessions, participate in paper presentations in seminars and conferences. The students are further nurtured and trained to publish research papers through projects in refereed high-impact factor international journals. The results over the last five years are so encouraging that this practice has emerged as one of the best practices of the Institute. The Institute has also planned to help these students to convert their innovative ideas into start-ups and to transform them into successful entrepreneurs through the incubation center being set up by the Alumni Association (LITAA).

File Description	Document
Upload any additional information	View Document
Past link for additional Information	View Document

2.2.2 Student- Full time teacher ratio (Data for the latest completed academic year)

Response: 19:1

File Description	Document
Any additional information	View Document

2.3 Teaching- Learning Process

2.3.1 Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

Response:

The Institute has devised accommodative learner-centric teaching-learning methodologies to augment the students' learning experience and fit them better on a learning curve.

Blackboard to Tech-board

Use of smart classrooms equipped with LCD projectors, usage of ICT tools, group discussions, presentations, etc. help in enhancing the learning capacity of the students.

Experiential Learning

Case study-based teaching methodologies, industrial training, expert talks, real-time exposure to the chemical process industries, discussion on emerging research areas, provide experiential learning to the students. It broadens their vision, intellect and opens up new vistas for acquiring knowledge. This helps in bridging the gap between theory and practice. The industrial visits and mandatory 4-6 week internships (monitored industrial training) helps the students to know about the role of chemical engineer/technologist in a chemical process industry. Few advanced learners also get job offers from renowned industries after the assessment of their performance during the internship. The students are also encouraged to take an active part in organizing various co-curricular and extra-curricular events which help them in developing their management skills.

Participative Learning

The students while working on their minor/major projects get an opportunity for project-based participative learning. Their project supervisors train them for the literature survey, identification of problems, and defining the problem statement. They are also introduced to research methodologies to develop a scientific outlook while working on real-life industrial innovations/problems. This provides an opportunity to gain professional values, knowledge, and skills. Students also gain a deeper understanding of the meaning of

civic responsibility and prepare themselves for serving the community.

Group Discussions

The students are divided into small groups. The topics based on the chemical engineering principles and industrial management which are of utmost importance are given for the group discussions. Such discussions offer an opportunity to conceptualize the theoretical as well as practical aspects learned by the students. This also helps in improving their rational and reflective thinking, and logical reasoning abilities. Such activities are aimed to imbibe in them the leadership qualities and also to inculcate in them the spirit of good teamwork.

Students' Seminar

The presentations by the students in seminars boost their confidence in public speaking and improve their understanding of a particular topic. Qualitative engagement of the students in seminars provides a unique opportunity to witness the presentation skills of their peers. The students also get exposure to a variety of topics presented by their peers.

Problem-solving Methodologies

The core subjects in the chemical engineering curriculum such as chemical reaction engineering, process dynamics, and control, mass transfer, chemical engineering thermodynamics, process modeling, and simulation, etc. include many challenging topics. The problem-solving methodologies need to be adopted in order to have a clear understanding of the fundamentals and the associated difficult concepts. The students are taught and trained with problem-solving skills. The thorough exercise involved in solving open-ended problems definitely develops the critical thinking and problem-solving skills of the students.

File Description	Document
Upload any additional information	View Document
Link for additional information	View Document

2.3.2 Teachers use ICT enabled tools for effective teaching-learning process.

Response:

Information and communication technology (ICT) is a major contributor to the modern interactive teaching-learning process. These tools as teaching aids empower the teachers to deliver their lectures effectively and efficiently.

1. The World of Internet and Web

- Institute premises are Wi-Fi enabled (NMEICT and BSNL connectivity)
- Computer laboratory

2. Evolution and spread of ICT in education

- Admissions, Administration, Academics, and Examinations are duly updated on MIS

3. Using ICT for Effective Educational Communication

- Visual Communication through the Powerpoint presentation
- Audio-Video recorded lectures
- Creating handouts and assignments for online usage

4. Online Courses

- Use of Moodle platform
- Designing and developing course content on Moodle
- Effective Cisco WebEx platform for the conduct of online classes, interactive and doubt clearing sessions, practical sessions, etc.

5. Adopting Online/Blended Education in Teaching-learning Process

- Need for combining online and F2F (Face-to-Face) education
- The techno smart classroom
- Evaluation of project reports and presentations
- Curriculum delivery as per the spirit of Bloom's Taxonomy

6. The Institute has its own dedicated Moodle website <http://moodle1litnagpur.in>

- A workshop on the "Learning Management System" was organized for the faculty members and the students to train them in the effective use of Moodle platform.

7. e-Resources

In addition to the traditional chalk-and-talk method of teaching, the teachers use the most relevant and quality videos available on YouTube to enhance the expression of their subject. These videos, created by eminent professors from IITs and reputed foreign Universities help the students to understand the difficult topics. Few teachers have also created their own Video lectures by using sources like OBS studio, Google Meet, etc., and published on their own YouTube channels. The main advantage of these e-resources is that there is no constraint of a fixed time-table and hence, the students can access the learning resource as per their convenience and as many times as they wish to watch it. These resources also enable the teachers to update their subject knowledge and thereby enrich their teaching abilities.

8. e- Library

The Institute library and the University library provide access to journals and e-books to the faculty and students. In addition, remote login access to these resources is also provided to the teachers. The central library of RTM Nagpur University has taken necessary steps in digitizing very old literature and converting it into e-resources, which are made available on the website of the University. The University Library has a Digital Knowledge Centre to provide access to e-books and e-learning resources to the students. The library has subject-specific search engines/databases such as INFLIBNET, SciFinder, etc. for searching

open literature on the topic of their research or a topic of their academic interest.

Faculty members are always ready to adopt the new methodologies and techniques as it is the need and necessity of the hour. A wide range of learning resources is made available to the students which proved extremely helpful particularly in the pandemic situation.

File Description	Document
Upload any additional information	View Document
Provide link for webpage describing the ICT enabled tools for effective teaching-learning process	View Document

2.3.3 Ratio of students to mentor for academic and other related issues (Data for the latest completed academic year)

Response: 19:1

2.3.3.1 Number of mentors

Response: 39

File Description	Document
Upload year wise, number of students enrolled and full time teachers on roll.	View Document
mentor/mentee ratio	View Document
Circulars pertaining to assigning mentors to mentees	View Document

2.4 Teacher Profile and Quality

2.4.1 Average percentage of full time teachers against sanctioned posts during the last five years

Response: 56.45

File Description	Document
Year wise full time teachers and sanctioned posts for 5years(Data Template)	View Document
List of the faculty members authenticated by the Head of HEI	View Document

2.4.2 Average percentage of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. during the last five years (consider only highest degree for count)

Response: 78.31

2.4.2.1 Number of full time teachers with *Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt.* year wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
34	33	22	24	25

File Description	Document
List of number of full time teachers with Ph. D. / D.M. / M.Ch. / D.N.B Superspeciality / D.Sc. / D.Litt. and number of full time teachers for 5 years (Data Template)	View Document
Any additional information	View Document

2.4.3 Average teaching experience of full time teachers in the same institution (Data for the latest completed academic year in number of years)

Response: 10.1

2.4.3.1 Total experience of full-time teachers

Response: 394

File Description	Document
List of Teachers including their PAN, designation, dept and experience details(Data Template)	View Document
Any additional information	View Document

2.5 Evaluation Process and Reforms

2.5.1 Mechanism of internal assessment is transparent and robust in terms of frequency and mode

Response:

Institute's primary focus is on strengthening the teaching-learning process through rigorous but transparent assessment and evaluation methods. Institute revised the traditional assessment system and evolved a credible and effective assessment and evaluation system. Accordingly, the internal evaluation scheme of 20 marks was revised and replaced by continuous monitoring and assessment from winter 2019. The parameters to be assessed and the weightage assigned is determined and communicated to the teacher/assessor by the Director of the Institute. Internal assessment of theory and laboratory courses is

done by the subject teachers. The scheme of examination and internal assessment is well explained to the students during the Student Induction Program and also by their respective subject teachers. The scheme of distribution of internal marks of the **Theory Subjects** is as follows:

Scheme	Details	Class Test 1	Class Test 2	Sessional	Assignment or Project	Total
Internal (80+20)	Weightage	15%	15%	60%	10%	100%
	Converted Marks	3	3	12	2	20
	Frequency	One/Sem	One/Sem	One/Sem	Five or One/Sem	
Internal Marks (70+30)	Weightage	16.66%	16.66%	40%	26.66%	100%
	Converted Marks	5	5	12	8	30
	Frequency	One/Sem	One/Sem	One/Sem	Five or One/Sem	
Internal Marks (35+15)	Weightage	20%	20%	40%	20%	100%
	Converted Marks	3	3	6	3	15
	Frequency	One/Sem	One/Sem	One/Sem	Five or One/Sem	

The sessional examination is conducted on the dates announced in the academic calendar. Allotment of roll numbers, seating arrangement, distribution of question papers, and the answer books are done just like the University examination. Two class tests I and II of one-hour duration are conducted by the respective subject teachers during their regular class. Five assignments are given by the subject teachers with a due date of submission, which is evaluated for 10% weightage. The Biometric Attendance is taken during the internal examinations. The revised scheme of distribution of marks for internal assessment is followed as per the revised curriculum of the University.

Internal marks obtained by the students are uploaded to the official MIS portal of the Institute by the respective subject teachers. These marks are then submitted online on the University Examination portal.

For practical subjects, as per the university scheme, 25 marks are allotted for internal and 25 marks for external evaluation. Day-to-day evaluation is done in each laboratory session. The distribution of internal marks is well explained to the students at the beginning of the session and the emphasis is given on their active performance in obtaining experimental results, practical record/journal completion in time, and their regular attendance. External marks are based on the performance of the experimental results obtained in the University practical examination and the viva-voce by the external examiner. The evaluation of project work and seminar is done by the respective guide/supervisor and the external examiner appointed by the University. Marks obtained in practical examination and the project work and seminar are submitted in online mode on the University Examination portal by the respective subject teachers.

File Description	Document
Any additional information	View Document
Link for additional information	View Document

2.5.2 Mechanism to deal with internal/external examination related grievances is transparent, time-bound and efficient

Response:

The students appear in –

Internal examinations – conducted by the Institute

External examinations – conducted by the University

At Institute level

Institute has evolved its own mechanism for redressal of examination-related grievances. The Institute conducts internal examinations (two class tests and a sessional examination) before the end of every semester as per the academic calendar of the Institute. The question papers for internal examinations are set by the respective subject teachers. The answer books are shown to the students to ensure transparency. Even after that, in case any student is not satisfied with the marks awarded by the subject teacher, he can submit his grievance to the Director. The Director takes appropriate action and final decisions on a case-to-case basis.

The final internal marks are entered in the MIS of the Institute. In case, the student was not able to appear for any internal examination, due to some unavoidable circumstances, re-examination is conducted by the subject teacher with the permission of the Director. However, the student has to justify the reason for his absence to obtain permission from the Director. In case, a student is found using unfair means during the examination, he is not allowed to write that particular examination and he is awarded zero marks forthwith.

At the University level

University has a well-established mechanism to deal with examination-related grievances. Any grievance related to hall tickets is addressed to the Director, Examination and Evaluation through the Director of the Institute. The issues pertaining to examinations are dealt with on top priority and resolved as soon as possible. The question papers are delivered online by the University via a secure link which is downloaded and printed just 15 minutes before the commencement of the examination. A senior teacher is appointed as the officer-in-charge of the examination by the University.

After the declaration of results, the students are allowed to submit their online applications for revaluation and re totaling of the answer books in prescribed format within 15 days. Senior teachers (other than the first assessor) in the respective subjects are appointed by the University to re-evaluate these answer books. After completion of the revaluation process, the revised result is declared by the university.

If any student is found involved in malpractices/use of unfair means during the University examinations,

he/she is not allowed to write his/her examination and the case is reported to the University for appropriate action.

In the Covid-19 Pandemic crisis, RTM Nagpur University theory examinations and Institute level examinations were conducted Online through the University Examination portal. Helpline numbers were displayed on the Examination portal to address the grievances of the students. The External Practical exam was conducted online as per the directions given by the University.

File Description	Document
Any additional information	View Document
Link for additional information	View Document

2.6 Student Performance and Learning Outcomes

2.6.1 Programme and course outcomes for all Programmes offered by the institution are stated and displayed on website and communicated to teachers and students.

Response:

The purpose of Outcome-Based Education (OBE) in education is to measure and map –

- Course Outcomes (COs) - Knowledge & skills acquired via course/curriculum
- Program Outcomes (POs) - Expertise developed after completion of the program
- Program Specific Outcomes (PSOs) - Expertise of graduates of a certain program

Designing the level of learning by adopting Bloom's Taxonomy:

Bloom Taxonomy defines and guides to design of the OBE requirements of the course criteria, making it useful for both the teacher and the student. It eases out the teaching-learning process and aligns the course outcomes to the learning/ difficulty level with which it is to be met. Higher-order skill demonstration is required for this, encompassing the lower-level skills like remembering and understanding. The student is required to demonstrate the knowledge and skill-based competencies, with a strong domain knowledge base to ensure the achievement of Graduate Attributes.

The program outcomes have been defined on the basis of the guidelines regarding Graduate Attributes (GAs) prescribed by concerned apex bodies of higher education such as UGC, AICTE, NBA, etc. POs and PSOs are prepared by the departmental committees and approved by the Director, which is available on the Institute website and well communicated to all. Course Outcomes (COs) are framed by the individual subject teachers in consultation with the respective heads of the departments. The course outcomes and their mapping with program outcomes and program-specific outcomes are elaborately discussed and finalized in the meeting of the subject teacher, head of the department, and the Director of the Institute. Bloom's Taxonomy has been referred to while defining the COs using action verbs, by all the committee members involved in this exercise.

Communicating the POs and COs

The Institute has a strong belief that every stakeholder, in general, and every student and teacher, in particular, is required to know and understand the course outcomes, and hence a structured mechanism is followed by the Institute in this regard. COs are communicated to the students during the introduction class itself.

1. Website

The Institute website is accessible to all stakeholders. Hence it is the most effective platform to publish the course outcomes. All the students access the website of the Institute regularly. The prospective students and their parents also visit the website for other relevant information. The availability of course outcomes on websites facilitates the students to relate her/his career objectives with program and course outcomes.

2. Student Induction Program

Every year the Institute organizes a well-planned induction program for newly admitted students. The concept of Program Outcomes and Program Specific Outcomes of the particular program is explained to the newly admitted students during the induction program.

3. Classroom Discussion

Every teacher prepares his/her teaching plan for the complete course in line with the COs. The respective subject teacher explains the COs to students in the introductory lecture so that the students understand the importance of studying a particular course and know the changes in knowledge/skill level expected on completion of a particular subject course.

File Description	Document
Upload COs for all Programmes (exemplars from Glossary)	View Document
Past link for Additional information	View Document

2.6.2 Attainment of programme outcomes and course outcomes are evaluated by the institution.

Response:

The Institute has a well-established mechanism for calculations of CO-PO attainment levels -

1. COs are framed by the subject teacher using Bloom's Taxonomy for the effective outcome of the course
2. Each CO is mapped with relevant POs and PSOs on the scale of High-3, Moderate-2, and Slight-1. MS-Excel sheets for calculating CO attainment based on the marks obtained by the students are prepared by the teachers and submitted to the IQAC coordinator.
3. The attainment and target level of CO is fixed after brainstorming sessions at the Institute level

with active participation CO PO Assessment Committee chaired by the Director.

