



SELF STUDY REPORT

FOR

2nd CYCLE OF ACCREDITATION

TOC H INSTITUTE OF SCIENCE AND TECHNOLOGY

TOC H INSTITUTE OF SCIENCE AND TECHNOLOGY ARAKUNNAM

ERNAKULAM-682313

682313

www.tistcochin.edu.in

Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

The Cochin branch of Toc H was initiated in the early seventies as a non-profit organization. Realizing the need for quality education in Cochin, Toc H started the Toc H Public School. Toc H Institute of Science and Technology (TIST) is a silver jubilee project of the Toc H public school society. TIST upholds the Toc H ethos of humaneness to create technocrats and management experts.

Ideally located in an area of 26.08 acres of land in the lush green rural environment of Mulanthuruthy Panchayath in Ernakulum district, Kerala. TIST has now achieved a commendable position in the technical education domain in the state and as well as in the country. TIST, since its inception in 2002, has given importance to the needs of the society, rural development, renewable energy sources and environmental problems along with its primary goal of imparting technical education with a global perspective. The engineers who come out of our portals - the Alumni of TIST- could be found in key positions in prestigious multinationals.

TIST has an excellent faculty with high qualification, experience in industry and academics.

The college offers 7 under graduate and 8 post- graduate Programmes. TIST believes in the overall development of students and therefore has initiated several co-curricular and extra-curricular activities.

TIST lays emphasis on developing student leadership skills and talents in Arts and Sports. Hence TIST gives due importance to its Student Council which consist of a team of gifted and spirited students chosen by their own peers.

Vision

To become a globally recognized Institution that develops professionals with integrity who excel in their chosen domain making a positive impact in industry, research, business and society

Mission

- To provide the ambience necessary to achieve professional and technological excellence at the global level.
- To undertake collaborative research that fosters new ideas for sustainable development.
- To instill in our graduates ethical values and empathy for the needs of society.

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

1. Good governance – with clear, vision, mission, and commitment
2. Admission process is transparent based on predetermined criteria specified by Kerala Technological university (KTU) and Government of Kerala, as specified in the college prospectus, brochures and website
3. A few management merit seats reserved for economically underprivileged rural students filled through TIFERS
4. Adequate and well maintained infrastructure with rural ambience
5. Add-on courses for up gradation of the level of employability of the students
6. Webinars, seminars, workshops by ICTAK
7. Excellent faculty student ratio backed by highly qualified and experience faculty
8. More faculty are encouraged to do Ph D research
9. The institute is recognized as Scientific and Industrial Research Organization (SIRO) by the Department of Scientific & Industrial Research (DSIR), Government of India
10. MOU with Foreign university and Research Centers
11. Adopting new technology and pedagogy for effective teaching /learning process
12. Outcome Based Education (OBE) introduced and NBA obtained for four programs; one among 8 op private Engineering colleges accredited in Kerala
13. Approved KTU Research Centre with supercomputing facility
14. High quality placement training programs in coordination with reputed training institutions resulting in excellent placement
15. TIST IEDC support to generate student entrepreneurs
16. Kerala's first industrial lab in Air conditioning setup by DAIKIN in the institute
17. Student progression through professional association like IEEE, CSI, ICI, ISTE, Yi, NSS, etc.
18. One among the ten engineering colleges in Kerala selected for Unnat Bharat Abhiyaan
19. Dedicated department of Psychology the only college with counseling facility
20. Advanced Partners in Success Infosys Campus Connect

Institutional Weakness

1. Less out-of-state and overseas students
2. Limited externally funded projects and consultancies
3. Limited participation of students in interstate and overseas events
4. Geographically located in rural region causing lesser connectivity
5. Not having full residential facility for staff
6. Extra time for library and other activities has to be looked for as the days are fully packed

Institutional Opportunity

1. Develop different sources of income through value added programs, increased research project funding, consultation & Management Development Programs (MDPs), partnering with industries/local bodies

2. Technology incubator to develop products
3. Implementation of the concept of virtual laboratories
4. Application for Atal Incubation Centre in the process stage
5. Further Enhancement/ encouragement for entrepreneurship among Students
6. Improvement of faculty and student exchange programs with National and International Institutes

Institutional Challenge

1. Industry-academia interaction within the academic framework
2. Adjustment of time-frame to provide free time to the students
3. Regular investment to keep pace with emerging technologies
4. Retaining qualified and passionate faculty in the region
5. Increased financial drain due to the increasing obsolescence rate with change of technology
6. Meeting the ever changing requirements of industry and society as a whole
7. Obtaining the services of specialized guests and visiting faculty
8. Improving communication skills of students hailing from rural background who otherwise are good in technical competencies
9. Dwindling present admission scenario, filling all seats to capacity

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

The college academic calendar is framed in the lines of university academic calendar. Each faculty prepares course plan and is approved by the HOD and Principal. Senior faculty participates in the curriculum and syllabus design under the aegis of BoS. Certificate, diploma and add-on programs are offered to the students to enhance core skills. The programs offered include Elective courses, Environment and Sustainability, Human Values and Professional Ethics. Seminars, industrial visits, guest lectures, workshops, field projects, internships support course objectives. Additionally, different clubs in the campus organize activities focussing on socio-cultural issues. Structured feedback is taken from all stakeholders, analysed and action taken.

Teaching-learning and Evaluation

Admissions to the 7 under-graduate and 8 post-graduate courses are streamlined strictly according to the stipulations and norms of CUSAT and Kerala Technological University (KTU), as given in the college Prospectus, Brochure and the web-site. Economically underprivileged but otherwise eligible candidates are ensured admission in various courses. This policy is integral as the avowed social commitment of the institute. Strict time schedule is followed in the conduct of classes and lab sessions as per the departmental time table.

On the job and marketing training, case studies and internships are given to MBA students. Class Tests, Internal Examinations, Seminars & Project Presentations and Assignments, follow a pre-fixed time schedule and are closely monitored by the respective Heads and Faculty. Performance appraisals of the students are kept on record and average and under performers are given Remedial and Tutorial class, peer learning, bridge courses and adequate motivational counseling by faculty mentors.

Proficiency award and Best student award is for academic excellence. To ensure quality of class room teaching, Course and class committee meetings with student representatives are held twice in a semester.

Our institution follows pedagogical model based on Revised Bloom's Taxonomy. The institution initiated to implement the outcome based education. Every programme in the institution has formulated a set of PEOs, POs and PSOs. Apart from this, a set of COs have been framed for each course. Systematic procedures have also been followed for assessing the attainment of these Outcomes.

Research, Innovations and Extension

With an aim to reach global standards in education, the Department of Research and Development started in the year 2006 was converted into J.C. Bose Centre for Research and Advanced Studies. Research projects funded by DRDO, DAE-BRNS, DST etc amounting to a total of Rs 2 cores were completed and is recognized as SIRO by DSIR. The institution was conferred B-grade institutional and commercial certificates by the Pollution Control Board, thereby authorizing its center for water testing.

MoU signed on 11th January 2018 between Nansen Environment Research Centre and Nansen Environment and Remote Sensing Centre, Bergen, Norway to develop joint programs in research and higher education.

An entrepreneurship development(ED) club established here in 2011 to fill gaps the curriculum. TIST IEDC took over and entered into an MOU with Startup village on 24th March 2015, to organize various startup village initiatives aimed at encouraging a spirit of innovation, entrepreneurship.

Extension activities of TIST provide a link between the institution and the community with an NSS unit and a chapter of Yi (Young Indians) .TIST ENCON club aimed at practicing energy conservation and environment protection joined hands with Kochi refinery that started ENCON clubs in the year 2002. At present we have about 50 refinery sponsored ENCON clubs in educational institutions.TIST KARMA extends support to poor people in the society by catering to five sectors, viz., Food, Health Care, Education, Volunteer and Shelter.

Infrastructure and Learning Resources

The institution has good infrastructure to meet the educational/recreational requirements. Buildings have an area of 36049 Sq.M with good ambience and provide all amenities. There are adequate number of class rooms, smart class rooms and seminar halls. All laboratories are well equipped. The institute has a centralized common computer facility. The library has 38781 books besides the digital library which has access to e-journals & e-books; internet facility with 80Mbps available.

The fitness centre of has a facility of a 12 station Multi Gym for the male students and a Treadmill for girls. We

have Outdoor Sports facilities, where Soccer, Cricket and Track & Field events are conducted. There are Basketball and Volleyball courts, Cricket practice nets; events like Inter Collegiate and Inter Department tournaments are conducted in these facilities. Indoor sports facilities are Two Badminton courts and facility to play Table Tennis in Indira Gandhi Indoor Auditorium, Inter Department Cultural and Inter Collegiate Competitions, facility for Music & Dance Practice, Annual Day, Onam & Christmas Celebrations are organized in this facility. The Institute provides the facility of a canteen where hygienic food, breakfast and lunch are served.

The college has a good transport facility (buses) both for the students and staff. The campus is under surveillance of CC Cameras installed at various vantage points.

Student Support and Progression

Scholarships to academically eligible financially backward rural students in addition to the Government scholarships are available. Text books are provided free of cost to the needy. College library provides text books for competitive examinations like GATE, GMAT, CAT etc. Expert coaching for GATE examination, conducts value added courses and workshops.

Students are members of various administrative bodies of the college such as Women's Grievance Redressal cell, Student Welfare Committee, Magazine Committee, Sports Committee, Student's council, Student chapters, branch wise association and IQAC. The students are encouraged to seek guidance on academic, general or psychological issues and participate in different technical and other co-curricular events held in and out of the campus. Sports events like Inter University tournaments and college annual sports meet are conducted. Our students participated in CANSAT competition conducted by NASA, JPL, Naval Research Laboratory and American Institute of Aeronautics and Astronautics (AIAA) and the Rover Challenge Competition conducted by Mars Society.

Students are involved in several social activities like Yi, NSS and ENCON. The institution conducts soft skill training, language lab and personal counseling for holistic development. The college has well established Innovation and Entrepreneurship Development Center and placement cell. TCS, Infosys, HCL Technologies, NI, Tata CMC, Kaynes Technology and Polycabs are among the prominent recruiters.

Bridge courses are conducted at the beginning of each semester. Alumni meetings conducted annually works as a platform for the students to interact with their seniors, connecting them on a professional level.

Governance, Leadership and Management

The Toc H Institute of Science and Technology is funded and managed by Toc H Public School Society, a nonprofit making educational trust. The Society presently consists of 14 members. A 9-member core management team, consisting of the Board of Directors (who are annually elected from among the members of

the Society) looks after the management of a School and the Engineering College.

As a self-financed Institution, the resource mobilization is mainly through Students Tuition Fees, Training & Consultancy, Research Project grants, conferences, seminars Industry sponsored labs etc.

The Governance of the institution is strictly in accordance with the Vision, Mission, and Quality policy and executive directions issued by regulating Government agencies. Management takes a pro-active policy towards professional development of staff in our institution. The organizational structure decentralizes the power and responsibilities among the internal stakeholders. The Institution has a mechanism for internal and external audits. Our Management has a full-time Treasurer to oversee the financial activities of the Institution. The Principal is responsible for the academic, general and financial administration. Well defined Service rules and policies are clearly disseminated to stake holders. The Institution has NBA accreditation (4 Departments), ISO 9001:2015 and NAAC Accreditation (2012-2017).

The Institution is focusing more onto filling the gap between Academia and Industry through Industry Institute Interaction, Research and Consultancy activities. Several MoUs are undertaken in this perspective like Kelaniya University- Sri Lanka, KITCO, NANSEN-Norway, Daikin etc.

Institutional Values and Best Practices

- Anti-Sexual Harassment and Womens cell, women safety application, training programs and security surveillance ensure women's safety and security. Department of Applied Psychology and Counseling along with faculty of concerned department, supports student mentoring.
- Solar plants, ENCON club, waste collection bins, sewage treatment plant, biogas plants and rainwater harvesting build ecofriendly campus. Green practices include tree plantation programs, intercoms and online communications. Lift and ramp in every block and scribe facility is extended to the needy. Many of the academic projects attracted attention as innovative solutions for differently abled.
- The institute has its own transport facility Institution serves as examination centers for various state and central government recruitments. Organization is rendering moral and vocational support through health camps, training and guidance classes for the society along with more job openings.
- Human values and professional ethics are provided through courses in curriculum, activities organized by professional bodies and other service schemes. To enlighten the national obligations, national days are observed. Buildings and the seminar halls in the institute are named after the famous personalities in India.
- The best practices in the institute are Outcome Based Education (OBE) and Innovation and Entrepreneurship Development Center (IEDC). Four of the departments are NBA accredited for three years from 2017-18, a coveted achievement. Institution started IEDC with a thrust on innovation since 2013. Today many graduates have brought laurels winning global recognition. Institutional scholarship schemes reflect its vision priority and thrust.

NAAC

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the College	
Name	TOC H INSTITUTE OF SCIENCE AND TECHNOLOGY
Address	Toc H INSTITUTE OF SCIECNE AND TECHNOLOGY ARAKUNNAM ERNAKULAM-682313
City	Ernakulam
State	Kerala
Pin	682313
Website	www.tistcochin.edu.in

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	Preethi Thekkath	0484-2748388	9946509900	0484-2749600	mail@tistcochin.edu.in
IQAC Coordinator	SANGEETHA S	0484-2738126	9809136958	0484-	sangeetha@tistcochin.edu.in

Status of the Institution	
Institution Status	Private and Self Financing

Type of Institution	
By Gender	Co-education
By Shift	Regular

Recognized Minority institution	
If it is a recognized minority institution	No

Establishment Details	
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Date of establishment of the college	06-06-2002			
University to which the college is affiliated/ or which governs the college (if it is a constituent college)				
State	University name	Document		
Kerala	A.P.J. Abdul Kalam Technological University	View Document		
Kerala	Cochin University of Science & Technology	View Document		
Details of UGC recognition				
Under Section	Date	View Document		
2f of UGC				
12B of UGC				
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	10-04-2018	12	

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

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?	No

Location and Area of Campus				
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.
Main campus area	Toc H INSTITUTE OF SCIENCE AND TECHNOLOGY ARAKUNNAM ERNAKULAM-682313	Rural	26.08	36049

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,Electronics And Communication Engineering	48	Higher Secondary	English	60	36
UG	BTech,Computer Science And Engineering	48	Higher Secondary	English	60	57
UG	BTech,Information Technology	48	Higher Secondary	English	30	13
UG	BTech,Electrical And Electronics Engineering	48	Higher Secondary	English	60	28
UG	BTech,Civil Engineering	48	Higher Secondary	English	60	42
UG	BTech,Mechanical Engineering	48	Higher Secondary	English	120	64
UG	BTech,Safety And Fire Engineering	48	Higher Secondary	English	60	46

PG	Mtech,Electronics And Communication Engineering	24	Higher Secondary	English	18	5
PG	Mtech,Electronics And Communication Engineering	24	Higher Secondary	English	18	2
PG	Mtech,Computer Science And Engineering	24	Higher Secondary	English	24	5
PG	Mtech,Computer Science And Engineering	24	Higher Secondary	English	24	4
PG	Mtech,Electrical And Electronics Engineering	24	Higher Secondary	English	24	4
PG	Mtech,Civil Engineering	24	Higher Secondary	English	24	21
PG	Mtech,Mechanical Engineering	24	Higher Secondary	English	24	1
PG	MBA,Mba	24	Higher Secondary	English	60	59

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				20				117			
Recruited	8	2	0	10	4	7	0	11	48	69	0	117
Yet to Recruit	0				9				0			
Sanctioned by the Management/Society or Other Authorized Bodies	10				11				117			
Recruited	8	2	0	10	4	7	0	11	48	69	0	117
Yet to Recruit	0				0				0			

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				71
Recruited	52	19	0	71
Yet to Recruit				0

Technical Staff				
	Male	Female	Others	Total
Sanctioned by the UGC /University State Government				0
Recruited	0	0	0	0
Yet to Recruit				0
Sanctioned by the Management/Society or Other Authorized Bodies				33
Recruited	21	12	0	33
Yet to Recruit				0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	7	1	0	4	5	0	0	1	0	18
M.Phil.	0	0	0	0	0	0	1	1	0	2
PG	0	1	0	0	2	0	46	68	0	117

Temporary Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	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			Total
	Male	Female	Others	Male	Female	Others	Male	Female	Others	
D.sc/D.Litt.	0	0	0	0	0	0	0	0	0	0
Ph.D.	1	0	0	0	0	0	0	0	0	1
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		Total
	1		0		1

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	176	0	44	0	220
	Female	54	0	12	0	66
	Others	0	0	0	0	0
PG	Male	40	0	0	0	40
	Female	61	0	0	0	61
	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	33	40	44	41
	Female	8	14	23	28
	Others	0	0	0	0
ST	Male	0	0	0	0
	Female	1	1	0	0
	Others	0	0	0	0
OBC	Male	641	598	566	549
	Female	316	427	476	458
	Others	0	0	0	0
General	Male	505	543	595	586
	Female	304	348	469	533
	Others	0	0	0	0
Others	Male	0	0	0	0
	Female	0	0	0	0
	Others	0	0	0	0
Total		1808	1971	2173	2195

3. Extended Profile

3.1 Program

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

Response: 753

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of programs offered year-wise for last five years

2017-18	2016-17	2015-16	2014-15	2013-14
15	15	15	15	14

3.2 Students

Number of students year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1810	1971	2175	2199	2096

File Description	Document
Institutional Data in Prescribed Format	View Document

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

2017-18	2016-17	2015-16	2014-15	2013-14
116	132	132	132	132

File Description	Document
Institutional data in prescribed format	View Document

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

2017-18	2016-17	2015-16	2014-15	2013-14
505	522	661	574	580

File Description	Document
Institutional Data in Prescribed Format	View Document

3.3 Teachers

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

2017-18	2016-17	2015-16	2014-15	2013-14
153	159	172	166	152

File Description	Document
Institutional Data in Prescribed Format	View Document

Number of sanctioned posts year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
176	176	172	166	152

File Description	Document
Institutional data in prescribed format	View Document

3.4 Institution

Total number of classrooms and seminar halls

Response: 69

Total Expenditure excluding salary year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
597.21	589.67	684.69	733.51	640.71

Number of computers

Response: 518

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:

University academic calendar is strictly adhered to. In order to enable the planned coverage of syllabus, a detailed academic calendar including all important dates for curricular, co-curricular and extracurricular activities is prepared by a committee headed by Dean Academics and is implemented.

Before the beginning of semester, faculty prepares their course plan which is approved by HOD. According to this course plan, the course syllabus is covered at appropriate pace including proper revisions prior to the commencement of the university examination. A model/practice session examination is also conducted for all courses in accordance with university question pattern.

Students are also made aware of course plan in the beginning of the semester. Also if a faculty finds that he or she is lagging behind the course plan, extra classes will be scheduled as and when required during holidays. The HOD monitors the implementation of course plan. Course committee meetings with student representatives are conducted and feedback from students is taken twice in a semester. Student's progress is assessed through class tests and reported to parents/PTA meeting.

Course plans for lab are also prepared which includes number of experiments as per the curriculum. Additional experiments are also included. Laboratory manuals are prepared covering all the experiments in the course plan and are issued to the students at the commencement of the practical course.

The institution follows pedagogical model based on Revised Blooms Taxonomy (RBT) and Creative Learning Process (CLP) enabling the students to achieve the knowledge through all levels of learning.

Faculty prepare learning materials, Format for Class room Teaching, question bank, previous question papers, follow chalk and board and ICT. The abstract concepts are explained with reference to real world situations. For continuous monitoring of student progress various assessment tools and micro teaching are followed.

During tutorial hours extra problems will be given to students for problematic courses or difficult concepts will be explained for other courses. Two teachers will be in charge of this hour which will provide individual attention.

File Description	Document
Any additional information	View Document

1.1.2 Number of certificate/diploma program introduced during the last five years**Response:** 2**1.1.2.1 Number of certificate/diploma programs introduced year-wise during the last five years**

2017-18	2016-17	2015-16	2014-15	2013-14
0	1	0	0	1

File Description**Document**

Details of the certificate/Diploma programs

[View Document](#)

Any additional information

[View Document](#)**1.1.3 Percentage of participation of full time teachers in various bodies of the Universities/ Autonomous Colleges/ Other Colleges, such as BoS and Academic Council during the last five years****Response:** 13.09**1.1.3.1 Number of teachers participating in various bodies of the Institution, such as BoS and Academic Council year-wise during the last five years**

2017-18	2016-17	2015-16	2014-15	2013-14
7	6	2	3	3

File Description**Document**

Details of participation of teachers in various bodies

[View Document](#)

Any additional information

[View Document](#)**1.2 Academic Flexibility****1.2.1 Percentage of new Courses introduced out of the total number of courses across all Programs offered during last five years****Response:** 87.25**1.2.1.1 How many new courses are introduced within the last five years****Response:** 657

File Description	Document
Details of the new courses introduced	View Document
Any additional information	View Document

1.2.2 Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system has been implemented

Response: 93.33

1.2.2.1 Number of programs in which CBCS/ Elective course system implemented.

Response: 14

File Description	Document
Name of the programs in which CBCS is implemented	View Document
Minutes of relevant Academic Council/BOS meetings.	View Document
Any additional information	View Document

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

Response: 2.19

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

2017-18	2016-17	2015-16	2014-15	2013-14
111	55	44	00	00

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

1.3 Curriculum Enrichment

1.3.1 Institution integrates cross- cutting issues relevant to Gender, Environment and Sustainability,

Human Values and Professional Ethics into the Curriculum**Response:****GENDER**

Various gender equity programmes include awareness and sessions on

- Self-defence and women's safety
- Interpersonal relationship,
- Celebrating international women's day and womanhood
- Organizing cancer awareness and hair donation programs.
- Employability & Entrepreneurship for women.
- Development and promotion of 'I Follow' App for Women's Safety

Anti-Sexual Harassment and Women's Cell and Grievance Redressal Cell looks into grievances of faculty, students and hostel inmates.

ENVIRONMENT AND SUSTAINABILITY

S.No	Core Courses	Description
1.	Environmental studies (CUSAT) – First Year	Natural resource, Concept of an ecosystem Environmental Pollution, The concept of development
2.	Sustainable Engineering (KTU) – First Year	Sustainability- needs and concept, Environmental Acts and Protocol, Global, local environmental issues, Natural resource pollution, Carbon credits, Zero waste c 14000, Life Cycle Assessment, Environm Assessment Studies, Sustainable habitat, G Green material, Energy, Sustainable Industrial Ecology.
3.	Environmental Engineering (Civil Engineering)	Environmental impacts of solid waste pollutants on the water and air quality and environment and human health. Solid waste management, wastewater treat pollution control methods.
4.	Environmental Engineering and Management (Safety and Fire Engineering)	Environmental impacts of solid waste pollutants on the water and air quality and environment and human health. Solid waste management, wastewater treat pollution control methods. Environmental impact assessment, E Auditing, Clean development mechanism Life cycle assessment.

5.	Disaster Management (Safety and Fire Engineering)	Fundamentals of disaster and its management. Students gain idea about the nature, applications of disaster management principles both natural and man-made disasters.
6.	Environmental Pollution and Control	Environmental management in industries, EMS, Clean development mechanism, pollution- Water pollution – Solid wastes, hazardous wastes.
7.	World Outside Program (WOP) on Green Technology	Sustainability, 'Cradle to cradle' design, waste reduction, innovation, viability. Concepts like green building, green chemistry, green nanotechnology, recycling, water purification, air purification, environmental remediation, environmental management.

International and National days like World Environment Day, World Water Day are observed by conducting awareness programmes.

HUMAN VALUES AND PROFESSIONAL ETHICS

S.No	Core Courses	Description
1.	Design and Engineering -First year (all branches)	Planning and design based on the concepts of ergonomics, human psychology and design.
2.	Life Skills - second year (all branches)	Human Values, Civic Rights, Engineering as social experimentation, Ethics, Global Issues, Code of Ethics.
3.	Principles of Management – Third year (all branches)	Social Responsibility, Decision making under uncertainty and risks.
4.	World Outside Program (WOP)	Positive thinking, Etiquette, Leadership, duties, Religion and Human values.

File Description	Document
Any Additional Information	View Document

1.3.2 Number of value added courses imparting transferable and life skills offered during the last five years

Response: 6

1.3.2.1 Number of value-added courses imparting transferable and life skills offered during the last five years	
Response: 06	
File Description	Document
Details of the value-added courses imparting transferable and life skills	View Document
Brochure or any other document relating to value added courses.	View Document

1.3.3 Percentage of students undertaking field projects / internships	
Response: 22.93	
1.3.3.1 Number of students undertaking field projects or internships	
Response: 415	
File Description	Document
List of students enrolled	View Document
Institutional data in prescribed format	View Document
Any additional information	View Document

1.4 Feedback System

<p>1.4.1 Structured feedback received from 1) Students, 2)Teachers, 3)Employers, 4)Alumni and 5)Parents for design and review of syllabus-Semester wise/ year-wise</p> <p>A.Any 4 of the above</p> <p>B.Any 3 of the above</p> <p>C. Any 2 of the above</p> <p>D. Any 1 of the above</p> <p>Response: B.Any 3 of the above</p>
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File Description	Document
Any additional information	View Document
Action taken report of the Institution on feedback report as stated in the minutes of the Governing Council, Syndicate, Board of Management	View Document

1.4.2 Feedback processes of the institution may be classified as follows:

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

B. Feedback collected, analysed and action has been taken

C. Feedback collected and analysed

D. Feedback collected

Response: B. Feedback collected, analysed and action has been taken

File Description	Document
Any additional information	View Document

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1 Average percentage of students from other States and Countries during the last five years

Response: 0.7

2.1.1.1 Number of students from other states and countries year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
12	12	13	21	14

File Description

Document

List of students (other states and countries)

[View Document](#)

Institutional data in prescribed format

[View Document](#)

2.1.2 Average Enrollment percentage (Average of last five years)

Response: 73.62

2.1.2.1 Number of students admitted year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
392	480	551	679	575

2.1.2.2 Number of sanctioned seats year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
696	756	756	756	672

File Description

Document

Institutional data in prescribed format

[View Document](#)

2.1.3 Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years

Response: 83.54

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

2017-18	2016-17	2015-16	2014-15	2013-14
97	102	117	109	113

File Description	Document
Institutional data in prescribed format	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, after admission and organises special programs for advanced learners and slow learners

Response:

- We have a system for mentoring/ tutorials for slow learners. The four points that we concentrate in mentoring are **T**each, **I**nspire, **M**otivate and **E**mpower.
- Formal mentoring is adopted. Each class is assigned four mentors and 15 students are allotted for a mentor. All the problems related to students are solved by mentors . External help from qualified counselors of Psychology department shall be called for, if required, for special cases, with the consent of the parents .
- The entire class is divided into six groups. Group assignments are given to students in addition to individual assignments.
- Class-in -charges of each admission are entrusted with the task of mentoring, to closely monitor the EQ and IQ of each student. The class is divided equally among the 3 class-in-charges according to their roll numbers, for each admission. Since the class-in-charges are the same till the student graduates for a particular year of admission, the mentoring of the student will be very effective and hence will improve their EQ and IQ levels.
- Remedial classes are offered by respective faculty for each course, in every semester, for slow learners in the class. Their progress is assessed based on their performance in the subsequent academic assessment tests. Teachers make special effort to conduct remedial classes during study leaves and lunch breaks.
- Teachers prepare visual presentations to convey difficult concepts to the students.
- Parallel learning, creative learning, analogies, modelling, simulations are some of the common elements of the creative learning process (CLP) used by our faculty as teaching aid to make complex concepts easy and simple for knowledge assimilation by students.

Strategies for facilitating advanced learners

- Advanced learners are identified as student mentors in class groups which itself is a motivation for these students.
- Proficiency award is given to the student who has secured the top position in each class. This becomes a source of motivation for them to continue their outstanding performance and for others to strive for better performance.
- In addition to the Proficiency award, Best student award is awarded annually to the student from each batch considering their academic excellence and their performance in co-curricular and extra-curricular activities along with the academic performance. These awards are given to the students on College Day.
- University Rank holders and toppers deserve special appreciation in bringing laurels to the departments and the institution.
- The list of all university rank holders are displayed in the departments.
- They are encouraged to give seminars, conduct technical quiz and group discussions on various topics with peers.
- Additional programmes like GATE coaching, technical workshops etc are arranged for interested students.