Stage 1- Calculations of CO and CO levels

Particulars	Target	Level
UG Theory	60%	Above 70 = 3 50-70 = 2 35-55 = 1 Below 35 = 0
UG Practical	80%	Above 70 = 3 55-70 = 2 45-55 = 1 Below 45 = 0
UG Seminar/Project	80%	Above 75 = 3 60-75 = 2 35-60 = 1 Below 35 = 0
PG Theory	70%	Above 75 = 3 60-75 = 2 35-60 = 1 Below 35 = 0

Step 1-

CO	Formula for Calculations
CO1	$(CT1 \text{ Marks} \times 1.5/3) + (\text{Sessional Marks} \times 2.5/12) + (\text{UE Marks}/5)$
CO2	$(CT1 \text{ Marks} \times 1.5/3) + (\text{Sessional Marks} \times 2.0/12) + (\text{Assignment Marks} \times 0.5/2) + (\text{UE Marks}/5)$
CO3	$(CT2 \text{ Marks} \times 1.5/3) + (\text{Sessional Marks} \times 2.5/12) + (\text{UE Marks}/5)$
CO4	$(CT2 \text{ Marks} \times 1.5/3) + (\text{Sessional Marks} \times 2.0/12) + (\text{Assignment Marks} \times 0.5/2) + (\text{UE Marks}/5)$

CO5

$$\frac{(\text{Sessional Marks} \times 3.0/12) + (\text{Assignment Marks} \times 1.0/2) + (\text{UE Marks}/5)}{5}$$
Step 2 -

From all the CO scores out of 20, % of COs attained is calculated.

Step 3 -

After getting the values of all % COs, the level 0,1,2,3 is assigned indicating the attainment of unattained, low, medium, and high levels by using the assigned rubrics (0,1,2,3 respectively).

Step 4 -

The average of all levels for all COs is then calculated.

Stage 2 - Calculations of CO/PO Matrix for Attainment**Calculating PO Attainment –**

PO1 attainment = $\{(\text{Average of CO1} \times \text{matrix weightage of CO1}) + (\text{Average of CO2} \times \text{matrix weightage of CO2}) + (\text{Average of CO3} \times \text{matrix weightage of CO3}) + (\text{Average of CO4} \times \text{matrix weightage of CO4}) + (\text{Average of CO5} \times \text{matrix weightage of CO5})\} / (\text{Average of PO1 matrix weightage})$

Similar formulae were applied to other PO attainment calculations.

Fixing the Desired Target Level

Target levels for theory, practical and different courses have been decided at the Institute level after elaborate discussions in faculty meetings chaired by the Director.

Achievement of the Desired Target Level

If the levels are achieved, then the teaching methods and tools are considered to be satisfactory and are continued. But in case, if the target is not achieved as expected, the course coordinator personally looks after the curricular gaps and takes necessary steps and due efforts to improve attainment levels.

File Description	Document
Upload any additional information	View Document
Paste link for Additional information	View Document

2.6.3 Average pass percentage of Students during last five years

Response: 96.41**2.6.3.1 Number of final year students who passed the university examination year-wise during the last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
216	192	191	199	196

2.6.3.2 Number of final year students who appeared for the university examination year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
218	194	204	207	208

File Description	Document
Upload list of Programmes and number of students passed and appeared in the final year examination (Data Template)	View Document
Upload any additional information	View Document
Paste link for the annual report	View Document

2.7 Student Satisfaction Survey**2.7.1 Online student satisfaction survey regarding teaching learning process****Response: 3.11**

File Description	Document
Upload database of all currently enrolled students (Data Template)	View Document

Criterion 3 - Research, Innovations and Extension

3.1 Resource Mobilization for Research

3.1.1 Grants received from Government and non-governmental agencies for research projects, endowments, Chairs in the institution during the last five years (INR in Lakhs)

Response: 116.28

3.1.1.1 Total Grants from Government and non-governmental agencies for research projects , endowments, Chairs in the institution during the last five years (INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
25.237	30.183	8.5	3.9	48.456

File Description	Document
List of endowments / projects with details of grants	View Document
e-copies of the grant award letters for sponsored research projects / endowments	View Document

3.1.2 Percentage of teachers recognized as research guides (latest completed academic year)

Response: 48.72

3.1.2.1 Number of teachers recognized as research guides

Response: 19

File Description	Document
Institutional data in prescribed format	View Document
Any additional information	View Document

3.1.3 Percentage of departments having Research projects funded by government and non government agencies during the last five years

Response: 40

3.1.3.1 Number of departments having Research projects funded by government and non-government agencies during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
3	3	2	2	4

3.1.3.2 Number of departments offering academic programmes

2020-21	2019-20	2018-19	2017-18	2016-17
7	7	7	7	7

File Description	Document
Supporting document from Funding Agency	View Document
List of research projects and funding details	View Document
Paste link to funding agency website	View Document

3.2 Innovation Ecosystem

3.2.1 Institution has created an ecosystem for innovations and has initiatives for creation and transfer of knowledge

Response:

The Institute provides a conducive environment for research-and-technology-driven innovations with a focus on five key constituents of the ecosystem for innovations, viz. Research, Innovation, Technology, Industry, and Entrepreneurship. The Institute endow with a healthy atmosphere, infrastructure, resources, that boosts confidence for the enrichment of the capacity and competency amongst students and teachers. All innovative and extension activities being conducted in the Institute are student-centric which nurtures and nourishes young minds.

Administration of the LIT and RTM Nagpur University has created an ecosystem for the undergraduate, post-graduate, and Ph. D. students that helps in the exploration of new ideas and sharing of knowledge with other like-minded people in their own areas of interest. Students with creative ideas approach the teachers for guidance and their work is presented in competitions/seminars/conferences or published in various reputed journals or is patented at national and international levels. Also, faculty members are taking a keen interest in publishing their work in refereed journals, edited/authored books, book chapters, and also in reviewing manuscripts submitted to reputed peer-reviewed journals, Ph. D. Theses, and M. Tech Dissertations. The faculty members also participate in knowledge transfer in the form of talks/lectures at various platforms like workshops and conferences.

The Institute Innovation Cell inculcates a research culture and encourages innovative thinking amongst the students. This platform provides an opportunity to exhibit academic talent and promote interaction with

industry and academia. This leads to the successful completion of innovative research tasks resulting in filing patents and then technology transfer.

The entrepreneurship development workshops, organized by the Institute encompass industry-institute interaction and industrial visits. During the last six years, the Institute prepared and implemented the work plan of promoting Entrepreneurship activities and related workshops that firmly fix entrepreneurial mindset and encourage forging relationships between the industry and the institution in diverse areas. The faculty members regularly interact with the industry to understand functional challenges through applied research or student projects. Few research projects are completed by the faculty members based on case studies from a few industries as consultancy projects. Individual departments interact with the industry to bridge the gap in the curriculum by organizing guest lectures delivered by the industry personnel.

Institute has a reasonably good research infrastructure that has been created, both through extramural sources such as DST, SERB, AICTE, etc., and through intramural funding like funded projects by RTM Nagpur University under University Research Project Scheme and Innovative research activities. Seed funding is provided by RTM Nagpur University to undertake specific research projects. These R&D activities in various departments of the Institute motivate the student and faculty members to explore new ideas in the field of chemical engineering and chemical technology thereby creating a research culture with a well-equipped ecosystem for innovation and knowledge sharing. Other facilities that help to carry out research activities within the campus include

- Wi-Fi and internet facility with adequate licensed software
- Well-equipped laboratories to carry out various projects
- Well-furnished Auditorium and conference rooms

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

3.2.2 Number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship during the last five years

Response: 25

3.2.2.1 Total number of workshops/seminars conducted on Research Methodology, Intellectual Property Rights (IPR) and entrepreneurship year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
13	3	4	3	2

File Description	Document
Report of the event	View Document
List of workshops/seminars during last 5 years	View Document

3.3 Research Publications and Awards

3.3.1 Number of Ph.Ds registered per eligible teacher during the last five years	
Response: 0.68	
3.3.1.1 How many Ph.Ds registered per eligible teacher within last five years	
Response: 13	
3.3.1.2 Number of teachers recognized as guides during the last five years	
Response: 19	
File Description	Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	View Document
Any additional information	View Document
URL to the research page on HEI website	View Document

3.3.2 Number of research papers per teachers in the Journals notified on UGC website during the last five years				
Response: 6.77				
3.3.2.1 Number of research papers in the Journals notified on UGC website during the last five years.				
2020-21	2019-20	2018-19	2017-18	2016-17
65	41	47	50	34
File Description	Document			
List of research papers by title, author, department, name and year of publication	View Document			
Any additional information	View Document			

3.3.3 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years**Response:** 3.63**3.3.3.1 Total number of books and chapters in edited volumes/books published and papers in national/ international conference proceedings year-wise during last five years**

2020-21	2019-20	2018-19	2017-18	2016-17
30	25	20	32	20

File Description	Document
List books and chapters edited volumes/ books published	View Document
Any additional information	View Document

3.4 Extension Activities**3.4.1 Extension activities are carried out in the neighborhood community, sensitizing students to social issues, for their holistic development, and impact thereof during the last five years.****Response:**

The Institute has taken several initiatives with the aim to ensure the holistic development of students and to make them responsible citizens. It always aims to pursue excellence towards creating manpower with a high degree of intellectual, professional competence to meet national and global challenges. This is being achieved by providing knowledge and quality education enveloped with moral values, scientific temper, and means to employ prior state-of-the-art technologies in designing novel and innovative solutions. The major strength of this institute is its ability to maintain a modern outlook with contemporary developments without compromising moral values. With this perspective, various activities have been carried out to help the students explore realistic situations/problems in diverse fields among all the cross-sections of society. These activities include old clothes and food donation to serve the deprived and orphans, awareness on the need of recycling the waste, importance of cleanliness and hygiene with respect to self and environment, Gandhian thoughts-applicability in today's context, student induction programs, street plays on current issues, the importance of mother tongue, etc. to name a few.

To give an extra edge to the higher education system and orient the youth towards community service while studying in an educational institute, National Service Scheme (NSS) has been adopted with an appropriate composition as per the norms. The organizing body comprises President, program officer, advisory committee, and student representatives. The main objective of adopting NSS is to create a sense of social responsibility among the budding engineers as well as to groom their overall personality through community services for the noble cause. The NSS unit of the Institute with a capacity of 150 volunteers is engaged in social work in and around Nagpur city. The NSS volunteers participate in cleanliness drives,

blood donation camps, tree plantation drives, Yoga activities, and various awareness programs in the neighborhood community, which in turn sensitize them to numerous social issues. Besides this, the NSS unit organizes webinars, talks on health-related issues, essays and slogan writing competitions on cleanliness, best out of waste projects (to emphasize the importance of reuse), cultural events, and visits orphanages. “Not me but you”, is the motto of the NSS unit.

These activities have created a great impact on the attitude of students and teachers towards the community in and around the Institute. It has been observed that the students who actively participated in the above-cited activities have developed a sense of responsibility. The students also propagate no tobacco consumption and no intoxication. They maintain personal hygiene and help in keeping the Institute premises clean. Participation in these activities makes them aware of various social/community issues and to find and suggest possible ways and means in order to solve these issues. The students take these activities as a platform to know and understand the real meaning of empathy, to develop compassion towards the needy people, and to enhance their practical knowledge, life skills, and critical thinking, which in turn sensitize them to numerous social issues that help in their holistic development.

File Description	Document
Upload any additional information	View Document

3.4.2 Number of awards and recognitions received for extension activities from government/ government recognised bodies during the last five years

Response: 0

3.4.2.1 Total number of awards and recognition received for extension activities from Government/ Government recognised bodies year-wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

File Description	Document
Number of awards for extension activities in last 5 year	View Document
Any additional information	View Document

3.4.3 Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years

Response: 41

3.4.3.1 Number of extension and outreach Programmes conducted in collaboration with industry,

community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
12	11	4	9	5

File Description	Document
Reports of the event organized	View Document
Number of extension and outreach Programmes conducted with industry, community etc for the last five years	View Document

3.4.4 Average percentage of students participating in extension activities at 3.4.3. above during last five years

Response: 56.75

3.4.4.1 Total number of Students participating in extension activities conducted in collaboration with industry, community and Non- Government Organizations such as Swachh Bharat, AIDs awareness, Gender issue etc. year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
540	330	440	350	440

File Description	Document
Report of the event	View Document
Average percentage of students participating in extension activities with Govt or NGO etc	View Document

3.5 Collaboration

3.5.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship per year

Response: 890

3.5.1.1 Number of Collaborative activities for research, Faculty exchange, Student exchange/ internship year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
186	204	172	168	160

File Description	Document
e-copies of related Document	View Document
Details of Collaborative activities with institutions/industries for research, Faculty exchange, Student exchange/ internship	View Document

3.5.2 Number of functional MoUs with institutions, other universities, industries, corporate houses etc. during the last five years

Response: 17

3.5.2.1 Number of functional MoUs with Institutions of national, international importance, other universities, industries, corporate houses etc. year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
9	8	0	0	0

File Description	Document
e-Copies of the MoUs with institution/ industry/corporate houses	View Document
Details of functional MoUs with institutions of national, international importance, other universities etc during the last five years	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1 The Institution has adequate infrastructure and physical facilities for teaching- learning. viz., classrooms, laboratories, computing equipment etc.

Response:

The infrastructure of the Institute comprises Classrooms, Laboratories, Computing Facilities, Central Library, Workshop, Central Stores, Photocopy and Stationery Store, Hostels, Playground, and Canteen. These physical infrastructure facilities are adequate as per AICTE norms. The buildings of various departments, library, hostels, etc. are well connected with bituminous roads and paver blocks. All buildings of the Institute are equipped with a number of ramps for differently-abled (divyang) students. Adequate comfort facilities such as washrooms, drinking water, boys' common room, girls' common room, and sick room are made available on the campus. Institute has a separate canteen block and covered parking facilities for faculty, staff and students. The details are enlisted herewith:

Classrooms

- Four spacious and very well ventilated classrooms (seating capacity – 90) equipped with LCD Projector, green board, fans, lights, One smart classroom with a large LCD screen, table for teacher, desks-benches for students.
- Four well-ventilated classrooms (seating capacity – 40) equipped with LCD Projector, green board, fans, lights, table for teacher, desks-benches for students.
- Three well-ventilated classrooms (seating capacity – 40) equipped with LCD Projector, green board, fans, lights, table for teacher, desks-benches for students.

Auditorium and Conference Rooms

- Auditorium: One hall having a seating capacity of 200 is well equipped with cassette air conditioners, LCD Projector, audio system, and internet facility.
- Conference Rooms: Two air-conditioned small conference rooms equipped with conference tables and executive chairs with a seating capacity of 20.

Drawing Hall

One big drawing hall with a seating capacity of 60 is equipped with drawing boards mounted on tables, stools/desks, fans, lights, and good ventilation.

Laboratories

Number of Laboratories: 32 (accommodating capacity of 20 - 30 students), equipped with necessary facilities, equipment, and instruments. Adequate safety measures and periodic maintenance of these laboratories are a priority. The central store maintains the dead stock and consumable registers for all the purchases done by the Institute. The departments also keep records of consumables. On submission of indent by the laboratory-in-charge through the head of the department, the chemicals, glassware, and other consumables are issued by the central stores.

Computing Facility

The Institute has computer laboratories that are equipped with the following facilities for students, faculty, and staff.

Desktop PCs for students in Computer Laboratories	160
PCs/Laptop available to Faculty Members	40
Number of PCs available in Language Laboratory	20
Number of PCs available in Library	20
Number of PCs/Laptop available in Administrative Office	8
Number of Printers/Scanners in Departments and Administrative Office	25
Number of Printers available to students	10
Internet Bandwidth in Mbps	100

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

4.1.2 The Institution has adequate facilities for cultural activities, sports, games (indoor, outdoor), gymnasium, yoga centre etc.

Response:

The Institute always promotes co-curricular and extra-curricular activities to encourage physical fitness, inculcate leadership qualities, enhance team-building skills resulting in the overall personality development of the students.

Facilities for Indoor Games

The Institute has facilities for indoor games, viz. Badminton Court, Table Tennis Hall, Carrom Boards, Chess Boards, etc.

Facilities for Outdoor Games

The Institute has made the following outdoor games facilities available for the students. The common sports facilities are provided by the University in its sports complex. As LIT is a conducted college of Rashtrasant Tukadoji Maharaj Nagpur University, students of the Institute are also allowed to use the common sports facilities of the University. The details are as follows:

Sr. No.	Facility	Area in sq. meters	Location
1	LIT Ground	5192.76	LIT Campus
2	Athletic Track - 400 Mtrs	4419.22	RTM Nagpur University Sports Complex
3	Football Ground	8348.03	RTM Nagpur University Sports Complex
4	Basket Ball No. of Courts = 02	2551.12	RTM Nagpur University Sports Complex
5	Gymnasium Hall	829.24	RTM Nagpur University Sports Complex
6	Ground for multipurpose activities	11598.51	RTM Nagpur University Sports Complex
7	Hockey Ground	5027	RTM Nagpur University Sports Complex
8	Kho-Kho Ground	464	RTM Nagpur University Sports Complex
9	Kabaddi Ground	125	RTM Nagpur University Sports Complex
10	Lawn Tennis Court	195.6	RTM Nagpur University Sports Complex
11	Volley Ball No. of Courts = 04	162	RTM Nagpur University Sports Complex

Cultural Activities

The Institute has one fully equipped air-conditioned auditorium with a capacity of 200. Institute also has access to Shree Gurunanak Bhavan (seating capacity - 400) of RTM Nagpur University, which is used to host the functions with larger gatherings. The students organize the Ganesh Festival (5 days), the Annual Social Gathering (4 days), technical events seminars, conferences such as REACT, MERGE, LITMUN, etc. under the guidance of teacher coordinators and senior student coordinators which ensures smooth conduct of these events.

Students are also encouraged, mentored to take part in various inter-collegiate competitions; these efforts resulted in fruitful outcomes in the form of awards and prizes won by the students.

NSS Activities

The National Service Scheme (NSS) unit of the Institute is instrumental in organizing various social activities like tree plantation, blood donation camps, and visits to various historic and heritage places in and around the city.

Institute Magazine

Institute publishes an annual student magazine “Clock Talk”. Institute magazine won the third prize in the year 2018 and first prize in the year 2019 in the magazine competition organized by the RTM Nagpur University every year. The annual magazine is prepared and published by the students' editorial team under the guidance of faculty members.

Canteen

The canteen is housed in an independent hexagonal block which is located in a picturesque location. The canteen provides hygienic food and beverages to the faculty, students, and staff at nominal cost.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

4.1.3 Percentage of classrooms and seminar halls with ICT- enabled facilities such as smart class, LMS, etc. (Data for the latest completed academic year)

Response: 58.33

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 7

File Description	Document
Upload Number of classrooms and seminar halls with ICT enabled facilities (Data Template)	View Document
Upload any additional information	View Document
Paste link for additional information	View Document

4.1.4 Average percentage of expenditure, excluding salary for infrastructure augmentation during last five years(INR in Lakhs)

Response: 42.36

4.1.4.1 Expenditure for infrastructure augmentation, excluding salary year-wise during last five years (INR in lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
46.19	37.97	26.98	45.30	80.96

File Description	Document
Upload Details of budget allocation, excluding salary during the last five years (Data Template)	View Document
Upload audited utilization statements	View Document

4.2 Library as a Learning Resource

4.2.1 Library is automated using Integrated Library Management System (ILMS)

Response:

The Institute has its own central library housed in an independent spacious building located on its campus, which provides easy access to textbooks, reference books, chemical abstracts, national and international journals, and e-journals. It includes:

Text Books and Reference Books	28815
Bound Volumes of Journals	16923
Chemical Abstracts	1500
Journals	31
Magazines	4

Integrated Library Management System software, “LIB-MAN” enabled with internet and barcode scanner is in place. The library database is maintained as per the standard classification system for easy retrieval. The LMS has been recently updated to cloud-based software.

The central library includes a wide range of textbooks and specialized reference books for basic science and basic engineering subjects, all the subjects of chemical engineering, chemical technology. The library has a spacious reading hall for 100 users at a time and a separate reference section. The library is an important hub of student life where they can read books, a study in a calm, quiet, and conducive environment. The students can even flip through popular magazines and daily newspapers. The students can also access e-books, e-journals, etc.

LIT Library is disseminating all kinds of technical information to our students, faculty, and other users. The library is linked with various consortiums for accessing online Journals. LIT Library maintains around collections of 28815 Text Books and References Books, Chemical Abstracts, Bound Volumes of Journals, Chemical Index, Text Books reserved for SC/ST students, etc. The library has a collection of 468 selected dissertations submitted in past, for the reference of the students. All the bonafide faculty members and students of LIT, Nagpur are eligible to use the library. Bonfire research workers of other institutes are also permitted to use the Library on request through proper channels. However, no materials will be issued to any outsiders from the library. Every person who enters the library shall sign on the registers, placed at the entry point.

Library Privileges:

Teachers and Heads of Departments: Maximum 8 and 10 books issued each for 30 days

PG and Ph. D. students: Maximum 4 books issued for 15 days

UG students: Maximum 2 Books issued for 15 days

Library Rules:

- Silence shall be strictly observed in the library
- The mobile phone shall be switched off while entering the library
- No user of the Library shall write by pen or any mark or remark or damage any publication of the library
- The borrower is required to examine the books at the time of receiving them. The last borrower will be held responsible for any damage
- Readers, not following library rules shall be asked to leave the library
- Smoking and spitting are strictly prohibited in the library

LIT being a conducted college of RTM Nagpur University, the students, staff, and the faculty members are allowed to use both the University Libraries freely as and when they want to do so. The IT-based services like OPAC, WebOPAC, Internet, e-Resource, online e-journals, and e-books can also be used freely by the students and the faculty of LIT, which is an added advantage.

File Description	Document
Upload any additional information	View Document
Paste link for Additional Information	View Document

4.2.2 The institution has subscription for the following e-resources

- 1.e-journals
- 2.e-ShodhSindhu
- 3.Shodhganga Membership
- 4.e-books
- 5.Databases
- 6.Remote access to e-resources

Response: A. Any 4 or more of the above

File Description	Document
Upload any additional information	View Document
Details of subscriptions like e-journals, e-ShodhSindhu, Shodhganga Membership , Remote access to library resources, Web interface etc (Data Template)	View Document

4.2.3 Average annual expenditure for purchase of books/e-books and subscription to journals/e-journals during the last five years (INR in Lakhs)

Response: 2.06

4.2.3.1 Annual expenditure of purchase of books/e-books and subscription to journals/e- journals year wise during last five years (INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	3.13	3.06	4.09

File Description	Document
Details of annual expenditure for purchase of books/e-books and journals/e- journals during the last five years (Data Template)	View Document
Audited statements of accounts	View Document

4.2.4 Percentage per day usage of library by teachers and students (foot falls and login data for online access) during the latest completed academic year

Response: 2.55

4.2.4.1 Number of teachers and students using library per day over last one year

Response: 20

File Description	Document
Details of library usage by teachers and students	View Document

4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities including Wi-Fi

Response:**The IT Policy**

Basically, the University IT policy exists to maintain, secure, and ensure the legal and appropriate use of Information Technology infrastructure established by the University on the campus. Information assets addressed by the policy include data, information systems, computers, network devices, intellectual property, as well as documents and verbally communicated information. As a conducted college of RTM Nagpur University, Institute is also governed by the said act and adopts this IT policy.

With the increasing demand for internet access in educational campuses due to evolving standard of education and flexibility offered by the Internet, Institute is keenly stepping forward to set up a secured and stable wired or Wi-Fi network campuses for students. As per the current trend, most of the students like to carry 2-3 devices like mobile, tablets, laptops, iPods, etc. with them to campus. As these devices devour bandwidth, Institute tries to keep up with the bandwidth demand. Institute has major requirements of user access and bandwidth. Hence, Institute has a policy for management and control of faculty's access and student's access. Thus campuses with wired and wireless internet access require a seamlessly roaming facility to access the internet from classroom to library to labs and residential areas. Institute continuously strives to provide state-of-the-art technologies and update its ICT facilities to ensure efficient functioning. IT facilities have been updated on regular basis. Extensive IT infrastructure has been set up during the last five years:

Computer Laboratory- Institute has two well-equipped updated computer laboratories, with a Wi-Fi facility with an internet speed of 100 Mbps and access to Wi-Fi connectivity. Students are allowed to use the computer for internet browsing strictly for academic purposes only. The record of students availing of this facility is maintained.

Language Laboratory- The Institute has a language laboratory with a capacity of 20 students.

Software- The Institute also purchased licensed copies of software like Aspen Plus, MATHCAD, AutoCAD, and MATLAB which are used for computational chemical engineering and modeling & simulation laboratories.

Wi-Fi- Wi-Fi connectivity is provided at various places like the administrative office of the Director, Computer laboratories, library, cabins of faculty members, boys' hostels, etc. The Institute has connectivity with the NMEICT network, a 100 Mbps leased line purchased from BSNL, and also a broadband connection in the main office building.

MIS Software-

The administrative office of the Institute periodically updates the academic data of students (Admission, Examination, Results, Issue of the bonafide certificate, leaving certificate, and fee receipts, etc.), and faculty use this MIS system to record the internal assessment and evaluation data and to monitor the academic performance of students.

Significant investment has been made continuously to upgrade classrooms to e-classrooms/smart classrooms with the addition of new LCD projectors.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

4.3.2 Student - Computer ratio (Data for the latest completed academic year)

Response: 5:1

File Description	Document
Upload any additional information	View Document

4.3.3 Bandwidth of internet connection in the Institution

Response: A. 750 MBPS

File Description	Document
Upload any additional Information	View Document
Details of available bandwidth of internet connection in the Institution	View Document

4.4 Maintenance of Campus Infrastructure

4.4.1 Average percentage of expenditure incurred on maintenance of infrastructure (physical and academic support facilities) excluding salary component during the last five years(INR in Lakhs)

Response: 57.45

4.4.1.1 Expenditure incurred on maintenance of infrastructure (physical facilities and academic support facilities) excluding salary component year-wise during the last five years (INR in lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
40.51	70.33	66.06	70.53	64.36

File Description	Document
Upload any additional information	View Document
Details about assigned budget and expenditure on physical facilities and academic support facilities (Data Templates)	View Document

4.4.2 There are established systems and procedures for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc.

Response:

Infrastructure plays a vital role in assimilating effective and efficient educational programs. Institute is equipped with a complete set of prerequisite infrastructure. The Institute has specific arrangements provided by the RTM Nagpur University to maintain its physical, academic, and support infrastructure.

- The maintenance and upkeep of support facilities and infrastructure created in the Institute is looked after by the University Engineer's Office staff
- The housekeeping work of LIT premises is done by the staff appointed on a contract basis
- The maintenance of the LIT garden is looked after by the garden superintendent and the workers
- The maintenance of equipment is undertaken as per the preventive maintenance schedules
- Surveillance and CCTV cameras and other security equipment are maintained by the equipment providers/vendors
- Firefighting equipment in various blocks, classrooms, laboratories, hostels, offices, etc., are maintained by the suppliers/vendors

Basic amenities

The Institute gets domestic use water supply from a borewell and an open well located in the premises. Institute operates the pump house located at Ambazari lake for domestic use with the help of the workshop staff of LIT. The drinking water is supplied by the Nagpur Municipal Corporation. The Institute has its own substation and staff in order to ensure and maintain the supply of electricity.

Civil & Electrical Maintenance

The University Engineer's office staff carries out the civil and electrical maintenance work.

e-Resources Maintenance

The e-Resources team of the University takes care of the maintenance and repairing of the internet, computers, printers, and all computer peripherals. The annual maintenance contract (AMC) is renewed every year by the Institute for the maintenance of ERP software.

Laboratory Equipment Maintenance

A separate repairing and maintenance fund is made available for the laboratory equipment. Workshop mechanics take care of the maintenance activities within the campus such as furniture repairing, doors, and windows repairing, welding, assembly, and preventive maintenance of the laboratory equipment, etc.

Library

The central library of the Institute is headed by an Assistant Librarian, who is supported by library clerks and library attendants. They take care of all the library resources and library administration.

Hostel maintenance

Institute has two boys' hostels (with a total intake capacity of 180 students) on campus. The girl students of the Institute are accommodated in the University Girls' hostel, located at Gandhi Nagar, which is around 3.5 km from the Institute. The maintenance of the hostels is done under the provisions of the separate budget head provided by the University.

Health Centre

The health center of the University is headed by a medical officer with a pharmacist, a clerk, and other paramedical staff. Free medical treatment and free medicines are provided to students, faculty, and staff of the Institute. Institute has a sick room with the provision of first aid and bed.

Sports

The sports facilities are maintained from the budget provision made by the University.

Photocopy Centre

Photocopying facility and stationery are made available for the students in Institute. This facility is operated by the Consumers Cooperative Society of the University employees.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1 Average percentage of students benefited by scholarships and freeships provided by the Government during last five years

Response: 44.96

5.1.1.1 Number of students benefited by scholarships and free ships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years (other than students receiving scholarships under the government schemes for reserved categories)

2020-21	2019-20	2018-19	2017-18	2016-17
101	462	381	347	367

File Description	Document
upload self attested letter with the list of students sanctioned scholarship	View Document
Upload any additional information Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years (Data Template)	View Document

5.1.2 Average percentage of students benefitted by scholarships, freeships etc. provided by the institution / non- government agencies during the last five years

Response: 0.44

5.1.2.1 Number of students benefited by scholarships and free ships provided by the institution, Government and non-government bodies, industries, individuals, philanthropists during the last five years (other than students receiving scholarships under the government schemes for reserved categories)

2020-21	2019-20	2018-19	2017-18	2016-17
7	8	0	0	1

File Description	Document
Upload any additional information	View Document
Number of students benefited by scholarships and freeships institution / non- government agencies in last 5 years (Date Template)	View Document

5.1.3 Capacity building and skills enhancement initiatives taken by the institution include the following

1. Soft skills
2. Language and communication skills
3. Life skills (Yoga, physical fitness, health and hygiene)
4. ICT/computing skills

Response: A. All of the above

File Description	Document
Details of capability building and skills enhancement initiatives (Data Template)	View Document
Any additional information	View Document
Link to Institutional website	View Document

5.1.4 Average percentage of students benefitted by guidance for competitive examinations and career counselling offered by the Institution during the last five years

Response: 75.14

5.1.4.1 Number of students benefitted by guidance for competitive examinations and career counselling offered by the institution year wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
717	478	487	504	596

File Description	Document
Number of students benefited by guidance for competitive examinations and career counselling during the last five years	View Document
Any additional information	View Document

5.1.5 The Institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases

1. Implementation of guidelines of statutory/regulatory bodies
2. Organisation wide awareness and undertakings on policies with zero tolerance
3. Mechanisms for submission of online/offline students' grievances
4. Timely redressal of the grievances through appropriate committees

Response: A. All of the above

File Description	Document
Upload any additional information	View Document
Minutes of the meetings of student redressal committee, prevention of sexual harassment committee and Anti Ragging committee	View Document
Details of student grievances including sexual harassment and ragging cases	View Document

5.2 Student Progression

5.2.1 Average percentage of placement of outgoing students during the last five years

Response: 42.16

5.2.1.1 Number of outgoing students placed year - wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
78	104	107	84	59

File Description	Document
Self attested list of students placed	View Document
Details of student placement during the last five years (Data Template)	View Document

5.2.2 Average percentage of students progressing to higher education during the last five years

Response: 24.31

5.2.2.1 Number of outgoing student progression to higher education during last five years

Response: 53

File Description	Document
Upload supporting data for student/alumni	View Document
Details of student progression to higher education (Data Template)	View Document

5.2.3 Average percentage of students qualifying in state/national/ international level examinations during the last five years (eg: IIT-JAM/CLAT/ NET/SLET/GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/State government examinations, etc.)