2.2.2 Student - Full time teacher ratio

Response: 11.83

File Description	Document
Any additional information	View Document

2.2.3 Percentage of differently abled students (Divyangjan) on rolls

Response: 0.06

2.2.3.1 Number of differently abled students on rolls

Response: 1

File Description	Document
List of students(differently abled)	View Document
Institutional data in prescribed format	View Document
Any other document submitted by the Institution to a Government agency giving this 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 experimental learning is done in many ways such as :-

- On job training and internships are given to MBA students.
- Workshops conducted on topics related to the course which are not included in the curriculum like software, workshops, embedded systems, aero modeling etc.
- Imparted hands on experience, workshops like Android applications, robotics, raspberry Pi, Arduino, Intel Galileo, B+ launch pad, Epicyclic gear train test rig, motorized gyroscope, whirling of shaft, static & dynamic balancing machine, vibration measuring instrument, TIG welding machine, MIG welding machine, Pipe bending Machine, Sheet bending machine, Hydraulic power press, Pick & place robot, sensors & actuators in automation, Agilent lab.
- Marketing training is given to students of MBA by conducting Christmas and Onam trade fair, students' outreach program etc
- Mini projects are given to students as part of syllabus.
- Competitions on Cube casting (in association with ICI), posters and power point presentation are conducted.
- Brain storming and discussion on topics beyond syllabus improve self learning capabilities
- Lab experiments beyond curriculum give an opportunity to learn and apply skills based on one's on learning capabilities.
- Industrial visits to gain onsite experience in various industrial sites.

1. PARTICIPATIVE LEARNING

- Students in each class is divided into group of six with a topper in each group and encouraged to promote co-operative learning.
- Students encouraged to conduct seminars on the basics/ fundamentals of subjects; also encouraged to attend the workshop and conferences so as to take up engineering project in community service.
- College has institutional member ship of DELNET (Developing library network), NDL (National Digital Library), NPTEL video lectures , Emerald Management for management studies, INDEST, Elsevier- Science Direct
- Workshops , seminars ,extempore, JAM, GD arranged
- Peer learning, group discussions, quiz, student's seminar
- Inter collegiate maths quiz

1. PROBLEM SOLVING METHODOLOGIES

- Design projects(selecting 3 products, analyze, study and develop one product)
- Major and minor projects providing scope for evolution of problem solving methodologies
- Open ended question added in the practical manual book
- Additional lab experiments beyond the scope of curriculum
- Tutorial classes conducted by faculty
- MOU s with industries for better training
- PPTs prepared by respective faculty to make fundamental concepts easy and simple
- Real world examples discussion and related videos.
- Difficult concepts are identified in each subject and models of analogies prepared to explain them.
- In consultation with PWD, projects were taken by students and real experiment was done on a sector of road earmarked by the Mulanthuruthi Panchayat and was widely appreciated.

- As a part of B.Tech student project, Rainbow bridge connecting the sloppy road and first floor of Vishveshwaraya block was designed and implemented.

2.3.2 Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.

Response: 90.85

2.3.2.1 Number of teachers using ICT

Response: 139

File Description	Document
List of teachers (using ICT for teaching)	View Document

2.3.3 Ratio of students to mentor for academic and stress related issues

Response: 12.75

2.3.3.1 Number of mentors

Response: 142

File Description	Document
Any additional information	View Document

2.3.4 Innovation and creativity in teaching-learning

Response:

The institution plan and organize teaching schedule. We follow pedagogical model based on Revised Blooms Taxonomy (RBT) and Creative Learning Process (CLP); the delivery of the course syllabus starts from a higher level like application level. Th helping students to achieve knowledge through all levels of learning.

faculty prepare learning material Formats for Class room Teaching, question and answer bank, and teach with the aid of chalk and board and ICT facilities. Teachers use latest technologies such as e-learning, NPTEL videos etc for effective learning. The abstract concepts are explained with reference to real world situations, wherever applicable.

For continuous monitoring of student progress, class tests are conducted after each module, as per course plan. Suggestion box are kept in all blocks for innovative ideas in teaching learning process.

In Faculty Development programme(FDP), rather than teaching learning practice, hours are included for providing guidance for the student performance and development,

The following Innovations are adopted for the betterment of teaching learning process

- Industrial visits to gain onsite experience.
- Workshops conducted on topics related to the course but not included in the curriculum.
- hands on experience, workshops
- trade fair, students' outreach program
- Brain storming and group discussion
- Lab experiments beyond curriculum
- Outcome based Education (OBE)
- Covering Course content beyond the prescribed syllabus
- Progress card after every IA
- PTI meeting for interaction with respective faculty
- student evaluation done through feedback
- Peer teacher evaluation and follow up
- Invited talks by renowned professors and experts
- Case studies to MBA students
- Regular industrial trainings / visits
- Major and minor projects providing scope for evolution of problem solving methodologies
- Open ended question added in the practical manual book
- Additional lab experiments beyond the scope of curriculum
- Tutorial classes

Creativity in teaching learning are :

Pedagogical models in teaching design and engineering adopted. For project based learning (PBL) followed.

- Promotion of critical thinking skills.
- Researchers who receive on-the-job support, guidance and feedback from a supervisor or a trained support person apply new skills and strategies more frequently and appropriately and adopt a more diverse range of instructional practices than teachers who do *not* receive such supports

2.4 Teacher Profile and Quality

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

Response: 104.06

File Description	Document
Year wise full time teachers and sanctioned posts for 5 years	View Document

2.4.2 Average percentage of full time teachers with Ph.D. during the last five years**Response:** 14

2.4.2.1 Number of full time teachers with Ph.D. year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
19	23	22	23	25

File Description**Document**

List of number of full time teachers with PhD and number of full time teachers for 5 years

[View Document](#)**2.4.3 Teaching experience per full time teacher in number of years****Response:** 10.23

2.4.3.1 Total experience of full-time teachers

Response: 1565

File Description**Document**

Any additional information

[View Document](#)**2.4.4 Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years****Response:** 3.74

2.4.4.1 Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
03	01	01	00	01

File Description	Document
Institutional data in prescribed format	View Document
e-copies of award letters (scanned or soft copy)	View Document
Any additional information	View Document

2.4.5 Average percentage of full time teachers from other States against sanctioned posts during the last five years

Response: 18.49

2.4.5.1 Number of full time teachers from other states year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
33	31	35	22	27

File Description	Document
List of full time teachers from other state and state from which qualifying degree was obtained	View Document

2.5 Evaluation Process and Reforms

2.5.1 Reforms in Continuous Internal Evaluation(CIE) system at the institutional level

Response:

Before the start of the semester Academic calendar is displayed on college notice board and website, through student induction programmes and PTA meetings. Being an affiliated college, the internal and external evaluation schemes followed are as prescribed by the university. The evaluation process is given in the college prospectus there. Proper conduct and Transparency are ensured by exams cell, observer appointed by university and CCTV camera. The university question papers are generated online and will be received only half an hour prior to the commencement of university exam. Instructions are displayed in all halls to intimate the students.

For Internal Exams, question papers set by each faculty based on RBT Considering advanced and slow learners by following a common pattern of difficulty level- 30% difficult, 40% average and 30% easy questions. The input based on easy, average and difficult questions enable the designing the tutorial and remedial hours Before the start of the semester Academic calendar is displayed on college notice board and website, through student induction programmes and PTA meetings. Question bank with answers keys are given to the students. The internal evaluation for theory courses consists of the following assessment tools are internal Assessment , two assignments are conducted as per university syllabus additionally three class test and additional one assignment are also held per semester.

As per curriculum, the students have to carry out a major project in end semesters. Students are advised and encouraged to identify their areas of interest in line with the recent research and development. This is achieved by interaction with faculty, technical experts from industry and literature review. The scrutinized topics are presented before an expert committee comprising of Head of the Department, 2 senior faculty, project co-coordinators and the project guide. The project guides regularly monitor the progress of project based on weekly discussions. Interim Presentation is done. by each project group before the expert committee. The committee of internal examiners along with the guide will evaluate the final project/research work.

2.5.2 Mechanism of internal assessment is transparent and robust in terms of frequency and variety

Response:

As per the university norms two internal assessment tests(IA) and two assignments are conducted in a semester for each course.

- As per academic calendar the schedule for the internal assessments are prepared by the Internal Assessment (IA) cell and circulated to all departments.
- Faculty members are instructed to use Revised Bloom's Taxonomy to prepare the question papers that test the various levels of learning and the relevant course outcomes.
- Question paper scrutiny committee assesses the quality of question papers submitted by individual faculty members. Also, it ensures the clarity of the questions on various aspects.
- The committee also checks the distribution of the marks based on the difficulty level of the question with respect to the learning ability of the students, as follows
 - Questions that can be answered by an average student :40%
 - Intermediate level of questions :30%
 - Advance level questions :30%
- Proper records are maintained for question paper collection and conduct of retest.

Evaluation and Process Implementation

- The scheme of evaluation and answer key of each question paper is prepared.
- Grading are done strictly based on evaluation scheme.
- Answer scripts are evaluated by the concerned subject faculty members within a week and the result is published. The final sessional marks are also published in the notice board before uploading on the university portal with their attendance.
- Students may be allowed to take retest only on medical or other genuine grounds.
- For practical paper, Continuous Assessment (CA) is done by considering day to day laboratory work, record submission, viva and laboratory examination at the end of the semester.
- End semester examinations for the project (only for PG) shall be conducted with an external examiner appointed by the university and internal examiner from the college.
- Each faculty provides effective feedbacks regarding performance and presentation of answers to students.

- During ISO audit, the function of IA cell and its process are assessed.

Evaluation of Assignment

- Students are expected to submit the assignments as per scheduled date specified by faculty.
- Each faculty has to prepare scheme of evaluation.
- Marks are given based on evaluation scheme.
- The Quality of referred material use to answer assignment also considered during the assessment.
- Comments on the feedback quality/correctness of the answer are given on the answer script by the faculty to improve the knowledge level of the students.
- After evaluation faculty gives a feedback to the students.
- Progress reports are sent to their parents regularly. The students are continuously evaluated through a transparent internal evaluation process.
- Regular PTA meetings discuss the progress of the students and remedial measures are taken.

2.5.3 Mechanism to deal with examination related grievances is transparent, time-bound and efficient

Response:

Internal Exam : IDC

- Grievances are taken into accounts on genuine reasons and remedial measures are taken.
- There is a student grievance cell in the college headed by the Dean (Student Affairs & Academics) to whom the students can address their grievances.

Academic discipline and malpractices in Examination every student is required to observe discipline and decorous behavior. Any act of indiscipline, misbehavior and unfair practice in examinations will be referred to the Disciplinary Action Committee (DAC).

Malpractices in examination shall be viewed seriously and any such incident observed or reported by a faculty member or an invigilator associated with the examinations shall be reported to the principal who in turn shall refer it to DAC. On the basis of the report and evidence available or gathered, DAC shall immediately initiate an enquiry giving the concerned student a chance to explain his/her case.

Based on this the committee shall recommend the course of action in line with the guidelines formulated for this by the controller of examination of the university and forward it to the principal for action. Actions are to be based on the severity of the offence and are to be dealt with, on a case basis. Guidelines on this shall be given by the controller of examination which is to be followed by the disciplinary action committee of the college. The student may appeal to the grievances and appeals committee for a relook on the matter. Based on the committee's report, the principal shall take a final decision on the matter.

DAC shall be headed by a department head and shall have three other faculty members drawn from different departments as members. In case of malpractices in end semester examination, the report given by the college DAC and the action taken by the principal shall be intimated to the controller of examination of the university.

2.5.4 The institution adheres to the academic calendar for the conduct of CIE**Response:**

University academic calendar is strictly adhered to. For planned coverage of syllabus and criterion evaluation, a separate academic calendar is prepared by a committee headed by Dean Academics and it is communicated to all departments for strict compliance. This calendar will indicate all academic, co-curricular and extracurricular activities. Namely The commencement of the semester, Class committee and Course Committee meetings, Arts/sports and other festivals and celebrations, Submission of internal marks, Closing of attendance, University exams, Internal assessment test, Model exam, End of the semester, Seminars, Workshop, Technical fest, Schedule for practical exams as specified by CUSAT and KTU, Last date for announcement of shortage of attendance, Last working day

In the light of college academic calendar, each faculty prepares a course plan. According to this course plan the course syllabus is covered at appropriate pace including proper revisions prior to the commencement of the university examination. A model/Practice examination is also conducted for all courses in accordance with university question pattern.

KTU Academic Audit: External academic auditor physically verifies all internal audit statements twice in a semester at the college. The academic auditing shall cover course delivery, syllabus covered, adherence to course plan, timely conduct of internal exams and publishing of internal marks, course committee and class committee minutes, students' grievances, welfare, discipline committee functioning and their minutes.

2.6 Student Performance and Learning Outcomes**2.6.1 Program outcomes, program specific outcomes and course outcomes for all programs offered by the Institution are stated and displayed on website and communicated to teachers and students****Response:**

The consolidated Course Outcomes of the respective course of the semester is displayed in all classes. The

same is available in all course diaries along with the mapping of the same with Programme Outcomes and Programme Specific Outcomes. This entire document is made available in the form of course handout along with many other details viz. course plan, question bank, assignment questions, evaluation scheme for all courses of UG programmes in the department and is shared to the students via google drive.

File Description	Document
COs for all courses (exemplars from Glossary)	View Document

2.6.2 Attainment of program outcomes, program specific outcomes and course outcomes are evaluated by the institution

Response:

Programme outcome attainment process has been done by taking, direct and indirect assessment tools. 80% of direct attainment and 20% of indirect attainment is considered for calculation of PO attainment. Direct attainment of programme outcomes and programme specific outcomes are based on the logical mapping of cognitive levels of course outcomes with programme outcomes and programme specific outcomes. This process is done by mapping the attained values of course outcomes with the programme outcomes and programme specific outcomes.

1. Assessment Method of PO & PSO

1	Assessment of COs & their Contribution to PO Attainment	80%
2	Assessment of Project & its Contribution to PO Attainment	
3	Assessment of S eminar & Its Contribution to PO Attainment	
4	Student's Alumni Feedback	5%
5	Student's Program Exit Feedback	5%
6	Student's Event feedback	10%

For determining indirect attainment of programme outcomes and programme specific outcomes, the following assessment tools have been used. viz. student participation in co-curricular, extra-curricular activities and student surveys. Three student surveys conducted are event feedback survey, program exit survey and feedback of alumni. Events considered include technical talks, industrial visits, technical forums, workshops, seminars, site visits, and bridge courses. After completing the event relating to each tool used for indirect attainment, student feedback is taken and analyzed to check the effectiveness of the same. In the second student survey, exit feedback is taken in which an exhaustive questionnaire is prepared to relate all programme outcomes and programme specific outcomes. Alumni feedbacks are also collected by contacting the alumni via. email & phone. This is used to identify any gap pertaining to quality, latest technology or any other related topics that have to be included in each course.

Finally, overall programme outcomes and programme specific outcomes attainment values are computed by adding direct and indirect programme outcomes and programme specific outcomes attainment values in the proportion of 80:20 respectively.

Programme outcomes and programme specific outcomes Attainment process

- In each course, five course outcomes are framed based on RBT levels and course levels.
- Logical mapping of cognitive levels of course outcomes with programme outcomes and programme specific outcomes are done.
- The average correlation level is calculated for all programme outcomes and programme specific outcomes for each course based on the 5 CO's, and rounded off to nearest whole number 1, 2 or 3.
- For average correlation level value 1, one third of CO attainment is considered of corresponding subject for calculation of PO & PSO attainment. Similarly for correlation level value 2 and 3, two third and same value of CO attainment is taken respectively.
- Indirect programme outcome and programme specific outcome attainment values are estimated from each tool used for filling the gap identified in criteria 2.
- Total programme outcome and programme specific outcome attainment value is the sum of direct attainment and indirect attainment values.
- If the CO attainment level is not attained the course shall not be considered for CO-PO mapping.

2.6.3 Average pass percentage of Students**Response:** 68.71

2.6.3.1 Total number of final year students who passed the examination conducted by Institution.

Response: 347

2.6.3.2 Total number of final year students who appeared for the examination conducted by the institution

Response: 505

File Description**Document**

Institutional data in prescribed format

[View Document](#)**2.7 Student Satisfaction Survey****2.7.1 Online student satisfaction survey regarding teaching learning process****Response:** 3.4

Criterion 3 - Research, Innovations and Extension

3.1 Resource Mobilization for Research

3.1.1 Grants for research projects sponsored by government/non government sources such as industry ,corporate houses, international bodies, endowment, chairs in the institution during the last five years (INR in Lakhs)

Response: 7.8

3.1.1.1 Total Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
7	0.8	00	00	00

File Description	Document
List of project and grant details	View Document
e-copies of the grant award letters for research projects sponsored by non-government	View Document

3.1.2 Percentage of teachers recognised as research guides at present

Response: 5.23

3.1.2.1 Number of teachers recognised as research guides

Response: 8

File Description	Document
Any additional information	View Document

3.1.3 Number of research projects per teacher funded, by government and non-government agencies, during the last five year

Response: 0.04

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

Response: 3

3.1.3.2 Number of full time teachers worked in the institution during the last 5 years

Response: 363

File Description	Document
Supporting document from Funding Agency	View Document

3.2 Innovation Ecosystem

3.2.1 Institution has created an ecosystem for innovations including incubation centre and other initiatives for creation and transfer of knowledge

Response:

To impart technical and innovative skills, an Entrepreneurship Development club was started in 2013. A team of students in the club won Black Berry Jam Asia Pacific Hackathon organized by BlackBerry and represented India. The cell paved the way for the students in similar national/international competitions. Keen to have a recognized platform, TIST entered into an MoU with Startup village on 24th March 2015, to organize various startup village initiatives including Boot camp.

As per the guidelines of Kerala Startup Mission, TIST IEDC was formed merging entrepreneurship Development club and is now governed by an executive committee. They are selected based on the recommendations of their respective HODs and headed by a Nodal Officer and supported by departmental staff coordinators.

TIST IEDC organizes various workshops in domains like applications development, 3D printing, programming, hacking etc, and motivates the teams to participate in national/international level competitions, by setting up startups, providing a platform with a team of entrepreneurs, organizes visits to Fab-lab, helps to experience the technical prototyping platform enabling the students to launch innovative products and prototypes of new models. IEDC supports global level representations in scientific and technological field. Technological developments are familiarized regularly through various programs like workshops on android, robotics, arduino, residential workshops etc to ignite the zeal for tinkering. Members are encouraged to participate in government supported projects like “Map my Home project” funded and organized by Google in association with Kerala Land Records and Survey department. IEDC also promotes social outreach programs, intercollegiate technical programs on FOSS which promote the virtues of free software and to increase the awareness regarding how each one can contribute to the open source arena. Maker Expo, an attempt to map and empower a community of educators and creative people was also organized. Some of the tangible outcome of IEDC initiatives is listed below:

- Participated in the annual CANSAT competition held in USA and World’s premier robotics competition.
- Aravind Sanjeev and Jibin Josewere the first winners of the Annual SV Square project which was officially rolled out by startup village offering an all- expenses-paid trip to Silicon Valley.
- Juhaim Ibnu Mohammed, the founder and CEO of Reckone Inventions launched ‘Ridelogik’ a fit bit for motorcycles, which diagnose the real time engine performance, connects with community riders, provides crash alert for security.
- Twenty students participated in Google Map My Home- project funded and organised by Google in association with Kerala Land Records and Survey department.

- Abraham Solomon, one among the 21 entrepreneurs selected by seventeen companies incubated by TIST students.
- Started outreach programs to extend support to other institutions for learning advanced tools and technologies.
- Enabled the students to develop communities by participating in various Summits.
- Manju Mohan could team up with students from multiple engineering colleges across the nation to put forward a project which maps Block chain with the healthcare industry.

File Description	Document
Link for Additional Information	View Document

3.2.2 Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the last five years

Response: 44

3.2.2.1 Total number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
18	05	06	03	12

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

3.3 Research Publications and Awards

3.3.1 The institution has a stated Code of Ethics to check malpractices and plagiarism in Research

Response: No

File Description	Document
Institutional data in prescribed format	View Document

3.3.2 The institution provides incentives to teachers who receive state, national and international recognition/awards

Response: No

3.3.3 Number of Ph.D.s awarded per teacher during the last five years

Response: 0.25

3.3.3.1 How many Ph.Ds awarded within last five years

Response: 2

3.3.3.2 Number of teachers recognized as guides during the last five years

Response: 8

File Description	Document
URL to the research page on HEI web site	View Document
List of PhD scholars and their details like name of the guide , title of thesis, year of award etc	View Document

3.3.4 Number of research papers per teacher in the Journals notified on UGC website during the last five years

Response: 0.34

3.3.4.1 Number of research papers in the Journals notified on UGC website during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
10	12	18	08	06

File Description	Document
List of research papers by title, author, department, name and year of publication	View Document

3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years

Response: 0.44

3.3.5.1 Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
22	14	11	15	09

File Description	Document
List books and chapters in edited volumes / books published	View Document

3.4 Extension Activities

3.4.1 Extension activities in the neighbourhood community in terms of impact and sensitising students to social issues and holistic development during the last five years

Response:

To maintain a link between the institution and the community, all extension activities are promoted and regulated by TIST, namely NSS Yi (Young Indians) ENCON and KARMA.

The NSS units has faculty coordinator who will be a person having flare in taking up social initiatives. The students and faculty are given duty leave for participating and organizing extension activities. Financial, moral and emotional support are given by the management & the institution. Our education/research/extension are based upon the basic human values to help individuals/families and community as a whole to lead a successful life in changing our neighborhood society which is also the surviving strength of our Institute. Student volunteers are encouraged & motivated by providing them opportunities to attend camps and given awareness programs on various social/health issues like cancer, Greening the campus, eye care, anti drug campaign etc.

The major extension activities organized by the NSS over the past five years include organizing free medical and blood donation camps, cleaning programs in & off the campus and hospitals. Organized visits to old age homes, orphanages and special school for children providing emotional and financial support. Department of Civil Engineering celebrated World Water Day 2018 in association with NSS by cleaning a pond at Arakkunnam Chira, as part of Nooru Kulam Project (under 100 wells Project). The cleaning was conducted under the supervision of Mulanthuruthy Panchayat President and NSS.

The TIST chapter of Yi was formed with an objective of creating a platform for Young Indians to realize the dream of a developed nation. Since its inception in 2002, it has undertaken various charitable events & awareness campaigns. Yi has around 1500 direct members in 12 chapters and engages around 8300 students through student nets. Under Nation Building, Yi engages its members under the broad categories of education environment, healthcare, employability, arts (sports & culture) and rural initiatives contributing to its surrounding eco system and the nation.

ENCON club aimed at practicing energy conservation and environment protection, gives a platform to acquire process and share knowledge on the subject. Kochi refinery also started ENCON clubs in the year 2002 associating with the younger generation in protecting and preserving environment. The main objective of this ENCON club is to drive home the message of energy conservation and environment protection in the minds of students, by organizing regular activities, talks, seminars, workshop, exhibition and other awareness programs. Thus we create a strong network of environment conscious people who would pass on the tradition to generation next. At present we have about 50 BPCL Kochi refinery

sponsored ENCON clubs in educational institutions in Kerala. In pursuit of this mission, we connect people, conceptualize and facilitate knowledge enriched open platform of discussion and dissemination of knowledge in an environment designed to encourage interaction among participants.

TIST started KARMA for extending support to poor people in the society by catering to five sectors, viz., Food, Health Care, Education, Volunteer and Shelter. Any student of TIST with an intention to help others can join this group.

3.4.2 Number of awards and recognition received for extension activities from 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 /recognised bodies year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
00	00	00	00	0

File Description

Document

Number of awards for extension activities in last 5 years

[View Document](#)

e-copy of the award letters

[View Document](#)

3.4.3 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., during the last five years

Response: 38

3.4.3.1 Number of extension and outreach Programs conducted in collaboration with Industry, Community and Non- Government Organizations through NSS/ NCC/ Red Cross/ YRC etc., year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
12	6	9	5	6

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

3.4.4 Average percentage of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the last five years

Response: 4.44

3.4.4.1 Total number of students participating in extension activities with Government Organisations, Non-Government Organisations and programs such as Swachh Bharat, Aids Awareness, Gender Issue, etc. year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
100	62	50	90	150

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 linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc during the last five years

Response: 105

3.5.1.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
25	29	18	19	14

File Description	Document
Number of Collaborative activities for research, faculty etc	View Document
Copies of collaboration	View Document

3.5.2 Number of functional MoUs with institutions of National/ International importance, Other Institutions, Industries, Corporate houses etc., during the last five years (only functional MoUs with ongoing activities to be considered)

Response: 7

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 (only functional MoUs with ongoing activities to be considered)

2017-18	2016-17	2015-16	2014-15	2013-14
02	02	02	01	00

File Description	Document
e-copies of the MoUs with institution/ industry/ corporate house	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 facilities for teaching- learning. viz., classrooms, laboratories, computing equipment, etc.

Response:

The institution has the policy of replacing or upgrading the existing equipment to meet the changes in the syllabus made by the university from time to time. The campus is spread over 26.08 Acres of land.

Infrastructure: The Aryabhata Block accommodates Principal, Board room, Administrative office, Examination cell, Seminar hall, Training and Placement cell and the departments of Electronics and Communication engineering, Management Studies (MBA), Prayer Room, Yoga Room, etc..

The Einstein Block houses departments of Electrical and Electronics engineering, Computer Science engineering, Science & Humanities, Information Technology, common Computer Centre, Central library, Science & Humanities and Mathematics.

Visvesvaraya Block accommodates departments of Mechanical engineering, Civil Engineering & Safety and Fire Engineering.

All the 3 blocks are fully equipped with the necessary infrastructure, adequate class rooms, seminar halls, tutorial halls, laboratories, space for academic activities and individual departmental libraries.

Class Rooms: Well-furnished, ventilated, spacious class rooms for conducting theory classes. Lighting is provided with good acoustics. All the class rooms of individual departments are at close proximity in order to have better access for the students. Each department is also being provided with tutorial classroom.

ICT facilities: Multimedia facilities providing audio-visual equipment and Webinar center which facilitates video conference for effective learning process. In the departments of the institution are equipped with latest projectors for effective teaching through video lectures. Also the students are supported by the faculty to present their seminar topics using the ICT facilities. Each room has a seating capacity of 60 and all departments are provided with sufficient number of LCD projectors, Wi-Fi and LAN enabled internet connectivity.

The institute continuously keeps upgrading the internet bandwidth as latest teaching methods demand the usage of NPTEL/Webinars etc. A separate server with HDD is being maintained exclusively for NPTEL video streaming within the campus.

Common Computer Facility/Language Lab: A common computing room measuring 305 sq.m with 71 computers and LAN and internet facility is available for faculty and students.

Smart Classroom: The each department has one Smart class room with all advanced teaching and learning aids with a seating capacity of 60

Seminar Hall: The College has modern, well equipped seminar halls for organizing workshops and

seminars.

Laboratories: All laboratories are well equipped, and well maintained not only for carrying out curriculum-oriented practicals, but also to carry out experiments beyond curriculum.

Specialized facilities and equipment for teaching learning and research: The College has an English communication skills lab where the students practice and test their communication skills. Apart from the central library, each department is having separate department library with a good collection. For self learning, reference books for all the subjects are available in the central library.

File Description	Document
Any additional information	View Document

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

Response:

INDOOR SPORTS FACILITIES

Indoor sports facilities have a Basketball Court (26 meters x 15 meters), Two Badminton courts (18 meters x 15 meters), and facility to play Table Tennis.

OUTDOOR SPORTS FACILITIES

Outdoor Sports facilities have a Main ground (100 meters x 80 meters) where Soccer, Cricket and Track & Field events are conducted. Apart from these there are Basketball court (30 meters x 20 meters), Volleyball court (30 meters x 18 meters), Cricket practice nets (30 meters x 20 meters) established in the year 2006. An average of 250 students avail the facilities on all working days; another 100 hostelites avail on all other days. Events like, Inter Collegiate and Inter Department tournaments are conducted in these facilities.

Facilities for Cultural Activities

There are three main facilities to conduct cultural events, **Dr. Radhakrishnan Hall** (720M²), **Amrithya Sen Hall** (202M²), **Indira Gandhi Indoor Auditorium** (1000M², was established in the year 2006.. Events like , Inter Department Cultural Competitions (MUDRA - Arts Day), Inter Collegiate Competitions (ADVAY - College Fest), are conducted here. Facility for Music & Dance Practice, Annual Day Celebration, Onam & Christmas Celebration are also organized in these facilities.

Gymnasium

The fitness centre of our college has a facility of a 12 station Multi Gym for the male students and a Treadmill for females .The athletes use this facility to build their fitness as part of their sports training programme. This facility was established in the year 2010.

Yoga Center

The Importance of Yoga is rendered to the students, as part of health and wellness programme. Yoga trainers are invited to address the students and render importance of yoga and give practical classes. This programme is coordinated by NSS and Young Indians (Yi). Yoga Center was established in the year 2016. Books on Yoga, Meditation etc are available in the central library.

Mediation / Prayer Center

Facility for prayer / meditation is provided at Aryabhata Block; the prayer hall is kept open during the working hours and staff and students use this facility .The prayer hall was established in the year 2013.