Response: 24.75

5.2.3.1 Number of students qualifying in state/ national/ international level examinations (eg: IIT/JAM/ NET/ SLET/ GATE/ GMAT/CAT/GRE/ TOEFL/ Civil Services/ State government examinations, etc.)) year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
30	11	12	19	20

5.2.3.2 Number of students appearing in state/ national/ international level examinations (eg: JAM/CLAT/NET/ SLET/ GATE/ GMAT/CAT,GRE/ TOFEL/ Civil Services/ State government examinations) year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
80	75	72	70	72

File Description	Document
Upload supporting data for the same	View Document
Number of students qualifying in state/ national/ international level examinations during the last five years (Data Template)	View Document

5.3 Student Participation and Activities

5.3.1 Number of awards/medals won by students for outstanding performance in sports/cultural activities at inter-university/state/national / international level (award for a team event should be counted as one) during the last five years.

Response: 0

5.3.1.1 Number of awards/medals for outstanding performance in sports/cultural activities at university/state/national / international level (award for a team event should be counted as one) year-wise during the last five years.

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

File Description	Document
Number of awards/medals for outstanding performance in sports/cultural activities at university/state/ national/international level during the last five year	View Document
e-copies of award letters and certificates	View Document

5.3.2 Institution facilitates students' representation and engagement in various administrative, co-curricular and extracurricular activities following duly established processes and norms (student council, students representation on various bodies)

Response:

The student is a major stakeholder in institutional growth. Participation of the students in various activities conducted by the Institute is the paramount requirement for the prosperity and well-being of the institute. To achieve overall excellence, Institute organizes various activities under the students' activity center. Students select the event coordinators among themselves and form sub-committees for the smooth conduct of these events.

Student Feedback on Amenities: Students address the problems pertaining to the classroom, infrastructure, library, food, water, hygiene, etc. to redress the students' grievances.

Anti-Ragging Committee: Nomination of students and parents as members of the Anti-Ragging committee promotes an ambiance conducive for the Institute to be a ragging-free campus.

Internal Complaints Committee: Students' representation facilitates the investigation into the information against sexual harassment complaints lodged if any.

REACT: The students of the Institute shoulder the responsibility of organizing the National Conference on Recent Trends in Chemical Engineering and Technology (REACT) every year since 2014. The office bearers are nominated by the faculty coordinators.

MERGE: This is an intercollegiate competition, which includes various competitions like technical

quizzes, poster presentations, model making, and elocution, etc. Students look after the publicity of the event and all other necessary arrangements.

Model United Nations (MUN): Institute organizes MUN, a student simulation event of the proceedings of the United Nations. Students are assigned a country to represent with pre-set topics to debate. They prepare notes on possible solutions to the probable problems faced. Just like the real UN, the goal is to identify solutions, by negotiation and consensus, on which many countries can agree.

Institute Magazine: Institute's magazine "Clock Talk" won **third prize** in the year 2018 in its maiden attempt. The hard work and zeal of students got rewarded with the **first prize** in 2019. The unique feature of the magazine of the year 2020 was the incorporation of a QR code.

Birth Anniversary and Commemoration Day of Rao Bahadur D. Laxminarayan: On 13th January and 30th September, the Institute pays tributes to Rao Bahadur D. Laxminarayan. D. Gangadhar Rao and D. Bahinabai memorial lectures are organized on this day. Distinguished alumni who have achieved top positions in their profession are invited as role models to inspire the students.

Ganesh Festival: Ganesh festival is organized by the students under the guidance of a teacher coordinator. All the activities are managed by students.

Teacher's Day: Institute celebrates Teacher's day every year on 5th September. This program is voluntarily organized by students to express their gratitude and respect.

Annual Social Gathering: It comprises technical quizzes, cultural and sports competitions. Student committees and volunteers shoulder the total responsibility of the successful organization of annual social gatherings.

Institute Innovation Council: This cell invokes the hidden talent of students and encourages them to come up with innovative ideas. Various lectures of successful innovators and entrepreneurs are organized in order to inspire students.

Thus, students being key stakeholders are represented in almost all the committees and associations of the Institute. The Institute got a 3.5 Star Rating from the Ministry of Education.

File Description	Document
Upload any additional information	View Document

5.3.3 Average number of sports and cultural events/competitions in which students of the Institution participated during last five years (organised by the institution/other institutions)

Response: 14.4

5.3.3.1 Number of sports and cultural events/competitions in which students of the Institution participated year-wise during last five years

2020-21	2019-20	2018-19	2017-18	2016-17
9	17	18	15	13

File Description	Document
Upload any additional information	View Document
Number of sports and cultural events/competitions in which students of the Institution participated during last five years (organised by the institution/other institutions (Data Template)	View Document

5.4 Alumni Engagement

5.4.1 There is a registered Alumni Association that contributes significantly to the development of the institution through financial and/or other support services

Response:

LIT Alumni Association **LITAA** (erstwhile LIT Old Students Association - **LITOSA**) is an independent body of the alumni of Laxminarayan Institute of Technology, Nagpur and is duly registered under the provisions of Societies Registration Act, 1860 and Maharashtra Public Trust Act 1950 vide Maha/221/97NAG PTR Registration No. F-14035 (N). The registered office of LITAA is on the LIT campus. LITAA has regional chapters at Delhi, Mumbai, Pune, Bangalore, and also has an NRI chapter, which functions under the parent body for easier integration of geographically dispersed alumni. LITAA has contributed in many ways to the development of the institute. Some of these examples are mentioned below:

Student Mentoring Program on 5th July 2016 with Dr. T. S. Rawal, renowned CA & orator as a resource person

Pandharipande – Taskar Memorial Lecture 2019 on 20th December 2019 by Shri Ballal M Chandrachud (1974 batch Alumni)

The following Guest Lectures were organized:

- **Organic Food and its Regulations**, delivered by Dr. S C Khurana, Scientific Panel Coordinator of Food Safety and Standards Authority of India, New Delhi on 12th July 2019
- **Wastewater Treatment and Reuse** delivered by Dr. Sharad Nimbalkar, Former Vice-Chancellor PDKV Akola on 22nd July 2019
- **Success a Mindset**, delivered by Dr. Shyam Koreti on 23rd September 2019

LITAA is in constant engagement with the alma mater and contributes to LIT's activities and events with financial support and other resources. From 2016-2020, many developmental projects were implemented:

- Borewell and piping project has resolved water scarcity problem
- Canteen renovation and refurbishment
- Tree Plantation, done during monsoon every year
- LITAA Samvaad, a quarterly magazine
- Air-conditioning, audio system, LCD projector, and furniture for LIT auditorium
- Jewels of LIT awards functions organized annually
- Financial support for various events organized by the students
- Financial support to poor students
- Rainwater Harvesting and Borewell Recharge Project

Donation of Pilot Plants for Students:

- Mr. D.S. Umalkar, B. Tech. (1974 batch alumnus) has donated Process Pilot Plant that includes Reactors, Distillation Columns, Absorption processes, etc. and the same has been installed at LIT campus
- Mr. Ramesh Tarale, B.Sc. Tech. (1978 batch alumnus) has donated Pilot Plant of Soap Manufacturing and the same has been installed at LIT campus

Walk-through of LIT Campus:

During a visit as an invited speaker at LIT on 13th January 2020, Dr. J P Gupta expressed that he would like to extend his support to remodel the entire infrastructure and landscape through government or CSR grants and asked LITAA to prepare a walk-through model of the proposed campus. The same has been fully developed into a 3-D software application which details all aspects of the proposed beautification of the LIT campus and the establishment of a Centre of Excellence.

Incubation Centre:

A well-equipped incubation center for students of LIT is being developed. The foundation stone of the center has been laid by the Hon. Vice-Chancellor RTM Nagpur University on 22nd August 2021. An information 3 – D walkthrough has been prepared to give an idea about the proposed incubation center.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

5.4.2 Alumni contribution during the last five years (INR in lakhs)

Response: A. ? 5 Lakhs

File Description	Document
Upload any additional information	View Document

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1 The governance of the institution is reflective of and in tune with the vision and mission of the institution

Response:

Rao Bahadur D. Laxminarayan, the owner of manganese mines in central India, donated all his wealth to establish this Institute. His statement on the need for technical education:

“Expert knowledge is practically non-existent in the country and until this defect is remedied, no great improvement of the industrial situation will be possible.” **(His Vision)**

“Every province ought, in my opinion, to have a Technical College for the training of industrial experts, and the supervisors and foremen. The course of study should include all industrial subjects suited to the Province including agriculture, electrical and mechanical engineering.” **(His Mission)**

In line with his thoughts, the Institute defined its vision and mission.

The Vision

“To provide integrated education of the highest quality at all levels in the field of Chemical Engineering and Chemical Technology and to become a leading Centre of Excellence in the country.”

The Mission

“The Institute is committed to provide quality education, to conduct research and development activities to meet the needs of the chemical process industry.”

In order to ensure this, the Institute always strives to proffer accessible, acceptable, and adaptable quality education to all. Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur Ordinance No. 10 of 1996 (*) constitutes “Board of Governors” (BoG). (<https://www.litnagpur.in/bog.lit>) This is the committee for the governance and management of the Institute.

BoG plays a key role in the fulfillment of the vision and mission of the Institute and helps for smooth conduct of various activities at the Institute through regular meetings chaired by the Hon. Vice-Chancellor, RTM Nagpur University who is the ex-officio chairman of BoG. The Director of the Institute is an ex-officio member secretary. Minutes of the meeting are prepared by Director, approved by the chairman, and are sent via e-mail to the members of the BoG. The members communicate the discrepancies, if any, to the member secretary. The minutes are placed for confirmation in the next meeting of BoG. After confirmation, these minutes are sent to the Registrar of the University, who places the same before the management council of the University for necessary action and final approval.

The BoG is responsible to plan the development of the Institute, both physical and academic, under the control of the Management Council. The main functions, powers, and duties of the BoG are:

- To prepare and recommend the budget for the Institute to the Finance and Accounts Committee
- To review the progress of the Institute regularly as stated in vision and mission
- To advise the Director about the internal management and discipline

As per the directions of the Director, the faculty members enthusiastically shoulder the responsibility of various curricular, co-curricular, and extra-curricular committees, constituted for the day-to-day functioning of the Institute. The head of the department holds the responsibility of maintaining, updating, and procuring the laboratory equipment as per the regulations stated in “The Maharashtra Universities Accounts Code”. The Institute has designed an online feedback system and is incorporated in MIS for upgrading the system from time to time.

File Description	Document
Upload any additional information	View Document

6.1.2 The effective leadership is visible in various institutional practices such as decentralization and participative management

Response:

As LIT is a conducted college of RTM Nagpur University, the overall governance is under the authority of the University comprising the Senate, Academic Council, the Management Council, the Board of Deans, the Boards of Studies, etc. These bodies have representation of members from various sections of the society such as academic, non-academic, industry, profession, etc., ensuring the participation of various stakeholders from the society. It helps in framing various policies for quality improvement, financial resource mobilization, promotion of research and innovation, development and maintenance of the physical infrastructure. Various authorities/bodies are set up under the provisions of the Maharashtra Public Universities Act, 2016.

The institute follows a democratic and participatory mode of governance. The Director works under the directions of the BoG and is reporting to the BoG. All the departments are headed by HOD nominated by the Director. The Director shares the guidelines/directions of the BoG with heads and the faculty members in the faculty meetings. The Director periodically takes a review of the various tasks allotted to the faculty members and seeks suggestions from them for the better implementation of the academic schedule and the delivery of the curriculum. The faculty members are asked to share and discuss the difficulties faced by them in the conduct of academic and co-curricular activities. Efforts are made to resolve these difficulties at the Institute level and if necessary the matter is placed before the BoG by the representatives of the faculty members. This ensures participative management of the Institute affairs.

There is a systematic delegation of powers to all the heads for allotment of academic workload, decisions regarding the procurement of equipment as per allocated budget, the recommendation for sanction of leave to the teachers and non-teaching staff of the department. The Heads of departments follows the participative management process in the following manner:

- Oversee the teaching plans and strategy of teaching
- Take the lead in planning seminars, workshops, career counseling sessions, add-on courses,

departmental activities, etc.

- Introduce creative and innovative measures for the benefit of the students
- Conduct departmental meetings periodically to finalize the requirements of the departments such as equipment, consumables, textbooks, etc.

The University approves the budget allocation to the Institute under various heads for the financial year. The Director allocates the budget to all the departments within the provision listed in the budget copy.

Director has powers to constitute committees for specific purposes. The Institute's decentralized management system ensures that certain tasks are accomplished independently by faculty-in-charges nominated by the Director from time to time. Faculty members also participate in the academic administration where decisions are evolved after extensive consultation with peers, heads, and the Director. Multiple level discussions culminate in a final decision by consent and approval of the concerned body. Apart from these, the Institute has various student welfare committees which work independently. Thus, the Institution's decentralization decision-making process provides participative and transparent operational autonomy to the stakeholders.

File Description	Document
Upload any additional information	View Document

6.2 Strategy Development and Deployment

6.2.1 The institutional Strategic / Perspective plan is effectively deployed

Response:

Perspective Plan:

It involves setting goals, determining actions to achieve the goals, and mobilizing resources to execute the actions. The important components of the perspective plan are:

- To foster alumni supported incubation center
- To establish the center of excellence in collaboration with industry
- To obtain the autonomy for the Institute

Action Plans:

- SWOC analysis involving all the stakeholders
- Identification and prioritizing the issues to be addressed
- Delineation of strategies, allocation of budget and time, proper utilization of human resources and fund to achieve the objectives
- Periodic review of the implementation process

LIT being one of the leading technological institutions located in central India, provides a stimulating work environment for its faculty, students, and staff, where teaching, research, talent, and hard work are

recognized and rewarded. Institute takes care of sustainability, usage of energy, green campus initiatives, and the involvement of alumni in the Institute's development. The Institute strives for improving the quality of research and increasing consultancy activities. The faculty members are encouraged to apply for fetching grants/funds for research projects from various funding agencies. The Institute has entered into collaborations and MoUs with a few Institutions/Organizations to conduct research in areas of common interest resulting in joint publications in high impact factor refereed journals and getting sponsored consultancy projects. Online feedback system helps in finding ways for the desired improvement which in turn helps in the overall progress of the Institute.

Alumni-funded proposed incubation center is designed to nurture and grow new and small projects at the early stages of development. It will offer access to the resources needed, all under one roof for start-ups and new ventures. It will provide access to expert advisors, mentors, administrative support, laboratory equipment, funding, and training to the budding entrepreneurs. The Institute aims to make the individuals aware of the process involved in setting up a business starting from a feasible concept/idea.

The Institute has plans to set up a center of excellence in collaboration with industry. It has already started working on this and Gexcon Norway has in principle agreed to collaborate and sign an MOU with the Institute to establish a center of excellence in process safety. This center will promote academics, skill-oriented programs relevant to the socio-economic needs of the nation in general, and the region in particular.

To continue this trend progressively, the Institute has a plan to apply for autonomy. With the expansion, diversity, and complexity of technical education across the nation, academic autonomy is desired. Autonomy will equip the Institute with the dynamism and freedom that an Institute needs to bring about the change in the course structure and curriculum to fit the demands of the market for highly skilled manpower. With the consent of University authorities, the Institute is following up with the Government of Maharashtra for the grant of administrative and financial autonomy. It will be followed by the grant of academic autonomy by the University with the approval of the University Grants Commission (UGC).

File Description	Document
Upload any additional information	View Document

6.2.2 The functioning of the institutional bodies is effective and efficient as visible from policies, administrative setup, appointment, service rules and procedures, etc.

Response:

LIT is a conducted college of Rashtrasant Tukadoji Maharaj Nagpur University which is a public university, governed by rules and procedures laid down in The Maharashtra Public Universities Act, 2016. Additionally, various Statutes and Ordinances of the University have well-defined provisions to provide a policy framework and direction for proper functioning and fulfillment of its objectives. The academic and general administration of the University is governed by various authorities/bodies and statutory offices formed under the Act.

Institutional Authorities/Bodies: Chapter IV, Section 26 of MPU Act 2016 prescribes the following

authorities/bodies for academic and general administration policymaking:

1. Senate
2. Management Council
3. Academic Council
4. Faculty
5. Board of Deans
6. Board of Sub-campuses of the university
7. Board of Studies
8. Board of University Departments and Interdisciplinary studies
9. Board of Post-Graduate Education in Colleges
10. Board of lifelong learning and extension
11. Board of Examinations and Evaluation
12. Board of Information Technology
13. Board of National and International Linkages
14. Board for Innovation, Incubation, and Enterprise
15. Board of Students' Development
16. Board of Sports and Physical Education and
17. Board of Research.

These bodies function to enhance the quality of education and safeguard the interests of stakeholders. University has well-structured systems for the professional development of staff in terms of various incentives.

INSTITUTIONAL SETUP

Powers, responsibilities, and the duties of the Director

As per the provisions under section 14 to 21 of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur Ordinance No. 10 of 1996 (*)

- The Director of the Institute shall be the Executive and Academic Head of the Institute and shall perform all such duties under the Act or by the Vice-Chancellor and Management Council.
- Subject to the control of the LIT Committee, the Director shall be responsible for admission, accounts, administrations, and effective management of the Institute.
- The Director shall be responsible for the proper administration of the affairs of the Institute under the direction and guidance of the Vice-Chancellor, Management Council, and the LIT Committee.
- The Director as the Member Secretary of the LIT Committee shall maintain a record of the proceedings of the LIT Committee and of the other sub-committees appointed by the LIT Committee.
- The Director shall maintain a record of the expenditure incurred on contingencies, purchase of stores, and other matters.
- Director shall have powers to write off scheduled losses due to irrecoverable stores, unserviceable equipment, etc. subject to the approval of the LIT Committee.
- Director shall organize short-term courses, certificate courses and utilize the money earned for the development of the Institute under the guidance and directions from the LIT Committee and the Management Council, from time to time.
- Director shall permit the teachers of the LIT to undertake work for a Private Body such as

consultancy, analysis work, etc. with the approval of the LIT Committee.

Faculty members strive for the development of the overall personality of students by involving them in organizing various curricular, co-curricular, and extra-curricular events. The responsibilities assigned to them inculcate a sense of responsibility in them and help develop leadership qualities and induce the spirit of teamwork.

File Description	Document
Upload any additional information	View Document
Link to Organogram of the Institution webpage	View Document

6.2.3 Implementation of e-governance in areas of operation

1. Administration
2. Finance and Accounts
3. Student Admission and Support
4. Examination

Response: A. All of the above

File Description	Document
Screen shots of user interfaces	View Document
Details of implementation of e-governance in areas of operation, Administration etc	View Document

6.3 Faculty Empowerment Strategies

6.3.1 The institution has effective welfare measures for teaching and non-teaching staff

Response:

The Institute recognizes all its employees as the most valuable resource and provides a caring and supportive working environment to all the teaching faculty members and non-teaching staff which enables them to develop and optimize their full potential. In connection with this, existing welfare measures for teaching and non-teaching staff are stated below:

1. Personal and Professional Development

- The Institute motivates the faculty to arrange industrial training programs/visits
- The Institute creates supporting infrastructure to execute research and the sponsored projects
- The Institute helps to improve teaching skills and encourages the teachers to adopt the use of modern teaching-learning aids, application of ICT resources, etc.
- Internet and Wi-Fi facilities are also available on campus

- Faculty members are provided with individual cabins and systems to facilitate good ambiance
- The Institute encourages faculty to be the member of local, national, international, professional bodies and societies
- The Institute organizes and motivates the non-teaching staff to attend skill development and training programs
- The Institute supports the faculty members with the provision of good infrastructure and a conducive work ecosystem
- Every year University gives Best Teacher, Best Scientist, and Best non-teaching Staff Award conferred on the University Foundation Day (4th August)

2. Financial support

- A research fund as seed money up to an amount of Rs. 3 lakhs per faculty is granted as per the policy of the University in order to motivate research, interdisciplinary collaboration within the University and also at the national level
 - Financial assistance for attending Conferences and Workshops
 - Financial assistance to meet emergency medical expenses of teaching and non-teaching staff and their family members
 - Medical facilities include free consultation and medicines
 - Short term advances (like grain advance, festival advance) to non-teaching staff
 - Withdrawal from a provident fund to meet emergency expenses

3. Health

University health center is available for LIT faculty, staff, and students in case of emergency and regular treatment as well

4. Cooperative Society

The cooperative society run by the RTM Nagpur University employees implement loan and deposit schemes for the financial benefit of the faculty and staff

5. Leave

For Teaching Faculty:

- Headquarter leave and vacation as per academic calendar
- Casual and sick leave as per the policy of the Government of Maharashtra
- Maternity leave of six months for female employees
- Paternity leave for male employees
- Child care leave to female employees
- Duty leave for attending conferences, invited talks, chairing the sessions, symposia, and seminars, delivering lectures in other Institutes
- Study leave for teachers
- Special leave for exigencies that may arise

For Non-Teaching Staff:

- Casual and sick leave as per the policy of the Government of Maharashtra
- Maternity leave of six months for female employees
- Paternity leave for male employees
- Child care leave to female employees
- Special leave for exigencies that may arise

6. Residential facility

Residential quarters are provided to teaching and non-teaching staff as per need and availability on a first come first serve basis

File Description	Document
Upload any additional information	View Document

6.3.2 Average percentage of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the last five years

Response: 4.71

6.3.2.1 Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	8

File Description	Document
Upload any additional information	View Document
Details of teachers provided with financial support to attend conference, workshops etc during the last five years	View Document

6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Response: 1

6.3.3.1 Total number of professional development /administrative training Programmes organized by the institution for teaching and non teaching staff year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
5	0	0	0	0

File Description	Document
Upload any additional information	View Document
Details of professional development / administrative training Programmes organized by the University for teaching and non teaching staff	View Document

6.3.4 Average percentage of teachers undergoing online/ face-to-face Faculty Development Programmes (FDP)during the last five years (Professional Development Programmes, Orientation / Induction Programmes, Refresher Course, Short Term Course).

Response: 49.07

6.3.4.1 Total number of teachers attending professional development Programmes viz., Orientation / Induction Programme, Refresher Course, Short Term Course year-wise during the last five years

2020-21	2019-20	2018-19	2017-18	2016-17
41	13	16	8	10

File Description	Document
Upload any additional information	View Document
Details of teachers attending professional development programmes during the last five years	View Document

6.3.5 Institutions Performance Appraisal System for teaching and non-teaching staff

Response:

LIT is a conducted college of Rashtrasant Tukadoji Maharaj Nagpur University and hence it follows the UGC regulations on minimum qualifications for appointment of teachers and other academic staff in universities and colleges and measures for the maintenance of standards in higher education, 2018 together with all amendments made therein from time to time, for its teaching and other academic staff.

A performance-based appraisal system (PBAS) is followed in its letter and spirit. It is based on the annual performance of the teachers in respect of their academic achievements, research publications, research projects and other curricular activities. PBAS report is filled by teaching faculty in a prescribed proforma,

which has three sections:

- Teaching, Learning, and Evaluation related activities
- Co-Curricular, Extension and Professional Development related activities
- Research Publications and Academic Contributions

The institute undertakes a wide range of activities besides academics, for which faculty members are assigned additional duties and responsibilities, which are mostly voluntary. The Institute accords appropriate weightage for these contributions in their overall assessment. The scores of PBAS are used for the award of career advancements to faculty members and for promotion to the next higher position.

Based on the self-appraisal report submitted by the faculty members, the Director submits the confidential report to Hon. Vice-Chancellor for his review and necessary action. Similarly, based on the self-appraisal report submitted by the non-teaching staff, the Director submits the confidential report to the Registrar for his review and necessary action. Final grades as per the guidelines specified in the proforma are recorded. The annual assessment based on the performance appraisal system also helps in analyzing the strengths and weaknesses of the employees.

The various parameters for staff members are assessed under different categories i.e. Character and Habits, Departmental Abilities, Capacity to do hard work, Discipline, Reliability, Relations/Cooperation with superiors, subordinates, colleagues, students, and public, efficient organization and technical abilities. The systems aim not only to objectively evaluate the performance as per established norms but also to identify the actionable points for improvement that can eventually lead to the professional growth of the employee.

Evaluation is an integral part of every education. Although there are various methods of teachers' evaluation, student feedback is considered the most effective and reliable method. At the end of every semester, online feedback in the form of questionnaires is filled by the students for each of the courses attended by them. This helps in assessing the teachers and different aspects pertaining to the teaching-learning process. The head of the department and the Director go through the feedback forms and suggest suitable measures to improve the teaching-learning process. In case, if laxity or lacunae is observed, the teacher in question is counseled by the Director and asked to improve his/her performance in the interest of their professional up-gradation and better curriculum delivery. Besides this, the Institute collects online feedback submission from outgoing students which is evaluated and corrective measures are taken accordingly based on these elaborative surveys.

File Description	Document
Upload any additional information	View Document
Paste link for additional information	View Document

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

Institute has a well-established mechanism for internal and external audits. The University has a full-time Finance and Accounts Officer, Accounts Officer, Deputy Registrar, Assistant Registrar assisted by several senior and junior assistants, along with a dedicated audit section to verify and certify the entire income and expenditure and the capital expenditure of the Institute, every year. The Finance and Accounts Department reviews each element of the University's accounting system in accordance with internal control policies defined in the Maharashtra Universities Accounts Code.

Periodic internal and external financial audits are carried out for better financial management and control. The University has its own internal audit mechanism where internal audit is an ongoing process. Qualified internal auditors have been appointed and a team of staff under them conducts a thorough check and verification of all vouchers of transactions that are carried out in each financial year. Likewise, an external audit is also carried out by the team of auditors led by a chartered accountant appointed by the management council of the University. Any errors and omissions pointed out by the audit team, are immediately rectified and precautionary measures are taken to avoid recurrence of such errors in the future. The following agencies conduct a regular financial audit at RTM Nagpur University:

Internal Audit

1. Work of internal audit of the University has been entrusted to the internal audit section of the University. The audit section of the University headed by Deputy Registrar-Finance performs the task of pre-audit. He also pre-checks salary fixations, pension, and gratuity payments and final payments of general provident fund (GPF).

2. The office of the Accountant General (AG), conducts statutory audits covering all financial and accounting activities of the University. This includes scrutiny of the following:

- (a) All receipts from fees, donations, grants, contributions, interest earned, and returns on investments
- (b) All payments to staff, vendors, contractors, students, and other service providers

External Audit

The external audit is conducted by the following:

- (a) CAG through Accountant General (AG)
- (b) Chartered Accountant (CA) appointed by the University

All observations/objections of AG are communicated through their audit reports. These objections are examined by separate committees of the University, duly constituted by Hon. Vice-Chancellor, for finalizing the compliance report of the University. AG's audits for the previous years have been completed and replies are submitted to their satisfaction. It has been noted that no serious objection/irregularity is outstanding.

Thematic audits by AG, Nagpur, for the years 2012 to 2017 have been completed and no Draft Para has ever been issued against the Institute by AG, to this date.

Chartered Accountant of the University conducts regular 'accounts audit' and certifies its annual financial

statements and concurrent/post-audit of all receipts and payments. All utilization certificates to various funding agencies are also verified and countersigned by the CA. All these mechanisms exhibit the transparency being maintained in financial matters and adherence to financial discipline to avoid defalcation of funds or properties of the institution at all levels.

File Description	Document
Upload any additional information	View Document

6.4.2 Funds / Grants received from non-government bodies, individuals, philanthropers during the last five years (not covered in Criterion III)

Response: 0

6.4.2.1 Total Grants received from non-government bodies, individuals, Philanthropers year wise during the last five years (INR in Lakhs)

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

File Description	Document
Details of Funds / Grants received from of the non-government bodies, individuals, Philanthropers during the last five years	View Document
Any additional information	View Document

6.4.3 Institutional strategies for mobilisation of funds and the optimal utilisation of resources

Response:

Major sources of funds include:

- Research Project grants (through various funding agencies)
- Participation fee in various conferences, seminars organized by the Institute
- Sponsorships for various events, conferences, seminars, etc
- Lab Testing Facilities; Alumni Contribution; Training & Consultancy
- Income by way of interest on deposits

A statutory committee, 'Finance and Accounts Committee', established under the Maharashtra Public Universities Acts, 2016, is entrusted with the task of ensuring prudential utilization of funds of the Institute. It examines the accounts, the progress of expenditure, and all new proposals involving fresh

expenditure in the light of the provisions available.

All academic departments and administrative sections propose their annual financial plans. The Director makes a presentation of the proposed budget before the BoG. The proposed budget on approval of the BoG is then presented by the Director before the Finance and Accounts Committee (FAC) chaired by Hon. Vice-Chancellor. The proposed budget of the Institute is examined and approved by the FAC and the administrative and financial approvals are granted by the Senate of the University.