File Description	Document
Any additional information	View Document

4.1.3 Percentage of classrooms and seminar halls with ICT - enabled facilities such as smart class, LMS, etc

Response: 59.32

4.1.3.1 Number of classrooms and seminar halls with ICT facilities

Response: 35

File Description	Document
Number of classrooms and seminar halls with ICT enabled facilities	View Document

4.1.4 Average percentage of budget allocation, excluding salary for infrastructure augmentation during the last five years.

Response: 6.43

4.1.4.1 Budget allocation for infrastructure augmentation, excluding salary year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
35	34	180	33	22

File Description	Document
Details of budget allocation, excluding salary during the last five years	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 an automated Central Library with modern software Library Management System (LMS), OPAC and WEBOPAC systems. It provides excellent learning resources catering to the ever growing intellectual requirements of the students, faculty, and researchers. OPAC: Online Public Access Catalog for searching the library resources. User can search the library resources as below: 1. General Search: Title, Author, Publisher, Accession Number, Call number, year of publication, subject etc. 2. Advance Search: The search can be done with various combinations of Title, Author, Publisher, accession Number, Call number, year of publication, subject etc. 3. Accession Search: Search can also be done through the accession numbers without remembering the title or author of the book.

At the entrance of the library barcode reader is used as gate register for students and punching system for staff. Also provided a system for checking the library account status of the users at the entrance which helps to know the all details of their accounts. Book issue, return and renewal processes are done in separate systems. Circulation (lending materials to patrons and receiving them): In the library circulation module provision is made to issue/return/renewal of book circulation, non-print material circulation (CD, DVD, etc.) and serial circulation (Print Journals/Magazines). Setting: In the setting module provision is made for holiday settings, Library rules setting, generating the barcodes, listing of books (by authors, publishers, suppliers), printing of members, barcode, etc

Reports: This is an important component of LMS which helps to generate various reports. The following reports are generated through this module: Books Issue/Return date wise, user wise, department wise, etc. Generate reports required for various statutory bodies and inspection teams, history of user and library resources. This will help in maintaining optimum stock of the concerned resources.

Tracking of the library resources. Serials: This is an important module of LMS to maintain and keep records of the serials (Print Journals, Magazine, Bound volumes and Newspapers). Through this module we can track the subscription period and renewal date of the serials.

The Digital Library(DL) is equipped with a repository of learning materials of NPTEL, DELNET enabling access to various journals from 5002 libraries in South Asia. The DL also provides access to e-journals, e books, question papers, seminar & project reports, National Digital Library (NDL), anywhere in the campus.

The Library procures and ensures effective use of the latest hard/soft copies of books, journals, documents, reports and other learning resources regularly. Besides the Main Library, there are separate department libraries.

File Description	Document
Any additional information	View Document

4.2.2 Collection of rare books, manuscripts, special reports or any other knowledge resources for library enrichment

Response:

Rare Books and costly books are arranged closed reference section.

Nanotechnology, Nano Science, Blooms Taxonomy, Spiritual Books, Soft skill books, Encyclopedias, Psychology books, Quantitative aptitude texts are the collections of the library.

Conference proceedings of National/ International seminars conducted in college; Doctoral theses

Books on competitive exams like GATE, TOEFL, UPSC, thozihil veethi (Employment News), competition Success ,Year Book

Published a book Information Management in Digital Environment based on the National conference LISDA-2016 by Ess Ess Publication, New Delhi in February 2018.

A library brochure “Glancing thro TIST Library” is brought out periodically detailing all facilities and services

File Description	Document
Any additional information	View Document

4.2.3 Does the institution have the following:

- 1.e-journals
- 2.e-ShodhSindhu
- 3.Shodhganga Membership
- 4.e-books
- 5.Databases

A. Any 4 of the above

B. Any 3 of the above

C. Any 2 of the above

D. Any 1 of the above

Response: B. Any 3 of the above

File Description	Document
Details of subscriptions like e-journals,e-ShodhSindhu,Shodhganga Membership etc	View Document
Any additional information	View Document

4.2.4 Average annual expenditure for purchase of books and journals during the last five years (INR in Lakhs)

Response: 26.78

4.2.4.1 Annual expenditure for purchase of books and journals year-wise during the last five years (INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
23.34	19.54	19.1	39.86	32.06

File Description	Document
Details of annual expenditure for purchase of books and journals during the last five years	View Document

4.2.5 Availability of remote access to e-resources of the library

Response: Yes

File Description	Document
Any additional information	View Document

4.2.6 Percentage per day usage of library by teachers and students

Response: 8.46

4.2.6.1 Average number of teachers and students using library per day over last one year

Response: 166

File Description	Document
Any additional information	View Document

4.3 IT Infrastructure

4.3.1 Institution frequently updates its IT facilities including Wi-Fi

Response:

TIST is Wi-Fi enabled to enjoy internet with speed of 80Mbps irrespective of where you are in the campus. All computers are connected over LAN and internet using Optical fibers and Twisted pair cables and are protected using latest antivirus softwares like Quick Heal, Avast antivirus and Microsoft Security Essentials.

The institute keeps upgrading the hardware and software packages, installed Wi-Fi devices, internet bandwidth and firewall software based on requirements. Wireless connectivity is supported with 24 Access points all over the campus. Connection to Wi-Fi networks is authenticated by the Authentication server with username and password. Firewall protection is also enabled.

Classrooms and laboratories are equipped with ICT enabled facilities like Projectors and LCD TVs. Webinar sessions are conducted occasionally in association with various organizations like Infosys, ICTAK, IIT etc

File Description	Document
Any additional information	View Document

4.3.2 Student - Computer ratio

Response: 3.49

File Description	Document
Any additional information	View Document

4.3.3 Available bandwidth of internet connection in the Institution (Lease line)

>=50 MBPS

35-50 MBPS

20-35 MBPS

5-20 MBPS

Response: >=50 MBPS

4.3.4 Facilities for e-content development such as Media Centre, Recording facility, Lecture Capturing System (LCS)

Response: No

File Description	Document
Facilities for e-content development such as Media Centre, Recording facility,LCS	View Document

4.4 Maintenance of Campus Infrastructure

4.4.1 Average Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, as a percentage during the last five years

Response: 30.88

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

2017-18	2016-17	2015-16	2014-15	2013-14
174.61	170.74	241.75	228.13	190.93

File Description	Document
Details about assigned budget and expenditure on physical facilities and academic facilities	View Document
Audited statements of accounts.	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:

Lab Maintenance

At the end of each semester, list of equipments for servicing is collected by the concerned lab staff. A communication is sent to the respective companies and their consent is taken for servicing the equipments. The companies give estimates regarding the amount for equipments. This estimate is submitted for the approval of the department HOD and Principal; Thereafter sent to the Management for final approval and the amount is settled with the company after servicing.

Library:

Book Purchase procedure: Librarian collects the list of books required by each department through the HODs during the beginning of each semester and submits it for the approval of the Principal. On approval, at least 3 quotations are invited from leading book suppliers and librarian prepares a comparative statement. Duly signed comparative statement by Principal and Librarian is sent to the management for approval. For any immediate requirement of the books and journals in any department, the librarian is authorised to do the same with the sanction of HODs and Principal.

Maintenance of books: The damaged books are maintained by binding at the end of each semester.

Stock Verification: Annual stock verification is done by an external auditor and report is presented before the Library Advisory Committee; weeding out of missing books will be done after the approval by Principal on the recommendation of the said Committee.

Sports Complex

The department of Physical Education provides facilities for maintaining physical fitness and well-being of students. Regular maintenance is done to the non perishable infrastructure like, cutting and trimming the grass on the ground, cleaning of the indoor stadium, painting of the steel structures etc. Perishable items like, balls, bats and guards are purchased every year by inviting 3 quotations and a comparative statement is submitted to the Principal who scrutinizes and transmits it to the Management Purchase Committee for final disposal. Stock and an issue registers are maintained in the department; perishables are written off after due stock verification by internal auditor.

Awards, Trophies and Certificates are issued to the individuals & teams after the completion of the events and published in the annual college magazine.

COMPUTER MAINTENANCE

The computer maintenance section provides facilities for maintaining and repairing computers. According to the requirement of each department, quotations are sought from computer vendors. We accept those quotations which are estimated the lowest price and offer services. Most vendors offer warranties and provide warranty assistance to their devices. There is no outsourcing of AMC in our college. The maintenance of computers and related components without warranty assistance is done in-house. Regular computer maintenance for each department is done by maintenance section. A stock register is maintained for laptops, desktops and related accessories by System Administrator and Break-down Register is maintained department-wise.

Classrooms

Due care is given for,

Proper upkeep and maintenance of the building, Maintenance of the lawns and surroundings, Carrying out minor repairs of furniture, electrical and sanitary fittings. Maintenance of the roads, water tanks and other services. Maintaining security and safety requirements.



NAAC

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 the last five years

Response: 6.21

5.1.1.1 Number of students benefited by scholarships and freeships provided by the Government year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
36	102	156	123	233

File Description	Document
Upload self attested letter with the list of students sanctioned scholarships	View Document
Average percentage of students benefited by scholarships and freeships provided by the Government during the last five years	View Document
Any additional information	View Document

5.1.2 Average percentage of students benefited by scholarships, freeships, etc. provided by the institution besides government schemes during the last five years

Response: 1.57

5.1.2.1 Total number of students benefited by scholarships, freeships, etc provided by the institution besides government schemes year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
38	44	24	27	25

File Description	Document
Any additional information	View Document

5.1.3 Number of capability enhancement and development schemes –

1. For competitive examinations
2. Career counselling
3. Soft skill development
4. Remedial coaching
5. Language lab
6. Bridge courses
7. Yoga and meditation
8. Personal Counselling

A. 7 or more of the above

B. Any 6 of the above

C. Any 5 of the above

D. Any 4 of the above

Response: A. 7 or more of the above

File Description	Document
Details of capability enhancement and development schemes	View Document
Any additional information	View Document
Link to Institutional website	View Document

5.1.4 Average percentage of student benefited by guidance for competitive examinations and career counselling offered by the institution during the last five years

Response: 50.58

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

2017-18	2016-17	2015-16	2014-15	2013-14
989	1354	841	774	1167

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

5.1.5 Average percentage of students benefited by Vocational Education and Training (VET) during the last five years**Response:** 0

5.1.5.1 Number of students attending VET year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
0	0	0	0	0

File Description**Document**

Details of the students benefited by VET

[View Document](#)**5.1.6 The institution has a transparent mechanism for timely redressal of student grievances including sexual harassment and ragging cases****Response:** Yes**File Description****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:** 46.26

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

2017-18	2016-17	2015-16	2014-15	2013-14
362	223	193	243	263

File Description	Document
Self attested list of students placed	View Document
Details of student placement during the last five years	View Document
Any additional information	View Document

5.2.2 Percentage of student progression to higher education (previous graduating batch)

Response: 4.75

5.2.2.1 Number of outgoing students progressing to higher education

Response: 24

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

5.2.3 Average percentage of students qualifying in State/ National/ International level examinations during the last five years (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

Response: 61.14

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

2017-18	2016-17	2015-16	2014-15	2013-14
01	12	05	09	22

5.2.3.2 Number of students who have appeared for the exams year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
2	12	12	17	36

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	View Document

5.3 Student Participation and Activities

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

2017-18	2016-17	2015-16	2014-15	2013-14
00	00	00	00	00

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

5.3.2 Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution

Response:

Student Council

Student Council acts as a liaison between the students and the management. It is a forum for the students to develop their attitude, leadership qualities, social skills, cultural talents and focuses on the overall development of the individual.

Academic Bodies

1.Student Chapters of various Departments:

The student chapters of the following professional bodies are active in the Institution.

- IETE
- IEEE
- CSI
- IE(I)
- AeSI
- IIE
- IIW
- IIPE
- ICI
- IGBC
- ISTE

- 1.Class Committee: The Meeting is held twice/thrice in each semester. These meetings serve as a platform for interaction between students and faculty.
- 2.Course Committee: This is for common courses offered to students admitted for the B. Tech programme irrespective of their branch of study.

Administrative Bodies

- 1.IQAC: Development and application of quality benchmarks/parameters for various academic and administrative activities of the institution.
- 2.IEDC: To Identify students with innovative ideas and create a platform for them to work with.
- 3.Hostel Committee: To provide healthy environment in the hostel for the overall development of the hostel inmates.
- 4.Library Committee: To provide for proper documentation service and to update the library collections.
- 5.Alumni Cell: This will strengthen our efforts in placement, project works and Industry-Institution Interaction.
- 6.Transport Committee: To promote healthy and safer transport to and from college.

Public Service Programs

- **National Service Scheme (NSS):** Activities undertaken by the NSS unit of our Institute are -Book Library, Class on personality development, energy conservation, Blood Data Bank, donors arranged in cases of emergencies, Antidrug awareness program, Visit to orphanages and old age homes, Vegetable Garden, Free Health Check up, Free eye check up, Marathon Run for Peace, Road Safety program, Street Play.
- **Young Indians (Yi):** TIST Yi Net show great enthusiasm in organizing and conducting Leadership and Social activities. Some of the events organized are-Awareness class by Experts from all walks of life to the students, Awareness on Anti Drug classes to school students, Awareness of Women Safety and Self Defense, Maintain cleanliness of our public surroundings like children's park, beach etc, Street play awareness show on water pollution, highlighting save

water, Industrial visit for value based learning, Awareness class on Sexual Abuse to school students, No honking Campaign in the city.

- **ENCON Club:** The main objective of the ENCON club is to drive home the message of energy conservation and environment protection in the minds of students by planning and organizing regular activities, talks, seminars workshops, exhibitions and other awareness programmes.
- **KARMA :** TIST started KARMA for extending support to poor people in the society by catering to five sectors, viz., Food, Health Care, Education, Volunteer and Shelter. Any student of TIST with an intention to help others can join this group.

File Description	Document
Link for Additional Information	View Document

5.3.3 Average number of sports and cultural activities/ competitions organised at the institution level per year

Response: 3

5.3.3.1 Number of sports and cultural activities / competitions organised at the institution level year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
3	3	3	3	3

File Description	Document
Report of the event	View Document
Number of sports and cultural activities / competitions organised per year	View Document

5.4 Alumni Engagement

5.4.1 The Alumni Association/Chapters (registered and functional) contributes significantly to the development of the institution through financial and non financial means during the last five years

Response:

The alumni association of TIST started in the year 2008, with the sole aim of setting up an excellent network amongst our students and our College. All the former students, faculty and final year students constitute the alumni. This will strengthen our efforts in placement, project works and Industry-Institution Interaction. It provides an opportunity that revokes nostalgia. Alumni meetings endeavor to bring best of Quality Education with Entrepreneurship. It collaborates and communicates using the best of

technology to Impart Professional Training through participation. It creates an environment to Guide the students with their forward looking ideas thus Promoting Entrepreneurship. Alumni activities are undertaken by a nominated faculty.

One of the main objectives of our Alumni Association is Ensuring and facilitating the continual bonding of our alumni. It brings together a wealth of talented and capable professionals who share their expertise and experience, and brainstorm on the prospective avenues. Association provides good interaction between the former students and the college through periodical meetings, project consultancy, placement activities and guest lecturers/seminar thereby making the alumni to be a part of developmental activities, taking place in the department. Association strengthens the cooperation and coordination with industries, which helps the students to get exposed to many internship opportunities. It creates opportunities for training and special projects apart from guest lectures, industrial visits and seminars. An Academic Advisory Committee Meeting is held every year, where the alumni's suggest modifications in up gradation and updating of curriculum to meet the industrial needs. This helps to enhance juniors for several Placement Opportunities.

The Alumni meets helps largely to develop the bonding between Alumni and the institution every year. Thus maintains a continuing and life long relationship among the students, faculty and Institution.

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

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

? 5 Lakhs

4 Lakhs - 5 Lakhs

3 Lakhs - 4 Lakhs

1 Lakh - 3 Lakhs

Response: <1 Lakh

File Description	Document
Alumni association audited statements	View Document

5.4.3 Number of Alumni Association / Chapters meetings held during the last five years

Response: 5

5.4.3.1 Number of Alumni Association /Chapters meetings held year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
1	1	1	1	1

File Description	Document
Number of Alumni Association / Chapters meetings conducted during the last five years	View Document
Any additional information	View Document

NAAC

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

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

Response:

Vision of the Institution: To become a globally recognized institution that develops professionals with integrity who excel in their chosen domain making a positive impact in industry, research, business and society.

Mission of the Institution:

- To provide the ambience necessary to achieve professional and technological excellence at the global level.
- To undertake collaborative research that fosters new ideas for sustainable development.
- To instill in our graduates ethical values and empathy for the needs of society.

Nature of governance: This institution is recognized by AICTE, approved by Directorate of Technical Education (DTE), Government of Kerala and affiliated to APJ Abdul Kalam Technological University, (KTU) and Cochin University of Science and Technology (CUSAT). The college is managed by Toc H Public School Society, Kochi, renowned for quality educational institutions in Kerala. A 9-member core management team, consisting of the Board of Directors (who are annually elected from the members of the Society) looks after the management of the College.

The Governance of the institution is strictly in accordance with the Vision, Mission, and Quality policy and executive directions issued by regulating Government agencies. As per the policies evolved and directions issued by the Management, the Governing Council, other management committees and the staff council (HoD Meetings) of this Institute, various institutional programs and activities are carried-out, while complying with the rules, systems, procedures and practices. The Principal is responsible for the academic, general and financial administration besides the all-round development and welfare of the institution. Well defined Service rules and policies regarding Recruitment, Promotion, Performance Appraisal, Termination of Service/Resignation, Retirement, Conduct and Discipline and Leave are followed and disseminated to stake holders. The finance regulations compiled under Delegation of financial powers have been prepared and all the financial transactions are made accordingly. The performance appraisal of teaching staff includes the feedback by the students. The consistent efforts in maintaining the quality of education comparable to global standards made this institution accredited with NBA for four departments recently. The Institute also acquired latest ISO 9001:2015 certification and was NAAC accredited with B Grade from 2012-2017.

The Institution is focusing more onto filling the gap between Academia and Industry through Industry Institute Interaction, Research and Consultancy activities. Several MoUs are undertaken in this perspective with Kelaniya University- Sri Lanka, KITCO, NANSEN-Norway, Daikin etc.

The commitment to the society and mankind is evident through the NSS, Yi, Encon Club and Karma Club in the institution. The strength and validity of this institution essentially depends on its ability to sustain itself on the bedrock of quality, excellence, relationships and governance. For effective decisions to be made, every role player in the system needs to participate at one level or the other. Decentralized governing is carried out here so that each and every staff gain experience in leadership and governance.

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

6.1.2 The institution practices decentralization and participative management

Response:

The institution practices decentralization and participative management. The Governing Body meets normally once a year to discuss the current performance levels of the institution in various aspects such as academics, administration and activities, and to set guidelines for the future course of action to be followed. Several bodies with well defined roles have been constituted to ensure proper functioning of the institution under the guidance of the Principal, who along with along with Dean (Academics) and Vice Principal are engaged in the overall development and day today governance. Principal chairs the meetings of staff council (HoD meetings) and meetings of other committees which are convened regularly. The activities are planned in the HoD meetings, executed through various academic and administrative bodies constituted with the participation of staff and with the concurrence of management. IQAC, PTA, Students Council, Anti Ragging Cell, Students Welfare Committee, Discipline Committee, Grievance Redressal and Appeals Committee, NSS, Exam Cell, Transport Committee, Innovations and Entrepreneurship Development Centre etc. are some among the active cells for propelling this institution. Adequate representation of faculty, students and parents is ensured in all these committees.

Adequate systematized autonomy to all the departments is provided. The Budget proposal for the academic year is prepared by the individual departments in participation with the staff. These individual department budgets are consolidated along with administration department budget. The budgets of all the departments will be consolidated by the Accounts Manager and will be presented to the Principal, and further presented before the Management for approval and sanction. All orders exceeding a sum of Rs.25,000/- must be processed after inviting minimum three quotations from different suppliers, manufacturers and a comparative statement to be prepared and sent to the Founder Director and Manager for approval with recommendation of the Principal. For orders exceeding Rs.5,000 and below 25,000, quotations with recommendation of the department head to be forwarded to the Founder Director and Manager along with the Principal's recommendation. For items less than Rs.5,000/- purchases may be made locally with the prior approval of the Principal. For department related purchases, HODs of concerned departments should submit justification for procurement and must recommend specifications for placing orders.

File Description	Document
Link for Additional Information	View Document

6.2 Strategy Development and Deployment

6.2.1 Perspective/Strategic plan and Deployment documents are available in the institution

Response:

The IQAC suggested collaboration with foreign universities and institutions which will open a wide spectrum of interaction in different levels like Student and Faculty exchange as well as research associations.

The Department of Management Studies entered into an MoU with the University of Kelaniya, Sri Lanka with the aforesaid objectives. This resulted in a series of associative programs like Seminars, Conferences and Workshops. Joint project-works are also happening, as an impact of this MoU. Another important milestone of this MoU is that the University of Kelaniya has consented to host an International Conferences on Business and Information (ICBI – 2018) at Toc H Institute of Science and Technology during the month of November 2018.

Vide IQAC minutes of meeting conducted on 01.07.2014, it was suggested that other departments also identify some collaborations with foreign universities. Pursuant to this, an agreement was made on 11th January 2018 between Nansen Environmental Research Centre (India), Cochin & Nansen Environmental and Remote Sensing Centre, Bergen, Norway on the one side and Toc H Institute of Science & Technology, Cochin on the other, in order to develop co-operative efforts in research and education with focus on environmental, ecological and climate research issues of regional concern. The overall objective is to develop joint programs in research and higher education among the participating institutions.

File Description	Document
Link for Additional Information	View Document
Strategic Plan and deployment documents on the website	View Document

6.2.2 Organizational structure of the institution including governing body, administrative setup, and functions of various bodies, service rules, procedures, recruitment, promotional policies as well as grievance redressal mechanism

Response:

The Institution is funded and supported by Toc H Public School Society a nonprofit making educational trust. The Society presently consists of 14 members. A 9-member core management team, consisting of the Board of Directors (who are annually elected from among the members of the Society) looks after the management of a School and the Engineering College. A Governing Council is set up for overlooking the

activities of the institution. The Governing Body meets normally once a year to discuss the current performance levels of the institution in various aspects such as academics, administration and activities, and to set guidelines for the future course of action to be followed.

Principal, who along with along with Dean (Academics) and Vice Principal are engaged in the overall development and day today governance. Several bodies with well defined roles have been constituted to ensure proper functioning of the institution under the guidance of the Governing Council and the Principal. Principal chairs the meetings of staff council (HoD meetings) and meetings of other committees which are convened regularly. The activities are planned in the HoD meetings, executed through various academic and administrative bodies constituted with the participation of staff and with the concurrence of management. IQAC, PTA, Students Council, Anti Ragging Cell, Students Welfare Committee, Discipline Committee, Grievance Redressal and Appeals Committee, NSS, Exam Cell, Transport Committee, Innovations and Entrepreneurship Development Centre etc. are some among the active cells for propelling this institution. Adequate representation of Faculty, students and parents are involved in all these committees.

Well defined Service rules and policies regarding Recruitment, Promotion, Performance Appraisal, Termination of Service/Resignation, Retirement, Conduct and Discipline and Leave are clearly disseminated to stake holders. Recruitment of faculty with distinguished academic background takes place throughout the year as per requirement to ensure smooth functioning of the organization. Recruitment procedures are well defined to ensure recruitment of the best candidates for the required position. Promotions are based on qualification, experience, performance and other qualities like attitude, motivation, initiative, innovation and ethics. Contributions to teaching, research and service are highly valued. The ability to work as a team to promote harmony among the stake holders of the institution is appreciated. Ability to adopt and implement pedagogy models like Revised Bloom's Taxonomy, creative learning process, etc. are important considerations. Periodic evaluation of faculty performance is done by the Principal, the respective department heads, students, peers and by the faculty himself/herself. In accordance with AICTE norms, performance, qualification and experience are the main criteria that contribute to the performance index on which the academic personnel are evaluated for awarding promotion.

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

6.2.3 Implementation of e-governance in areas of operation

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

A. All 5 of the above

B. Any 4 of the above

C. Any 3 of the above

D. Any 2 of the above

Response: B. Any 4 of the above

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

6.2.4 Effectiveness of various bodies/cells/committees is evident through minutes of meetings and implementation of their resolutions

Response:

DAIKIN Centre of Excellence (CoE) in Air Conditioning

The general impression among the industrial fraternity is that fresh engineers lack employability and other allied skills. Taking cue from ‘Skill India’ and ‘Make in India’ campaigns for skill development, Toc H Institute of Science & Technology (TIST) endeavors to be a forerunner in imparting necessary skills.

A major stride in this direction is our joining hands with Daikin Air Conditioning India Private Limited (DAIPL), a subsidiary of Daikin Industries Limited (DIL, Japan). As part of their joining hands with the central government and several state governments on ‘Skill Enhancement’, including capacity building, industrial training, community college, vocational courses, curriculum intervention etc., they have established Centers of Excellence (CoE) across the country. These CoEs are essentially state-of-the-art air-conditioning labs comprising the latest range of products and tools in the industry. Apart from capacity building, Daikin is also collaborating with these institutes in providing training and conducting workshops on latest technologies to both students and faculty.

The Mechanical Engineering Department, TIST was successful in inviting Daikin Air-conditioning India Pvt. Ltd. (DAIPL) as a part of the Skill India Initiative, to setup an Air-conditioning / HVAC lab at Toc H Institute of Science and Technology, Kochi.

TIST signed an MoU with DAIPL on 26th April 2017 for further expanding their expertise on HVAC training. Every year they train the students and faculty in HVAC. This initiative provides them a platform to enhance their skills and get access to world class training in Air conditioning. Daikin shares its training resources with TIST and deserving students may be considered for placement in Daikin or channel partners for internship, live projects or fixed term employment contracts, etc. Under the banner of Daikin

CoE, four faculty and five students have undergone training at DA IPL Neemrana plant, Rajasthan. The CoE also conducted a five day workshop on HVAC for faculty from 18th to 22nd December, 2017. a few sessions for the students also were carried out with the assistance of DA IPL engineers (Kochi Division). Also Skill Development programs in HVAC for students and faculty are being carried out in association with DAIKIN CoE.

List of Equipment					
Sl.No	Product	Model	Refrigerant		Spec
1	Wall mounted split AC	Indoor unit: FTC 50 QRV 16	R-32	1.6	TR, c
		Outdoor unit: RC 50 RV 16			
2	Wall mounted inverter split AC	Indoor unit: FTK 50 QRV 16	R-32		1.5 T
		Outdoor unit: RKP 50 PRV 16			
3	Ceiling Mounted Cassette Corner Type	Indoor unit: FXK Q 40 MAVE	R-410		10 h
		Outdoor unit: RXM Q10 AY 16			
4	Heat Pump	Indoor unit: FBQ 100 DV1	R-32	3.2	TR, SA Du
		Outdoor unit: RZQ 100 KC V 4A			
4	Ductable AC	Indoor unit: FD 65 DRV 16	R-22	5.5	TR, pressur Outdoor un
		Outdoor unit: R130 DRY 16			

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

6.3 Faculty Empowerment Strategies

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

Response:

The college has a welfare mechanism in place, for all teaching and non-teaching staff. The various welfare schemes are:

- Employee's cooperative society floats loans to teachers and staff
- Festival Allowance is provided to all faculty and staff
- Accommodation is available for faculty & guest faculty

- Tours and family get-togethers are organized for staff and employees
- Awards and recognitions are given away in functions to the winners
- LIC Pension Plan/EPF available for all confirmed teaching staff.
- Employees Provident Fund/ESI/Medi-Claim for all confirmed non teaching staff.
- On campus free medical facilities
- Cafeterias
- Sabbatical leave is given for faculty members for higher studies & research.
- Computers/ laptops with free internet/wifi facilities
- Provision for purified drinking water
- EPABX facility for communication
- Reprography facility with stationary
- Transportation facility
- 24 hour power back-up

Management takes a proactive policy towards the professional development of staff like:

- Conducting International & National Seminars
- Opportunities for international exposure
- Provides duty leave, TA/DA for participating in seminar/workshops & conferences.
- The faculty members are having dedicated cabins in each department

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: 4.95

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

2017-18	2016-17	2015-16	2014-15	2013-14
0	18	8	8	6

File Description

Document

Details of teachers provided with financial support to attend conferences,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: 20.4

6.3.3.1 Total number of professional development / administrative training programs organized by the

Institution for teaching and non teaching staff year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
23	21	18	17	23

File Description	Document
Details of professional development / administrative training programs organized by the Institution for teaching and non teaching staff	View Document

6.3.4 Average percentage of teachers attending professional development programs viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Program during the last five years

Response: 11.66

6.3.4.1 Total number of teachers attending professional development programs, viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Programs year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
06	26	29	10	23

File Description	Document
Details of teachers attending professional development programs during the last five years	View Document

6.3.5 Institution has Performance Appraisal System for teaching and non-teaching staff

Response:

The Institute follows a well defined faculty performance appraisal system. The performance evaluation of faculty is conducted once in an academic year. The faculty is evaluated based on Result Analysis, Feedback from Students, Peer Evaluation, Lesson Plan Preparation, Innovative Teaching methods, Syllabus Coverage, Effectiveness of Presentations, Creative contributions to academic and non-academic activities.