Strategies employed for resource mobilization

- Institute welcomes donations, memorial prizes, and endowments from the donors and alumni
- Institute engages with its alumni and other stakeholders in exploring revenue-generation avenues
- All the grants received from the funding agencies and the government are utilized for the purpose for which the funds are granted

Mobilization and Utilization of Space and Time

- To provide the better infrastructure that includes common rooms to students and staff rooms are mobilized as and when required to provide better ambiance
- The institute infrastructure and spaces are utilized fully and optimally. A part of the land in the main building has been transformed into a beautiful garden.
- The existing old canteen has been renovated and transformed into a modern amenity with the donations from LIT Alumni Association (LITAA)
- The Computer laboratory accommodates various courses and is also utilized to conduct the centralized admission process (CAP) implemented and regulated by the admission regulating authority of the Government of Maharashtra
- Institute auditorium is used for multiple purposes such as organization of guest lectures, lecture series, cultural and social events of the Institute, pre-placement talks given by the companies visiting for the recruitment of students
- Mobilization of Intellectual and other Abstract Resources
- The institution mobilizes its human resources for the academic and co-curricular activities of the students that are organized regularly
- These abstract resources of intellectual and moral probity, along with a social conscience and cultural inclinations are prioritized and cultivated by the Institute in the form of collaborations, patents, and consultancy.

File Description	Document
Upload any additional information	View Document

6.5 Internal Quality Assurance System

6.5.1 Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes

Response:

Institute attempts to chisel out the total quality person through a persistent focus on imparting quality education, through its innovative, comprehensive, and flexible education policy. Its Internal Quality Assurance Cell (IQAC) carries out activities that encompass all aspects of the Institute's functioning. IQAC significantly contributes to developing a system for conscious, consistent, and catalytic improvement in the overall performance of the Institute. The objectives of IQAC are:

- To ensure continuous improvement in the entire operations of the Institute.
- To ensure that all the stakeholders namely the students, parents, teachers, staff, employers, funding agencies, and alumni are well connected with the Institute.
- To promote measures for the proper functioning of the Institute for academic quality enhancement and institutionalization of best practices.
- To ensure the quality of the teaching-learning process, infrastructure, and related facilities.

The two examples of practices institutionalized as a result of IQAC initiatives are as follows:

- Add on courses for making the students upgraded with all fields:

In this era of tremendous competition in the technical education sector, interdisciplinary knowledge is an essential requirement in order to boost career opportunities for students. The Institute has recently designed and started new Add-on courses in all branches of B. Tech courses with the objective of imparting additional knowledge through well-conceived syllabi for these Add-on courses. This provides the opportunities to the students to study the subjects particularly from other branches of engineering and technology in addition to his/her own branch of study. These Add-on courses are not made mandatory to the students; however, they can opt for these courses voluntarily. They will receive certificates on successful completion of these courses. The allotment of the Add-on courses is done on a merit basis based on his/her CGPA score up to the previous semester. A considerable response from the students can be seen. It helps in boosting the relevance of students credentials to the job market

- Training Programmes for enhancing the soft skills in non-teaching staff:

The needs, expectations, and requirements for better computer/soft skills became an essential part of the duties of office staff during the pandemic situation. The Institute organized a workshop on, "SMART OFFICE: POST PANDEMIC SCENARIO". The workshop was intended towards the basic orientation of the office staff, related to computer accessories and their use, Microsoft office, working in a social distancing scenario with online meeting coordination and use of online meeting tools such as google meet. The workshop was beneficial in enhancing their skills in the workplace. It was free training offered at the computer center of the Institute. Looking at the outcome of this workshop, the Institute has decided to organize such training programs in order to constantly improve the skills and competencies of staff which will help them for their personal and professional growth.

IQAC consistently strives to upgrade quality assurance strategies and processes at every level of the functioning of the Institute.

File Description	Document
Upload any additional information	View Document

6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms and recorded the incremental improvement in various activities (For first cycle - Incremental improvements made for the preceding five years with regard to quality For second and subsequent cycles - Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives)

Response:

In pursuance of the National Action Plan of NAAC, Bangalore, for performance evaluation, assessment and accreditation, and quality up-gradation of institutions of higher education, IQAC has been established in the Institute. IQAC is always active for incremental improvement in various activities. IQAC has successfully implemented the two significant activities in the teaching-learning process, structures & methodologies which are listed here:

- Channelizing the COs as per Bloom's Taxonomy for attaining POs and PSOs:

It has been observed that the internal assessment system of conducting only one sessional examination for the award of internal marks falls short when anyone wanted to assess students' knowledge at the higher levels of response and evaluation of the attainment of course outcome. Bloom's Taxonomy and the hierarchy associated with its focus on allowing learners to understand how they have developed. Keeping this in mind, a new system of assessment of internal marks was introduced in January 2019. Students are now evaluated on the basis of two class tests, five assignments, and one sessional examination. The system has been developed for the continuous assessment of practical as well as for seminars and projects. Students are expected to use concepts or tools they have learned in increasingly complex ways through the different levels of cognitive development. When students apply an abstract idea to a concrete situation to solve a problem or relate it to prior experience, they are showing their level of proficiency at a higher level of learning. Thus, Teaching Staff provide opportunities for the student to use ideas, theories, and/or problem-solving techniques independently and come up with some new creative ideas

- Organizing training for the use of open-source learning platform- Moodle:

The COVID-19 has resulted in drastic changes in education systems after lockdown and posed new challenges to the teachers and students. Online education whereby teaching is undertaken remotely and on digital platforms became the order of the day. The major challenge was choosing the right platform and training the teachers for its effective use. To address these issues, IQAC organized a workshop for the teachers as well as for the students to make them understand the working and usage of the Moodle platform. It enabled the teachers to reach out to each and every student more efficiently and effectively through chat groups, video meetings, feedback sharing, the conduct of test examinations, submission of assignments and their evaluation, etc.

Organizing measurable student outcomes in this way allowed the institute to select appropriate classroom assessment techniques for the course. Using this model for curriculum delivery, methods of instruction, and assessment techniques, the Institute could properly align the teaching-learning process with course outcome.

The IQAC has regularly convened faculty meetings since its formation. SWOC analysis is conducted by

sending feedback forms via emails to all the stakeholders and analyzing the data so obtained. Appropriate measures have been initiated to improve upon the weak areas. This exercise helped in the development of quality benchmarks for the various academic and administrative activities of the Institute.

File Description	Document
Upload any additional information	View Document

6.5.3 Quality assurance initiatives of the institution include:

- 1.Regular meeting of Internal Quality Assurance Cell (IQAC); Feedback collected, analysed and used for improvements
- 2.Collaborative quality initiatives with other institution(s)
- 3.Participation in NIRF
- 4.any other quality audit recognized by state, national or international agencies (ISO Certification, NBA)

Response: B. 3 of the above

File Description	Document
Upload e-copies of the accreditations and certifications	View Document
Upload details of Quality assurance initiatives of the institution	View Document
Paste web link of Annual reports of Institution	View Document

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Measures initiated by the Institution for the promotion of gender equity during the last five years.

Response:

This Institute is a co-education institution, always striving to uphold the principle of gender equity. There is no gender discrimination in any of its policies framed for all the stakeholders. Equal opportunities are provided to all individuals irrespective of gender, race, religion, caste, color, creed, language, religion, political or another opinion, national or social origin, property, birth, or another status. Safety, security, and well-being, along with gender equity and a friendly working atmosphere are the issues of prime concern to the Institute. The Institute has students as well as faculties with diverse cultural backgrounds, as they come from different parts of India. Some of the concrete steps ascertained to ensure gender equity includes:

Equal Opportunity: University has an equal opportunity cell, which addresses the issues related to gender discrimination, may be amongst students, teaching, and non-teaching staff. However, no such issues arose to this date. At the Institute level, boys and girls are given equal opportunity in organizing co-curricular and extra-curricular activities, departmental student forums, research projects, in classrooms, and in laboratory sessions. Male and female faculty members are recruited without being prejudiced and responsibilities are given to them without any kind of gender discrimination. Sports activities at Institute and University level are also an arena, which promotes gender equity by ensuring equal representation of both genders. Equal opportunity to both genders is given in the conduct of NSS activities such as blood donation camps, tree plantation drives, visits to heritage places and slum areas to look at their standard of living and in figuring out the solutions in the best possible way.

Common Rooms: The Institute has common rooms for both girls and boys, equipped with proper sitting arrangement, first-aid provision, indoor games, etc.

Safety and Security: Institute shows gender sensitivity through various initiatives and actions for creating a safe, secure, and healthy atmosphere on the campus. Institute has a 24x7 security system, that includes security guards and CCTV surveillance with high-resolution cameras, with the facility of distributed recording in the control room. It also helps in tracing out the unwanted elements entering the campus. Such surveillance ensures freedom to students and staff as they have assured security during their stay on the campus.

Counseling: Mentor-Mentee groups interact regularly; teachers play the role of counselor and help the students in solving their academic as well as personal problems brought to the notice of the mentor.

The Outcome of Gender Equity: The outcome of gender equity is fairly reflected in the placements, as both the genders were exposed to organize various activities, which constructively manifested the outcome in boosting leadership qualities, team spirit, decision making, etc. that results in the development of their overall personality and in turn helped them in handling any sort of such issues they may face in future.

It is noteworthy to mention that, due to these initiatives and measures taken by the Institute and University administration, cases of gender discrimination, etc. are never noticed within the Institute's campus.

File Description	Document
Link for specific facilities provided for women in terms of: a. Safety and security b. Counselling c. Common Rooms d. Day care center for young children e. Any other relevant information	View Document
Link for annual gender sensitization action plan	View Document

7.1.2 The Institution has facilities for alternate sources of energy and energy conservation measures

- 1.Solar energy
- 2.Biogas plant
- 3.Wheeling to the Grid
- 4.Sensor-based energy conservation
- 5.Use of LED bulbs/ power efficient equipment

Response: C. 2 of the above

File Description	Document
Geotagged Photographs	View Document
Any other relevant information	View Document

7.1.3 Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 500 words)

- Solid waste management
- Liquid waste management
- Biomedical waste management
- E-waste management
- Waste recycling system
- Hazardous chemicals and radioactive waste management

Response:

Institute is conscious of waste management. The emphasis is on the minimum generation of all kinds of waste and maintaining an eco-friendly environment on campus. It strictly adheres to waste management methods promoted by Nagpur Municipal Corporation (NMC) and other regulatory bodies and has established mechanisms for the collection of solid, liquid, and electronic waste as well as for disposal of such waste as per prevailing regulations.

Solid Waste Management

- The Institute adopted a mechanism of collecting solid waste and disposing of it on a regular basis.

- Activities like “*Best out of waste*” bring awareness amongst the students towards sustainable development.
- The plant's leaves are collected in a tank and converted to compost.
- Microbial digestion of vegetable waste from Hostel Mess into Organic Manure.
- The microbial digestion assembly for turning food waste from hostel mess to organic compost has been successfully implemented at LIT premises (capacity 150 Kg/month).
- On spot weed control through ‘Weed-O-Friend’ strategy and its conversion into Organic Manure. The route of controlling weeds, generating compost thereby improving soil fertility is quite promising and it’s a win-win situation and is in progress.
- The other scrap material is sold to scrap vendors from time to time at pre-decided rates as per the annual rate contract.
- Old answer papers and sessional answer books are periodically disposed of with the help of a paper shredding machine, available at the examination and evaluation section of the University. The shredded paper is then sold to the vendors.

Liquid Waste and Hazardous Chemical Management

Disposal of Chemicals: Most of the laboratories, utilizing chemicals try to minimize their use by using the chemicals judiciously and the students are allowed to perform some of the experiments in a group.

Following measures are taken for effective disposal of used chemicals:

- Chemical waste that cannot be reused, is diluted to minimize its toxicity.
- A standard operating procedure “ECOBIN” is in place for handling the hazardous waste generated and minimizing the toxicity of the chemical effluents to different levels at laboratories.
- A Government-approved agency is assigned the task of collecting the waste from the Institute.

e-Waste Management

Computers are upgraded to the latest versions, rather than buying new machines. However, obsolete CPUs, monitors, motherboards, keyboards, mice, compact discs, printers, cartridges, etc. generated as electronic waste are disposed of from computer laboratories by selling it to scrap vendors from time to time at the pre-decided rates as per the annual rate contract.

Wastewater Recycling System

Water that drains from the air conditioner is free from chlorine, salt, or any chemicals, which used for watering the plants. An air conditioner on continuous running may produce 5-10 liter water/day. A bucket to air conditioner drain hose/pipe is attached, collecting the water which is used for cleaning purposes or directly plants pot can be kept.

File Description	Document
Link for Geotagged photographs of the facilities	View Document
Link for Relevant documents like agreements/MoUs with Government and other approved agencies	View Document

7.1.4 Water conservation facilities available in the Institution:

1. Rain water harvesting
2. Borewell /Open well recharge
3. Construction of tanks and bunds
4. Waste water recycling
5. Maintenance of water bodies and distribution system in the campus

Response: A. Any 4 or all of the above

File Description	Document
Geotagged photographs / videos of the facilities	View Document
Link for any other relevant information	View Document

7.1.5 Green campus initiatives include:

1. Restricted entry of automobiles
2. Use of Bicycles/ Battery powered vehicles
3. Pedestrian Friendly pathways
4. Ban on use of Plastic
5. Landscaping with trees and plants

Response: Any 4 or All of the above

File Description	Document
Geotagged photos / videos of the facilities	View Document
Link for any other relevant information	View Document

7.1.6 Quality audits on environment and energy are regularly undertaken by the Institution and any awards received for such green campus initiatives:

1. Green audit
2. Energy audit
3. Environment audit
4. Clean and green campus recognitions / awards
5. Beyond the campus environmental promotion activities

Response: A. Any 4 or all of the above

File Description	Document
Reports on environment and energy audits submitted by the auditing agency	View Document
Certification by the auditing agency	View Document

7.1.7 The Institution has disabled-friendly, barrier free environment

1. Built environment with ramps/lifts for easy access to classrooms.
2. Divyangjan friendly washrooms
3. Signage including tactile path, lights, display boards and signposts
4. Assistive technology and facilities for Divyangjan accessible website, screen-reading software, mechanized equipment
5. Provision for enquiry and information : Human assistance, reader, scribe, soft copies of reading material, screen reading

Response: B. 3 of the above

File Description	Document
Policy documents and information brochures on the support to be provided	View Document
Geotagged photographs / videos of the facilities	View Document

7.1.8 Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and other diversities (within 500 words).

Response:

As one of central India's premier institutes, LIT accommodates a wide diversity of regional, linguistic, and socio-economic populations. The Institute takes the responsibility of shaping the students by inculcating human values and inducing professional ethics. Some of the initiatives are enlisted below:

Harmony in Cultural Diversity

The spirit of accommodating cultural diversities is inculcated among the students by sensitizing them through various events such as the celebration of birth anniversaries of great personalities to make the students aware of their contribution to nation-building and enrichment of social values. The cultural events organized during annual social gatherings and Ganesh festival celebrations showcase various cultural diversities under one umbrella. In fact, harmony in the student community is the theme of the five-day Ganesh festival.

Harmony in Linguistic Diversity

To respect linguistic diversities, various events are organized, that includes speech, debate, poster making competitions on various themes such as Matrubhasha divas.

Harmony in Regional Diversity

Birth anniversaries, commemoration days are celebrated in the Institute every year to provide an inclusive environment, these include:

- Shivaji Maharaj Jayanti (Birth Anniversary)
- Rao Bahadur D. Laxminarayan Birth Anniversary
- Rao Bahadur D. Laxminarayan Commemoration Day
- Rashtersant Tukadoji Maharaj Jayanti (Birth Anniversary)

The eminent speakers are invited to deliver talks on these occasions to inspire young students from the life and sacrifices of these great personalities.

Tolerance Building and Sensitization

The Institute has been instrumental in building tolerance among its students in the context of accommodating peers with varied social, economic, regional, and educational backgrounds. Students perform street plays on sensitive issues, (particularly on Republic Day and Independent Day) such as brain drain, adolescence, social evils such as dowry, intoxication, etc. that convey a moral message and evoke a sense of responsibility towards oneself and the nation.