The Head of the Department is responsible for conducting faculty appraisal process. The feedback received from the students is shared with the concerned faculty for improvement. The Head of the Department organizes peer evaluation by other members of the concerned department in confidence and indicates the percentage obtained in peer evaluation. Best Teacher Award is also offered to faculty members every year

based on performance evaluation.

There is a performance appraisal system for non teaching staff wherein their evaluation is done in a yearly basis under the supervision of the Administrative manager. Due recognition of their performance is given to meritorious ones.

Implementation and Effectiveness

An evaluation report is generated for each teaching faculty based on their performance as per criteria below:

a) Student Feedback Analysis:

The major areas covered here are Lecture Methodology, Faculty-Student relationship, Punctuality etc. It helps us to take corrective or remedial measures to ensure maximum effectiveness in learning process.

b) Performance Evaluation for Faculty:

It's a self evaluation process done to check the completion of basic works. It clearly indicates the confidence of faculty in the progress of work.

c) Peer Evaluation Form:

Peer review helps our faculty to know and adopt the best practices within the group under the guidance of HODs

d) Best Faculty Evaluation-Faculty Performance Appraisal

Best faculty evaluation is done to reward the faculty's excellence in teaching and thereby promoting the excellence in teaching among the entire faculty community. It thus aims in developing the faculty quality in their respective domains. This is done in yearly basis and all the academic criteria of the faculty is evaluated. A sample evaluation form is uploaded for reference. This process combines the outcomes from all the feedbacks collected and assessed. Based on this, Best Faculty award is given to the best performers.

File Description	Document
Any additional information	View Document

6.4 Financial Management and Resource Mobilization

6.4.1 Institution conducts internal and external financial audits regularly

Response:

Yes, the Institution has a mechanism for internal and external audits. Our Management has a full-time Treasurer to oversee the financial activities of the Institution.

All the books of accounts are audited regularly by Chartered Accountants. Both Internal & External Audits are conducted annually. Hence all financial transactions are transparent. The audited financial statements of the academic years are available in the website- <http://tistcochin.edu.in>.

File Description	Document
Link for Additional Information	View Document

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

Response: 3.67

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

2017-18	2016-17	2015-16	2014-15	2013-14
0.2	0.27	0.084	2.37	0.75

File Description	Document
Details of Funds / Grants received from non-government bodies during the last five years	View Document

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

Response:

The Institution is funded and supported by Toc H Public School Society a nonprofit making educational trust.

As a self-financed Institution, the resource mobilization is mainly through Tuition Fees. Other sources of income includes Training & Consultancy, Research Project grants, rent generated from hosting various competitive exams, Sponsorships and Participation fee in various conferences, seminars, Industry sponsored labs etc.

Adequacy of budget allocation

Before the commencement of the financial year, budget requirements under 'recurring' and non-recurring' heads given by the HODs will be reviewed by the Principal and then it is submitted to the Management for approval and sanction. Utilization of the funds is monitored by the accounts department and a purchase committee nominated within the management for negotiations. Supplementary allocations are made in special cases.

Although expenses are monitored, all necessities are met for smooth functioning. The management has been very efficiently doing this over the past several years with the help of the nominated purchase committee for negotiations, accounts department and HODs. All these years, the institution never had any serious budget crunch.

Utilization of allocated funds

Funds are allocated by the management. Our Management has a full-time Treasurer to oversee the financial activities of the Institution. HODs are informed about the extent of funds approved against the budget proposals submitted by them at the beginning of the academic year.

Lab equipment procurements, upgradation of the existing lab facilities, purchase of consumables, maintenance expenses of all labs are initiated from the department by inviting quotations from at least 3 vendors. Comparative statements are prepared by the department and submitted to the Principal for onward transmission to the management for approval who in turn calls for negotiations with the vendors in the presence of concerned HODs before finalizing the deal. Any other departmental event or major conferences and workshops (national or international) budget proposal is submitted and approval is sought from the management. Once the approval is given, the amount can be collected from the accounts department by concerned faculty. Utilization of the allocated funds is reviewed in the departments periodically in consultation with accounts department.

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:****CASE 1**

The IQAC initiated a bold step to implement Outcome Based Education (OBE) in the teaching learning process in the institution with an objective to build competencies in learning that makes the graduates to cope with the rapid changes happening in the society. It aims at wider recognition and transparency as well as quality assurance so as to ensure 'learning by the student' through an effective teaching methodology and enable them to be more industry friendly graduates. In tandem with the mission and vision of the institute, outcomes are framed, assessed and monitored continuously. The IQAC also identified that OBE

is a primary requisite for getting accreditation from various national boards like NBA. This initiative was taken well by the ECE, CE, CSE and ME departments of the institute and to go through the NBA accreditation process. Consequently during 2014-15 the accreditation process started and subsequently in 2016-17 the college submitted the pre-qualifier along with the self-study report. The peer team conducted on site evaluation during 2017-18. The above said the entire four departments received NBA accreditation in the same year. This is the fructification of an initiative of the IQAC of this institute.

CASE: 2

The IQAC suggested collaboration with foreign universities and institutions which will open a wide spectrum of interaction in different levels like Student exchange, Faculty exchange as well as research association. The Department of Management Studies entered into an MoU with the University of Kelaniya, Sri Lanka with the aforesaid objectives. This resulted in a series of associative programs like Seminars, Conferences and Workshops. Joint project-works are also happening, as an impact of this MoU. Another important milestone of this MoU is that the University of Kelaniya has consented to host an International Conferences on Business and Information (ICBI – 2018) at Toc H Institute of Science and Technology during the month of November 2018.

Vide IQAC minutes of meeting conducted on 01.07.2014, it was suggested that other departments also identify some collaborations with foreign universities. Pursuant to this, an agreement was made on 11th January 2018 between Nansen Environmental Research Centre (India), Cochin & Nansen Environmental and Remote Sensing Centre, Bergen, Norway on the one side and Toc H Institute of Science & Technology, Cochin on the other, in order to develop co-operative efforts in research and education with focus on environmental, ecological and climate research issues of regional concern. The overall objective is to develop joint programs in research and higher education among the participating institutions.

File Description	Document
Link for 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

Response:

With a view to enhance the teaching-learning process by effecting structural changes in the operation of learning process, the following two strategies were adopted: Outcome based Education (OBE) and Faculty Development Programme (FDP).

Outcome Based Education

As per the IQAC meeting held on 20/3/2014, it was recommended that all departments should go for NBA accreditation. Accordingly, the institute initiated activities to create awareness about outcome based education. OBE is an approach that focuses on what students should learn (outcomes) and able to apply

after the learning process. The faculty were trained to frame the course objectives and course outcomes based on Revised Bloom's Taxonomy. The achievement of the course outcomes was calculated at the end of each semester. To achieve the Course Outcomes, the internal exams and assignments were used as direct methods.

Programme Outcome (PO) attainment process has been done by taking direct and indirect assessment tools. 80% of direct attainment and 20% of indirect attainment are considered for calculation of PO attainment. Direct attainment of programme outcomes and programme specific outcomes are based on the logical mapping of cognitive levels of course outcomes with programme outcomes and programme specific outcomes. For determining indirect attainment of programme outcomes and programme specific outcomes, the following assessment tools have been used like student participation in co-curricular, extra-curricular activities and student surveys. Three student surveys conducted are event feedback survey, program exit survey and feedback of alumni. Events considered include technical talks, industrial visits, technical forums, workshops, seminars, site visits, and bridge courses. In the second student survey, exit feedback is taken in which an exhaustive questionnaire is prepared to relate all programme outcomes and programme specific outcomes. Alumni feedbacks are also collected by contacting the alumni via. email & phone. This is used to identify any gap pertaining to quality, latest technology or any other related topics that have to be included in each course.

Faculty Development Programmes

Faculty forms the backbone of any institute. The institute aims to enhance the academic and intellectual environment and thus enables the faculty to update their knowledge in latest trends and developments. In the early years, FDPs were held periodically, but on a lesser note. IQAC wanted to improve those numbers and encouraged the departments to conduct more FDPs, sought an increase in the number of faculty attending FDPs conducted at other reputed AICTE recognized institutions and thus increasing their exposure. The IQAC also gave the recommendation to ensure that the faculty are updated with the emerging technologies. All the departments responded positively and followed the its guidelines.

The consolidated list of the FDP attended and FDP conducted by TIST faculty are as follows:

Academic Year	No: of teachers attended	Total number of External PROGRAMMES ATTENDED
2013-2014	112	30
2014-2015	61	22
2015-2016	96	35
2016-2017	126	40
2017-2018	69	26

Academic Year	No: of teachers attended	Total number of Internal PROGRAMMES ORGANISED
2013-2014	154	39
2014-2015	202	40
2015-2016	202	16
2016-2017	235	17
2017-2018	229	17

6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year

Response: 0

6.5.3.1 Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
00	00	00	00	00

File Description	Document
Number of quality initiatives by IQAC per year for promoting quality culture	View Document

6.5.4 Quality assurance initiatives of the institution include:

1. Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual Quality Assurance Report (AQAR) to NAAC; Feedback collected, analysed and used for improvements
2. Academic Administrative Audit (AAA) and initiation of follow up action
3. Participation in NIRF
4. ISO Certification
5. NBA or any other quality audit

A. Any 4 of the above

B. Any 3 of the above

C. Any 2 of the above

D. Any 1 of the above

Response: B. Any 3 of the above

File Description	Document
e-copies of the accreditations and certifications	View Document
Details of Quality assurance initiatives of the institution	View Document
Any additional information	View Document
Annual reports of institution	View Document

6.5.5 Incremental improvements made during the preceding five years (*in case of first cycle*) Post accreditation quality initiatives (*second and subsequent cycles*)

Response:

- Enhanced the number of PhD faculty in the institution
- More faculty are encouraged to do PhD research
- Qualified faculty members according to AICTE norms are maintained
- Laboratory experiments were introduced for Basic Science courses with the introduction of KTU
- DSIR SIRO approval obtained
- MoUs with foreign universities were undertaken
- IEDC was implemented to promote startups in association with Kerala Start Up Mission
- IQAC activities were given greater thrust
- OBE was introduced and NBA accreditation obtained
- Participation in FDPs were promoted to make faculty aware with recent advancements
- Large scale placements for successful students were achieved
- Infrastructure was enhanced for increased intake
- A complete ERP solution is being undertaken for efficient management of the institution
- ISO Certification renewed to the latest 9001:2015 norms
- MoUs with Industries were taken up to bridge the gap between Industry and Academia
- Internships and industry visits were promoted among students and faculty
- Societal Commitment was enhanced through the activities of NSS, Encon, Karma etc.
- Academic and Administrative Audits were carried out
- Conferences and seminars were conducted to give wide exposure to staff and students

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

Response: 12

7.1.1.1 Number of gender equity promotion programs organized by the institution year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
06	02	02	01	01

File Description

Document

Report of the event

[View Document](#)

List of gender equity promotion programs organized by the institution

[View Document](#)

7.1.2

1. Institution shows gender sensitivity in providing facilities such as:

1. Safety and Security
2. Counselling
3. Common Room

Response:

a) Safety and Security

Anti-Sexual Harassment and Women's Cell genuinely looks into the faculty and student grievances related to women. Grievances of faculty, students and hostel inmates can be communicated to Grievance Redressal cell. As part of assuring the safety and security, cameras are fixed around the campus. Institute provides separate hostel facility for girls and boys. To support the employees, day-care unit is running for taking care of the kids of staff. Programs on women safety are organized under Women's cell. Security people are appointed to monitor the campus and hostels day and night. A fully functional health Centre with a doctor, nursing assistant and ambulance offer medical care. Transport facilities are arranged for pick and drop to and from the college. "Ifollow" is an application developed by faculty and students of TIST for women safety.

b) Counseling

In each department, students, in groups, are assigned to mentors, who are the faculty from the respective department. Department of Applied Psychology and Counseling, with two full time counselors is available in the campus. The mentors interact with students and any academic or personal difficulties identified are taken care in consultation with the respective HOD. The students who have emotional instabilities, family problems or learning disabilities are referred to the Department of Applied Psychology and Counseling. The counselors will discuss the cases and provide psychological counseling and the feedback is given to the respective HOD. If a particular student's case is grave or is of a very sensitive nature, the same is informed to the Head of the Institution. In such cases, parents are also called for counseling so that an overall intervention could be done, both at the institution level and at the family level. Referral services are also provided by the counselors. If additional expertise required, the student is referred to the Director in the Management Board, who is a senior acknowledged counselor. The mentor form for each semester consists of personal and academic details. In addition to this form, the mentors maintain an individual mentor record for each student, in which details of the mentoring sessions are recorded. The mentor meets the student at least three times in each semester. The academic progress, attendance, other activities and achievements are discussed and they are counseled with care to sustain and improve their performance. This information along with any discrepancies in the student behaviour is noted in the mentor form as well as mentor record. Parents are informed regarding the progress as well as problems, if any, of their wards. To relieve the stress in addition to counseling, yoga programs are conducted for faculty and students.

c) Common Room

Common rooms, serving as areas of amenities are available in every blocks of the institution. Those rooms are provided with newspapers and periodicals. Facility for indoor games is also available in the institution. Sick rooms are available to students who fall sick but not required hospitalization. Separate restrooms are available for boys and girls in every block.

File Description	Document
Any additional information	View Document

7.1.3 Alternate Energy initiatives such as:

1. Percentage of annual power requirement of the Institution met by the renewable energy sources

Response: 2.65

7.1.3.1 Annual power requirement met by the renewable energy sources (in KWH)

Response: 18.15

7.1.3.2 Total annual power requirement (in KWH)

Response: 684

File Description	Document
Details of power requirement of the Institution met by renewable energy sources	View Document
Any additional information	View Document
Link for Additional Information	View Document

7.1.4 Percentage of annual lighting power requirements met through LED bulbs

Response: 9.64

7.1.4.1 Annual lighting power requirement met through LED bulbs (in KWH)

Response: 15885

7.1.4.2 Annual lighting power requirement (in KWH)

Response: 164786

File Description	Document
Details of lighting power requirements met through LED bulbs	View Document

7.1.5 Waste Management steps including:

- Solid waste management
- Liquid waste management
- E-waste management

Response:

Solid Waste Management

TIST ENCON club aimed at practicing environment protection is keeping separate waste collection bins for disposal of different types of solid waste. Institution assigned employees for clearing scattered waste. Usage of plastic bags is discouraged within the premises of the college. Dust bins are in place at every class rooms, staff rooms and office rooms. The conservancy staff is to collect waste from all the departments and categorize the waste into degradable and nondegradable. Waste is transported to the disposal sites using handcarts. The paper waste and all nondegradable wastes are disposed through vendors. Other than paper wastes all degradable wastes are burned in incinerator. Land fillings are also used to dispose the degradable waste so as to minimize dependency on incinerator. Land filling supports landlevelling. In this procedure, layers are compressed with some mechanical equipment and covered with earth, leveled, and compacted.