Community Welfare Activities

Institute always strives for community welfare by encouraging students and staff to cultivate the spirit of integration and the sense of social responsibility by organizing numerous programs such as blood donation camps, social awareness camps, cleanliness drives, etc.

Curriculum Enrichment

Student Induction Program is conducted every year for fresh students, where the efforts are taken to make them Institute friendly and create harmony amongst the peers. The curriculum includes courses on ethical values and professional ethics. The Institute undertakes various initiatives to provide an inclusive environment by bringing students and teachers with diverse backgrounds on a single platform.

Socio-economic Support

Institute has always been supportive to non-teaching staff by providing financial assistance in the form of advance during festive seasons like Diwali, grain advance, etc. The Institute also facilitates in providing loans through employee's cooperative society and provident fund. A scheme of 'Earn and Learn' for underprivileged students has also been implemented by RTM Nagpur University in 2014 and the same has been adopted by LIT also. Under this scheme, students from weaker economic backgrounds earn by working part-time in the Director's office and Library.

File Description	Document
Link for supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	View Document

7.1.9 Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens (within 500 words).

Response:

The Institute understands and realizes its role and responsibility in spreading the awareness about constitutional values, rights, duties, and responsibilities of citizens among the students and staff, by organizing various programs and ensuring active participation of all. It includes a pledge on Anti-Terrorism day, awareness programs as National Voters' Day, Swachha Bharat Abhiyaan (Clean India Initiative), Jal Divas (save water, save life program), etc. Students are encouraged to participate through group discussion, poster making, essay writing, cleanliness drives, tree plantation drives, etc.:

- **Group Discussion on "Awareness of Voter is a Need of the Era"** – UG Students are the young budding minds- just stepped into the voting age. They are promoted to express and exchange their views on voters' power on a common platform for fruitful discussion. The concept of "One Vote – One Value" and its impact on democracy was debated.
- **Group Discussion on "Power of Vote: The Need of the Era"** on the eve of Lokshahi Pandharwada gave the opportunity to the students to express their views and ideas on the right and power of the vote in the democratic government.
- **Poster Competition:** A poster-making competition on the constitution of India gives an opportunity to understand the deep meaning of the preamble and the fundamental rights and duties of citizens.
- **Essay Writing Competition:** Competition on the topic "**Mahatma Gandhi – The Real Hero**", helps the students to understand the thoughts, principles, and lifestyle of the Mahatma and its relevance in today's context.
- **Environmental Science:** As a part of the curriculum, students study and adopt green practices, conservation of natural resources, and use of eco-friendly energy resources.
- **Ethical Science:** Students are introduced to ethics through a compulsory subject.
- **Swachhta Pakhwada:** Cleanliness drive – Students are made to realize their responsibility towards hygiene with respect to self as well as the environment. NSS unit also organizes the cleanliness drives in the Institute and hostel premises periodically involving all the students of the Institute.
- **Student Induction Program:** During this program, the code of ethics, universal human values, fundamental rights, duties, and responsibilities of a real citizen are emphasized.
- **Election Duty:** Teaching and non-teaching staff is constantly involved in all the election-related duties. The staff is also serving the election commission for the preparation and updating of voter lists in Nagpur city.
- **Republic Day:** Celebrated on 26th January every year by organizing activities highlighting the importance of the Indian Constitution that demarcates fundamental rights, directive principles, etc.
- **Constitution Day:** Celebrated on 26th November every year to promote justice, equality, liberty, and fraternity. The Institute organizes a special program where all the students, staff, and faculty read the Preamble of the Constitution.

- **Independence Day:** Celebrated on 15th August every year to remember and pay tribute to the great freedom fighters and their sacrifices for the freedom of the country.
- **Voters' Registration:** A special drive is conducted to register the students as voters.

The students are in touch with the mentors, project guides who keep them motivated towards their responsibilities and duties towards society.

File Description	Document
Link for details of activities that inculcate values necessary to render students in to responsible citizens	View Document

7.1.10 The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.

1. The Code of Conduct is displayed on the website
2. There is a committee to monitor adherence to the Code of Conduct
3. Institution organizes professional ethics programmes for students, teachers, administrators and other staff
4. Annual awareness programmes on Code of Conduct are organized

Response: A. All of the above

File Description	Document
Details of the monitoring committee composition and minutes of the committee meeting number of programmes organized reports on the various programs etc in support of the claims	View Document

7.1.11 Institution celebrates / organizes national and international commemorative days, events and festivals (within 500 words).

Response:

Institute is committed to uphold the spirit of nationalism by reminiscing the national heroes like Mahatma Gandhi, Chhatrapati Shivaji Maharaj, Dr. S. Radhakrishnan, etc, who contributed immensely to nation-building with a prime focus on reinforcement of various attributes such as national integration, communal harmony, social concern, and duties. Institute organizes National festivals as well as Anniversaries for the great Indian Personalities, that includes:

- **Independence Day (15th August):** Flag hoisting followed by street play; to sensitize the students towards their role in the reconstruction of the society.
- **Dr. Sarvepalli Radhakrishnan Birth Anniversary (5th September):** The birth anniversary of a great teacher is celebrated as Teacher's Day. Students felicitate their teachers. The students also

deliver speeches on the life of Dr. S. Radhakrishnan.

- **D. Laxminarayan Commemoration Day (30th September):** It provides the platform for all students to know more about Divine Donor, Rao Bahadur D. Laxminarayan, the founding father of the Institute.
- **Mahatma Gandhi Birth Anniversary (2nd October):** Institute conducts activities like a Quiz competition and a guest lecture on Gandhian thoughts by an eminent speaker from the city. The faculty and staff of the Institute also participate in the program organized by the University at the Department of Gandhian Thoughts.
- **D. Laxminarayan Birth Anniversary (13th January):** Students are benefited from the inspiring success stories of Alumni of the Institute, as a part of two lecture series on this auspicious day.
- **Republic Day (26th January):** Flag hoisting followed by a parade by NSS unit, street play; to encourage the students for their duties and responsibilities towards the nation.
- **Chhatrapati Shivaji Maharaj Jayanti (19th February):** It is celebrated every year as “Hostel Day - Grajana”. The hostellers organize this event with great enthusiasm. The Institute invites an eminent speaker to talk on the life of Great Maratha Warrior Chhatrapati Shivaji Maharaj. On this occasion debate, elocution, painting and, sketch competitions are organized on the life of Chhatrapati Shivaji Maharaj.

Apart from these events, the students, staff, and faculty also participate in the functions/programs organized at the university level on the designated days: Birth Anniversary and Death Anniversary of Rashtrasant Tukadoji Maharaj, International Day of Non-violence, International Yoga day, Rashtriya Ekta Diwas (National Unity Day), Birth Anniversary of Bharat Ratna Dr. A. P. J. Abdul Kalam, University Foundation Day, etc. This provides exposure to the students as well as faculty to universal values like truth, non-violence, righteous conduct, and peace from various narratives and stories associated with the lives of these great personalities. Certain days of national importance include National Science Day, Engineer’s day, Martyrs’ day, etc. by way of talks, presentation of facts, student discussions, short films, and guest lectures at the university level which are attended by students, staff, and faculty members. Other State level functions such as Maharashtra Day and Hindi Rashtrabhasha Gaurav Diwas are also celebrated with equal enthusiasm.

The Institute practices a pluralist approach towards all religious functions and encourages the students and faculty to showcase the same.

File Description	Document
Link for any other relevant information	View Document
Link for Geotagged photographs of some of the events	View Document
Link for Annual report of the celebrations and commemorative events for the last five years	View Document

7.2 Best Practices

7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.

Response:**Best Practice - 1****Title of the Practice:****Development of Research Culture in B. Tech and M. Tech Students****Objectives of the Practice:**

- To motivate the students for research/industrial project work leading to value addition to the society and industry. It also imbibes the research culture among the students.
- To motivate the faculty members to achieve consistency and high standards in research activities addressing industrial, environmental, and society-related research problems.
- To inculcate the research culture amongst students.
- To develop experimental and computational skills amongst students in order to address a particular research problem.
- To motivate UG and PG students for writing research/review articles for publication of in refereed SCI journals of repute having high impact factor.

The Context:

The Institute has talented and motivated faculty members supported by enthusiastic, sincere, and hardworking students. The faculty members of the Institute believe in guiding the students for their project work in a positive way in order to inculcate the research aptitude and develop their problem-solving skills. With this philosophy, faculty members of the Institute got motivated to undertake research-oriented projects and industrial problems and strive to obtain the solutions in an effective manner. This practice proved to be very effective and has resulted in some of the projects with tangible outcomes like SCI publications, publications in journals of the repute with high impact factor, book chapters in international edited books by the reputed publishers like CRC Press, Elsevier, Wiley, Springer, etc. and also the grant of patents. These fruitful and encouraging results have created research interests and inspired students to take up academic, industrial, and environmental problems for their project/thesis/dissertation work.

The Practice:

As stated by Marcus Aurelius “Nothing has such power to broaden the mind as the ability to investigate systematically and truly all that comes under thy observation in life.” In this context, the Institute has practiced this idea to motivate the students of the Institute to undertake research-oriented projects and industrial problems to strive for the best possible and effective solutions. Some of the features of this practice are as below:

- To achieve this, the very first step taken is to assign mentor cum guides to students well in advance. The Institute also organizes motivational lectures of eminent researchers working in diverse fields. The project guide conducts regular meetings with the students along with their presentations.
- The students are asked to conduct an extensive literature review on the selected topic and plan the activities for the execution of the project along with the available resources and funding required. In some cases, the extensive literature survey leads to review articles that are published in peer-

reviewed journals. The project guide plays a key role in the constant monitoring of the timely execution of the research project.

- Where-ever necessary, the design and fabrication of experimental setups is accomplished from the resources/expertise available in the department. The computational project work is assigned to the students based on licensed software packages available in the Institute. The students carry the experimentation/computation work understanding various facets of the research work. As a result, it inculcates the research aptitude in them and helps in developing their experimental and computational skills. The project report many times leads to the research paper for publication, in a refereed international journal by keeping in mind the quality and professional ethics. After assessing the outcome of the project work, if the results are found to be promising, the project team and project guide take the decision regarding the filing of the patent.
- Institute also encourages the faculties to submit the research proposals to various funding agencies. Over the last five years, 14 projects have been sanctioned by the government and non-government agencies with a total funding amount of 116.28 Lakhs. Most of the research publications of students came out from these projects.
- This practice is found to be very successful and resulted in noteworthy outcomes like publications in high impact factor journals, book chapters in international edited books by reputed publishers like CRC Press, Elsevier, Wiley, Springer, etc., and patents.

Evidence of Success:

This practice resulted in the form of research publications. Students have publications in top-ranking journals like Applied Thermal Engineering, Ultrasonic Sonochemistry, Indian Chemical Engineer, Nano-Structures & Nano-Objects, Ceramics International, Optik, Materials Chemistry and Physics, Materials Today Communications, International Journal of Environmental Research, Advanced Powder Technology, Industrial & Engineering Chemistry Research, Journal of Molecular Liquids, Journal of Food Process Engineering, Separation and Purification Technology in last 5 years. This helped many students in getting good placements and for their admissions for higher studies. Also, several papers were presented in the national and international conferences by those students.

In the last 5 years, 09 Indian Patent applications were filed based on the work carried out by students. More than 10 book chapters in international edited books published by CRC Press, Elsevier, and Springer.

Students From	Total Publications in Refereed International Journals			
	Impact Factor	Impact Factor	Impact Factor	Total
	< 2	2 to 4	> 4	
B. Tech	05	05	04	14
M. Tech	07	06	05	18
Grand Total	12	11	09	32
Book Chapters From UG & PG students				10
Patents From UG & PG students				09

Students work in several industrial projects, which can further strengthen the best practices.

Problems Encountered and Resources Required:

During the implementation of this practice following shortcomings has been observed:

- The project team effectively worked on the various tasks with the available funding and resources. Often, the project team is in need of high-end characterization techniques and equipment to have better insight into the possible solution and thereby publication in high impact factor journals. However, this problem is being resolved to some extent with collaborations with the experts/faculty members from the Institute of national repute. Institute is trying its best to install high-end analytical equipment/instruments by fetching the funds under various government schemes. Institute is confident that this will definitely enhance the quality of research work and publications in high-impact factor journals.
- Institute is facing a faculty shortage. If the vacant positions are filled, it will expedite the research activities with an infusion of new faculty members working in newer research areas.

Notes:

Students undertake eco-friendly projects applying innovative methods.

- Development of nanomaterials using cavitation and conventional processes which are being applied in energy conversion devices, heat transfer applications like nanofluids, photocatalysis for wastewater treatment.
- Development of a cavitation-based process for the efficient production of Emulsion Liquid Membranes for the removal/recovery of the pollutants present in the wastewater.
- Value-added products, Biocomposite from solid waste material such as ash, plastic, agro-based materials.
- ANN modeling for multivariable nonlinear systems having high complexity.
- GA for multivariable optimization problems.
- Modeling and simulation of complex multicomponent systems for separation involving azeotropic and extractive distillation using heat integration.
- Green hydrogen production and fuel cell development.
- Sustainability assessment framework for chemical products and processes.
- Life Cycle Assessment of product.
- Process intensification and development for specialty chemicals.
- Membrane-based processes for wastewater treatment.

Best Practice - 2

Title of the Practice:

Revenue Generation through Testing and Consultancy

Objectives of the Practice:

- To provide consultancy services of the highest standards of performance and reliability to the nearby industries.
- To provide analysis and testing services as per desired standards and specifications to the nearby industries.
- To invite and undertake minor research/constancy projects from nearby industries so as to promote application-oriented technology transfer.

- To facilitate interaction between the industries, and government/ private organizations, and the Institute for collaborative research resulting in technology up-gradation and technology transfer.
- The ultimate goal is to establish a center for Incubation, Innovation, and Entrepreneurship in near future.

The Context:

The Institute has well-equipped laboratories with various equipment and instruments suitable for testing paper quality, various paints, polymers, edible oils, food products, and some petroleum products. The faculty members are engaged in testing these industrial products for their quality as per desired standards and specifications. The effective utilization of existing facilities in addition to its regular usage for the conduct of practical sessions and projects for UG and PG students has an added advantage resulting in revenue generation. The institute has enthusiastic and competent faculty engaged in research in their chosen areas of expertise. The experience of these faculty members is effectively utilized by engaging them in research and development activities, particularly on live industrial problems. During the last five years, the Institute managed to fetch consultancy projects and successfully delivered the results to the satisfaction of the sponsoring organizations/ industries.

The Practice:

In the light of changing economic and industrial scenarios, the Institute encourages consultancy projects for extending the benefit of scientific research work to the sponsoring agencies, which contributes toward industrial growth, strengthens the interface, and enriches the professional experience. It acts as a liaison between the Institute and industry to undertake projects with specific regional/ societal problems. Any agency can approach the Institute with their problems in the discipline of chemical engineering and chemical technology. The Institute through its faculty takes up such problems from the industry/organization as the consultancy work. The Institute provides testing facilities, particularly in oil, paints, paper, polymer, and food technology-related areas. These activities enrich the professional experience and knowledge of faculty members and thus make them better educators. Institute, besides undertaking consultancy projects in the scientific area, also undertake research and consultancy projects in order to address social issues and help the tribal populations to benefit themselves through technology transfer. One such example is, faculty member of the Institute, Dr. M. G. Bhotmange is a member of the committee formed by the Government of Maharashtra on "Utilization of Mahua Flowers for the benefit of tribal people". Under this scheme, he is giving free consultation to various NGOs and camps organized by the Government agencies to propagate this technology to the tribal population.

The Institute got the consultancy projects of societal relevance from Maharashtra Bamboo Development Board, District Conservator of Forests, Sironcha, Tadoba Andhari Tiger Reserve, Chandrapur. The Institute also got an industrial consultancy project from Cytec Industries (Solvay Group) for the solution of effluent treatment issues faced by them. These projects have been successfully completed and a good amount of revenue has been generated for the Institute.

The Institute also regularly gets samples from various industries for testing of its products to ensure and certify their quality. The industries/organizations approaching the Institute includes Ordnance Factory (Government of India), Maharashtra State Education Board, Western Coalfields Limited, Maharashtra State Road Transport Corporation, Indian Railways, BSNL, Lokmat Media, Kanchanjunga Paints, Vimal Paints, Shri Sai Paints, VNIT Nagpur, Seven Seas Paints (Delhi), Tata Projects, Indian Oil, etc. Institute generates a good amount of revenue through its testing assignments.

The Institute also provides Paper Testing Services to Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur free of cost. The Institute undertakes the paper quality testing work for the University throughout the year for answer books, mark sheets, question paper booklets, degree certificates, and all kinds of blank papers purchased by the University. The samples are sent right from the receipt of samples received along with tender documents submitted by the various vendors. The samples are also sent to the Institute after the supply of the paper to the University. Quality assurance is looked after by LIT. Department of Paper and Pulp Technology is constantly providing these services to Rashtrasant Tukadoji Maharaj Nagpur University resulting in savings of at least Rs. 30,000 each year.

Evidence of Success:

The Institute provides free services to RTM Nagpur University for paper testing facility resulting in savings the cost thousands of Rupees every year. Some of the faculty members who are engaged in testing and consultancy activities of the Institute regularly interact with the industry experts. These faculty members also involve the advanced learners from among the UG students in case studies to solve some live problems of the industries. One of our faculty members Dr. S. U. Meshram could solve the effluent-related issues faced by Cytec Industries (Solvay Group Company) with the participation of second-year UG students. This company-paid Rupees 2.5 Lakhs as consultancy charges in the year 2017. These testing and consultancy activities in the institution motivate the student and faculty members to explore new ideas in the field of chemical engineering and chemical technology by creating a research culture with a well-equipped ecosystem for innovation and knowledge sharing. Installations of Eco-Bins in laboratories to treat waste chemicals is an outcome of this practice.

- Tribal people got benefited from the effective usage of Mahua flower extract for societal application through the consultation.
- The greatest success is the satisfaction of helping a weaker section of society, which is extremely rewarding as it is a great source of mental peace.

The consolidated statement of revenue generation in the last five years:

Particulars	Revenue Generated in Rs.					Total Revenue in Rs.
	2020-21	2019-20	2018-19	2017-18	2016-17	
Testing and Analysis	3,26,609	1,25,140	2,33,950	3,93,500	1,63,500	12,32,699
Consultancy	9,11,620	7,92,000	0	4,15,000	0	21,18,620
Total Revenue Generated	12,38,229	9,17,140	2,23,950	8,08,500	1,63,500	33,51,319

Problems Encountered and Resources Required:

- The consultancy process is time-consuming as the researcher/faculty member is trying to get the solution for a challenging and unknown problem for which the sponsoring industry could not find a solution with their in-house expertise.
- The requirement originates from the industry, faculty then estimate the time and cost required to

accomplish the task. However, sometimes there is a mismatch between planning and implementation in terms of expected time as well as cost.

- Sometimes, the required analytical instrumentation facility is not available in the Institute and it has to be managed from other places. Especially, the non-availability of high-end sophisticated instruments which are very costly pose constraints and challenges in order to analyze and resolve some of the issues.
- The rapid changes of the chemical industry, together with the emergence of new scientific methods and tools, pose a formidable challenge to coping with
- The time management for teaching faculty in order to balance teaching, consultancy, and research.

Notes:

The Institute and its faculty members are continuously trying to fetch new consultancy grants for industry-sponsored research.

The faculty members and the laboratory staff are paid as per the revenue sharing model approved by the BoG and Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur.

File Description	Document
Link for Best practices in the Institutional web site	View Document

7.3 Institutional Distinctiveness

7.3.1 Portray the performance of the Institution in one area distinctive to its priority and thrust within 1000 words

Response:

Establishing Brand LIT

Preamble:

The students have a diverse background having not only misconceptions but also lack the experience to get a brief preview of the industry. The institute involves them in various challenging activities and makes them comfortable in giving honest feedback.

LIT Alumni are working worldwide in core chemical industries and academics. They firmly stand with the Institute and support students for placements. Students' interaction with distinguished alumni boosts them to gear up for a bright future. LIT has introduced industry internship as an integral part of its curriculum, wherein each student has to undergo six weeks of industrial training/internship after completion of their sixth semester.

The Institute organizes a three-day workshop to prepare final year students for resume writing, aptitude tests, group discussions, and personal and mock interviews. This boosts their confidence level.

Transcending on these lines, the placement program incorporates a diligent and informed approach, taking student participation to the next level making the learning environment more competitive and interesting. It helps them to understand that business times are transgressing in new vistas of technology and management. The placement guidance program always tries to help the mentee achieve his/her career path by providing guidance, motivation, emotional support, and role modeling. This activity also helps and inspires the students to connect with and learn from each other in order to advance towards their professional goals.

Institutional Distinctiveness:

With the advent of the Information Technology era and a large number of recruitments in the IT sector particularly in software industries like TCS, Infosys, Wipro, etc. most of the recruitments were done from the core engineering branches like civil, mechanical, electrical, and chemical. Almost 50% or even more students from the top institutions all over the country used to get employment through campus placements in software industries. One major attraction was the higher salary packages in software industries, in those days, as compared to core engineering industries. Institute has decided to convince students and make up their minds to preferably appear for campus interviews for core chemical industries and join the core sector. Because of the gap in salary packages, it was very difficult to convince students to follow guidelines. However, Institute could convince them with due emphasis on the following points:

- They have studied Chemical Engineering and Chemical Technology and the Institute has given them rigorous training and subject domain knowledge and prepared them so as to work in chemical process industries.
- Divine donor Rao Bahadur D. Laxminarayan mentioned in his will that “Every province ought, in my opinion, to have a Technical College for the training of industrial experts, and the supervisors and foremen” and the Institute respects and follows this noble thought.
- They will have a challenging and rewarding career in the core chemical sector which will give them immense job satisfaction as compared to the software sector.
- The salary packages of the core sector sooner or later will be brought at par in order to attract highly talented students to the core chemical industries.
- The Institute allowed them to opt for software companies (like Honeywell), which are working for the chemical and petrochemical sector where core chemical engineering knowledge is required.

Institute also arranged talks and interactions with distinguished alumni to introduce students to the work culture and scope for growth in the core chemical sector and the future of the chemical process industry. In the meantime, the huge gap in salary packages not only narrowed down but stood at par. The Institute has taken a bold decision almost 20 years back to adopt a well-defined policy for campus placements of students. The Institute is following these guidelines:

- As this Institute produces Chemical Engineers and Chemical Technologists with a noble intention to provide skilled engineers core chemical industries, the Institute will approach and invite-only core chemical sector companies to its campus for campus recruitment of final year students.
- The Institute will not invite companies from the software sector to its campus. However, if some student makes up his mind to opt for the software sector, he/she will be permitted to do so off-campus.
- The Institute will ensure that the selected students serve the company for a minimum period of three years from the date of joining. The Institute tries to imbibe professional ethics in students. Loyalty with a particular company pays very well in long run and helps them positively in their

future endeavors.

- Once a student is selected by a particular company in the campus recruitment process, he/she will not be allowed to appear for the forthcoming companies visiting the Institute.

In the last 5 years, a total of 318 students was placed from campus placement drives. The placement record of top 10 recruiters visiting for placements consistently of last 5 years:

Sr. No.	Top Recruiters	2020-21	2019-20	2018-19	2017-18	2016-17	Total
1	Reliance Industries Ltd.	0	10	16	13	10	49
2	Adani Wilmar Ltd.	7	6	10	3	1	27
3	Sudarshan Chemical Industries Ltd.	5	1	11	7	2	26
4	Inventys Research Co Pvt Ltd.	9	11	0	3	0	23
5	Galaxy Surfactants Ltd.	3	5	3	0	1	12
6	Cairn Oil & Gas Ltd. (Vedanta Group)	8	2	6	0	0	16
7	Berger Paints	6	2	5	0	1	14
8	Navin Fluorine International Ltd.	2	0	5	4	3	14
9	Aarti Industries Ltd.	5	5	0	0	0	10
10	DCM Shriram Ltd.	2	1	2	0	0	5
		47	43	58	30	18	196

The Institute got a very positive response to policy and Brand LIT got established as a reliable and well-known brand to top core chemical sector industries. The attrition rate of students is very low. Fruitful

accomplishments of these initiatives are evident Placement Record of last 20 years which is available on the Institute's website <https://litnagpur.in/training-placements>

File Description	Document
Link for appropriate web in the Institutional website	View Document
Link for any other relevant information	View Document

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5. CONCLUSION

Additional Information :

Institutional Strategic Plan and its Effective Implementation and Monitoring

The institutional strategic plan comprises different institutional development plans. It has been prepared and made available by analyzing the strengths, weaknesses, opportunities, and challenges (SWOC analysis) of the Institute. The Director, all HoDs, Stakeholders of the Institute had several extensive interactions and arrived at the Institute level SWOC analysis. While carrying out the SWOC analysis the following factors were considered:

- Existing Infrastructure of the Institute, which includes buildings, laboratories, equipment, workshops, library, connectivity, transport, furniture, hostels, medical facilities, playgrounds, canteen, etc.
- Fee structure, admission policies of the government including reservations, requirements of the affiliating university/ AICTE/UGC.
- Outcome-Based Curriculum Development and Teaching-Learning Processes.
- Additional academic support for weaker students to improve their performance in the examination.
- Employability rate
- Training needs of Faculty/Technical Staff/Supporting Staff
- Research, consultancy
- Industry Institute Interaction

Core Values

The core values adopted by the Institute as enduring principles are Integrity, Excellence, Accountability, and Transparency.

- **Integrity:** Research and teaching shall be carried out in an environment of academic freedom and honesty. The Institute adheres to the highest standards of ethics in all its activities.
- **Excellence:** The Institute is committed to excellence in all spheres of its activities, and through internal and external reviews, work towards continuous improvement. The Institute recognizes exceptional efforts through awards and honors.
- **Accountability:** The Institute is a University-managed conducted college of RTM Nagpur University is a Public Institute funded by the Government of Maharashtra is accountable to all its immediate stakeholders including students, staff, faculty, alumni, and industry under the provisions of the Maharashtra Public Universities Act.
- **Transparency:** The Institute functions according to defined procedures and rules. The information about the Institute is displayed on the official website which is always available in the public domain.

Concluding Remarks :

Great Institutes are not built overnight. The collective experience of each of the faculty members of the Institute as an academician, researcher, consultant to industry, member of several professional bodies and government committees, and through interactions with alumni, government officials, faculty from leading Institutes in India and abroad helps in establishment of the brand name of Institute.

LIT believes that performing consistently is not so easy and it strives relentlessly to achieve this objective by instilling a sense of commitment and responsibility in the students through various on and off-campus activities. The Institute tries to maintain and improve its status and caliber to produce technically sound chemical engineers and technologists. The Institute has maintained and encouraged independence and flexibility that promotes creativity, innovation, and growth. The Institute has kept pace with modernization and it has proven itself for the past 78 years. The Institute produces a batch of about 80 Chemical Engineers and an equal number of Chemical Technologists every year who are sincere, diligent, confident, immensely talented, and ready to face industrial challenges.

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6.ANNEXURE

1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification																				
3.4.3	<p>Number of extension and outreach programs conducted by the institution through NSS/NCC, Government and Government recognised bodies during the last five years</p> <p>3.4.3.1. Number of extension and outreached Programmes conducted in collaboration with industry, community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years</p> <p>Answer before DVV Verification:</p> <table><tr><td>2020-21</td><td>2019-20</td><td>2018-19</td><td>2017-18</td><td>2016-17</td></tr><tr><td>13</td><td>17</td><td>5</td><td>10</td><td>6</td></tr></table> <p>Answer After DVV Verification :</p> <table><tr><td>2020-21</td><td>2019-20</td><td>2018-19</td><td>2017-18</td><td>2016-17</td></tr><tr><td>12</td><td>11</td><td>4</td><td>9</td><td>5</td></tr></table>	2020-21	2019-20	2018-19	2017-18	2016-17	13	17	5	10	6	2020-21	2019-20	2018-19	2017-18	2016-17	12	11	4	9	5
2020-21	2019-20	2018-19	2017-18	2016-17																	
13	17	5	10	6																	
2020-21	2019-20	2018-19	2017-18	2016-17																	
12	11	4	9	5																	
3.4.4	<p>Average percentage of students participating in extension activities at 3.4.3. above during last five years</p> <p>3.4.4.1. Total number of Students participating in extension activities conducted in collaboration with industry, community and Non- Government Organizations such as Swachh Bharat, AIDs awareness, Gender issue etc. year-wise during last five years</p> <p>Answer before DVV Verification:</p> <table><tr><td>2020-21</td><td>2019-20</td><td>2018-19</td><td>2017-18</td><td>2016-17</td></tr><tr><td>642</td><td>500</td><td>540</td><td>550</td><td>540</td></tr></table> <p>Answer After DVV Verification :</p> <table><tr><td>2020-21</td><td>2019-20</td><td>2018-19</td><td>2017-18</td><td>2016-17</td></tr><tr><td>540</td><td>330</td><td>440</td><td>350</td><td>440</td></tr></table>	2020-21	2019-20	2018-19	2017-18	2016-17	642	500	540	550	540	2020-21	2019-20	2018-19	2017-18	2016-17	540	330	440	350	440
2020-21	2019-20	2018-19	2017-18	2016-17																	
642	500	540	550	540																	
2020-21	2019-20	2018-19	2017-18	2016-17																	
540	330	440	350	440																	
4.2.4	<p>Percentage per day usage of library by teachers and students (foot falls and login data for online access) during the latest completed academic year</p> <p>4.2.4.1. Number of teachers and students using library per day over last one year</p> <p>Answer before DVV Verification : 28</p> <p>Answer after DVV Verification: 20</p> <p>Remark : DVV has made the changes as per average of teacher and students using library per day on (dates)</p>																				

5.3.1 Number of awards/medals won by students for outstanding performance in sports/cultural activities at inter-university/state/national / international level (award for a team event should be counted as one) during the last five years.

5.3.1.1. Number of awards/medals for outstanding performance in sports/cultural activities at university/state/national / international level (award for a team event should be counted as one) year-wise during the last five years.

Answer before DVV Verification:

2020-21	2019-20	2018-19	2017-18	2016-17
0	2	11	10	1

Answer After DVV Verification :

2020-21	2019-20	2018-19	2017-18	2016-17
0	0	0	0	0

Remark : DVV has not consider shared certificate of participation by HEI.

2.Extended Profile Deviations

Extended Profile Deviations

No Deviations