Liquid Waste Management

A sewage disposal system with a capacity of 42m³/day that collects the effluents from canteen, septage, hostels and kitchen in a collecting tank and treating the waste water in a Sewage treatment Plant. Waste water from two biogas plants and wash water from kitchens of Boys and Girls Hostels gets collected in the sump tank and is pumped into reactor tank provided with biopack. During the pumping of waste water into the reactor tank it is dosed per 7m³ with 20gm of sodium hydroxide, 13gm of poly electrode and 5gm of ferric chloride. They are fed into solution with the help of dosing pumps. The retention time in reaction tank is one and a half hours. The reaction tank is provided with biopack where aerobic bacteria are lodged. The tank is aerated with recirculation pump (1 HP) fitted with an air bleed. After the lapse of one and half hours, waste water from the reactor tank is pumped through a coarse filter to pressure sand and pressure carbon filters in succession with a 1HP pump. After filtering water is chlorinated by means of dosing pump and led into infiltration basin, finally disposed into the ground. Special area of this ground is earmarked for this with a thick plantation. Usually there will be 6 to 7 batches per day.

E-waste management

Minor repairs of systems and electronic equipments are carried out by the technical staff and are reused. Computer scraps are collected to set up hardware display room. The exhibits include outdated devices and even new generation devices. Sessions on hardware assembling for students also uses scrap items. The Institute also donates used electronic items. Authorities also dispose non repairable e-waste through contractors or vendors.

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

7.1.6 Rain water harvesting structures and utilization in the campus

Response:

In the initial years the institution faced scarcity of water and was dependent on water from tankers which was to be paid monthly. Rainwater harvesting helped to reduce the quantity of water to be supplied from outside. Rainwater from roof tops of buildings spread over an area of 24 acres of land is collected in three tanks having a capacity of 10 to 15 lakhs of Liters each. Tanks are well constructed using reinforced cement concrete and random rubble masonry to prevent the leakage of water. Tanks are also 60cm above the ground level to prevent the ground water flowing into the tank. Another tank of capacity of about 10 lakhs liters water is used for storing the filtered water. Water is filtered using sand filter. Filtered water from the tank is chlorinated before pumping into the drinking water tank. Filtered water is also used for watering the flower and vegetable gardens and for flushing the toilets.

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

7.1.7 Green Practices

- Students, staff using
 - a) Bicycles
 - b) Public Transport
 - c) Pedestrian friendly roads
- Plastic-free campus
- Paperless office
- Green landscaping with trees and plants

Response:

Efforts towards green practices include awareness campaigns and display of posters. Institution was awarded “The Kerala State Energy Conservation Award and Commendation Certificates” by Government of Kerala for efficient utilization of energy, conservation of energy, research and promotion of energy efficiency. Institution is located at a 500m walkaway distance from the bus stop and hence many of the staff and students depend on public transport. A fleet of buses operated by the institution also helps the staff and students to avail this transport facility. Campus has sufficient space for parking vehicles of staff and students. Roads inside the campus are well maintained. Pedestrians can walk safely through the campus through walk friendly pathways. Entry of vehicles inside the campus is restricted. Security people are assigned duties on every turn and crossing to the campus

ENCON club activity practicing energy conservation and environment protection of student community aims at plastic free campus. The main objective of ENCON Club is to drive home the message of energy conservation and environment protection in the minds of students. Faculty coordinator is associated with ENCON club. Go Green initiatives are organized by various departments. Old newspapers are collected and used in the cooperative stores to wrap items other than the grocery. Campus has restricted the usage of paper or plastic cups and instead stainless steel cups are used in the canteen.

Reuse of one -side- printouts is encouraged. Communications inside the campus are channeled via emails and WhatsApp groups. Telephone with intercoms inside the institution helps to avoid communication over papers. Online application process is also entertained for student admissions. Library work is managed by library software developed by the TIST team. Accounting and leave management is also done through software.

Institution is surrounded by native plants throughout the campus providing cooling shade in summer and warmth in winter. On the World Environment Day NSS Volunteers planted trees around the

campus to highlight the importance of planting trees. The scientific names of the trees are also displayed on trees gives an opportunity to discuss their uses among the staff and students of the institution. Campus garden includes varieties of flowering plants, fruit bearing trees and lawns. Gardener is appointed to take care of the campus garden and hand tools are mostly used in the garden to avoid pollution. Campus garden is watered through rain water collected from roofs. Restricted the use of plastic pots in garden and instead mud pots are used. To instill the importance of Organic Cultivation, Green Chili and Gourd cultivation was done in boys and girls hostels.

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

7.1.8 Average percentage expenditure on green initiatives and waste management excluding salary component during the last five years

Response: 0.24

7.1.8.1 Total expenditure on green initiatives and waste management excluding salary component year-wise during the last five years(INR in Lakhs)

2017-18	2016-17	2015-16	2014-15	2013-14
0.17	4.3	0.814	4.32	2.19

File Description	Document
Green audit report	View Document
Details of expenditure on green initiatives and waste management during the last five years	View Document

7.1.9 Differently abled (Divyangjan) Friendliness Resources available in the institution:

1. Physical facilities
2. Provision for lift
3. Ramp / Rails
4. Braille Software/facilities
5. Rest Rooms
6. Scribes for examination
7. Special skill development for differently abled students
8. Any other similar facility (Specify)

A. 7 and more of the above

B. At least 6 of the above

C. At least 4 of the above

D. At least 2 of the above

Response: B. At least 6 of the above

File Description	Document
Resources available in the institution for Divyangjan	View Document
Any additional information	View Document
link to photos and videos of facilities for Divyangjan	View Document

7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years

Response: 2

7.1.10.1 Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
01	00	00	00	01

File Description	Document
Number of Specific initiatives to address locational advantages and disadvantages	View Document
Any additional information	View Document

7.1.11 Number of initiatives taken to engage with and contribute to local community during the last five years (Not addressed elsewhere)

Response: 34

7.1.11.1 Number of initiatives taken to engage with and contribute to local community year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
12	6	5	5	6

File Description	Document
Any additional information	View Document

7.1.12

Code of conduct handbook exists for students, teachers, governing body, administration including Vice Chancellor / Director / Principal /Officials and support staff

Response: Yes

File Description	Document
Any additional information	View Document
URL to Handbook on code of conduct for students and teachers , manuals and brochures on human values and professional ethics	View Document

7.1.13 Display of core values in the institution and on its website

Response: Yes

File Description	Document
Any additional information	View Document
Provide URL of website that displays core values	View Document

7.1.14 The institution plans and organizes appropriate activities to increase consciousness about national identities and symbols; Fundamental Duties and Rights of Indian citizens and other constitutional obligations

Response: Yes

File Description	Document
Details of activities organized to increase consciousness about national identities and symbols	View Document
Any additional information	View Document

7.1.15 The institution offers a course on Human Values and professional ethics

Response: Yes

File Description	Document
Any additional information	View Document
Provide link to Courses on Human Values and professional ethics on Institutional website	View Document

7.1.16 The institution functioning is as per professional code of prescribed / suggested by statutory bodies / regulatory authorities for different professions

Response: Yes

File Description	Document
Provide URL of supporting documents to prove institution functions as per professional code	View Document

7.1.17 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years

Response: 17

7.1.17.1 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties year-wise during the last five years

2017-18	2016-17	2015-16	2014-15	2013-14
04	02	04	02	05

File Description	Document
List of activities conducted for promotion of universal values	View Document
Any additional information	View Document

7.1.18 Institution organizes national festivals and birth / death anniversaries of the great Indian personalities

Response:

7.1.18. Institution organizes national festivals and birth / death anniversaries of the great Indian personalities.(1)

The Institution organizes national festivals Republic Day and Independence Day. Teacher's day is celebrated on September 5th on remembrance of the birth anniversary of Dr. Sarvappalli Radhakrishnan who was a great philosopher and scholar of India. Talks, games and other events are organized on such days. On the day students give "thank you cards" to their teachers and may decorate the walls with hangings of flowers and quotes.

National Technology Day is celebrated at the institute under the sponsorship of Kerala State Council for Science Technology and Environment (KSCTE) covering invited talks, quiz competition, project exhibition related to advances in technology and sustainable development along with a demo of safety equipments. Engineers Day is celebrated on the birthday of India's greatest ever engineer Sir M Visveswaraya and celebrations include exhibition at the institute for school students. Women's Day is celebrated by Women cell of TIST with invited talks on empowering women. International Day of Yoga is also organized by the institute under the guidance of yoga therapist. World environment day with a message of promoting tree plantation is organized in the institute by NSS.

In remembrance of great Indian personalities, departmental blocks and seminar halls are named after them, namely Aryabhata Block, Visweswaraya Block, C.K. Prahalad MBA Library, C.V Raman Hall, Ramanujan Hall, Tagore Hall and Amirtya Sen Hall. Research wing of the institute is named as J.C. Bose Centre for research and advanced studies in memory of Sri. J.C Bose.

Along with the aforementioned the regional festivals Onam and Christmas are celebrated in the institution with specially invited guests and associated programs. World water day is observed with the theme of water conservation and various activities are organized in association with NSS. National Energy Conservation day is organized at the institute and is accompanied with site visits. National Safety day is also organized in the institute.

File Description	Document
Any additional information	View Document

7.1.19 The institution maintains complete transparency in its financial, academic, administrative and auxiliary functions

Response:

The institute is headed by Principal who performs the following functions: plans, organizes and implements necessary steps for development of institution in line with its vision and mission; supervises the administrative activities and also motivates the faculty and staff to set objectives and goals; supervises the student admission, faculty and staff recruitment under the guidelines specified by the management and

statutory supervisory bodies of Universities and Government. Dean (Academic and Student Affairs) advises Principal on taking timely measures to ensure proper teaching learning process. Vice Principal oversees general academics of the institute and helps Principal, along with the Dean. Heads of the departments look after day to day activities relating to teaching and other workloads of teaching and non-teaching staff; assist Principal in faculty recruitment; organize trainings for faculty and students and also to conduct research activities. External audits conducted by affiliated university monitors the quality of education.

Other supporting bodies: Internal Quality Assurance Cell coordinates quality related activities. Internal Audit Cell conducts internal audits and ensures timely submission of monthly report to university. Anti-Sexual Harassment and Women's Cell looks into any complaints filed by students/staff/faculty and also conducts seminars and lectures. Anti-Ragging Cell implement anti-ragging measures, monitors the violations of anti-ragging rules and conducts enquiry on violations. Discipline Committee reports breach of discipline to the Principal and recommends corrective actions.

University Examination Cell deals with conduct of university and online examinations. Grievance Redressal and Appeals Committee to redress the grievances of the students. Student Welfare Committee for welfare of the students by taking appropriate steps with the concurrence of the Principal. AICTE cell deals with Extension of AICTE Approval. Committee for SC/ST ensures prevention of atrocities. Internal Complaint Committee deals with gender sensitization. Parents Teachers Association facilitates parental participation in college. Hostel committee handles grievances of hostel inmates and ensures discipline, health and hygiene in hostels. Alumni Cell to strengthen the ties between alumni and Institute. Admission Cell looks into the criteria for admissions. Library Committee guides the librarian in formulating general library policies and regulations which govern the functions of the library. Librarian is responsible for the overall in charge of the library. Placement officer is responsible for all the activities relating to the students placement and also coordinates with the industries for providing the training courses to students. System Administrator manages all the activities relating to the computer systems and networking. Physical Education coordinator is responsible for all the activities related to the Physical Education. Transport Officer is responsible for students and staff transport. Technical Staff takes care of consumables, maintains and assists in conduction of the lab.

Administrative manager coordinates maintenance of the college and manages supporting staff. Budgets prepared by the departments are scrutinized by Principal and thereafter approved by Management. Accounts Department makes entry of day to day transactions and does ledger and bank reconciliation and is audited internally and externally. Human Resource Department prepares acquittance roll as per statutory norms, maintains employee records and manages attendance of employees.

7.2 Best Practices

7.2.1 Describe at least two institutional best practices (as per NAAC Format)

Response:

Two best practices are Outcome Based Education(OBE) and Innovation and Entrepreneurship

Development Center (IEDC)

1. Title of the practice

Outcome Based Education (OBE)

2. Objectives of the practice

- Enhancing quality of teaching learning process.
 - Structure content around activities
 - Assess achievement of course and program outcomes.
 - Promote interdisciplinary and higher order thinking skills.
 - Achieving global recognition

3. The context

TIST incorporates many novelties in curriculum, within University parameters. Creative content is given priority while adopting pedagogy models like Revised Bloom's Taxonomy (RBT) and Creative Learning Process (CLP). OBE approach builds competencies in learning making graduates to cope with rapid changes around aiming wider recognition, transparency, quality assurance to ensure 'learning by the student' through effective teaching methodology leading to industry relevant graduates. To achieve mission and vision of the institute, outcomes are framed, assessed and continuously monitored.

4. The Practice

Institution has reframed its Vision and Mission in the year 2015. Departments formulate PEOs and PSOs. NBA process manual is maintained by departments accredited by NBA. COs are framed by concerned faculty. Course plan prepared also endeavors to bridge syllabus based gaps by adding contents outside syllabus. The outcomes are assessed through assessment tools. Surveys are conducted analyzed for improvement of outcomes. RBT based observable and measurable action verbs define learning outcomes. COs are mapped with POs and PSOs. Assessment tools viz: internal assessment tests, class tests, assignments, continuous evaluation in laboratories and university exams are used to determine CO attainment. Well defined procedure is followed in the institution for measuring attainment from assessment tools. At the end of every academic year, curriculum gaps are identified using PO/PSO Mapping along with Course End surveys, Program Exit Surveys, Alumni Surveys and Employer Surveys and steps initiated to address it. Faculty prepare learning materials and teach with the aid of chalk and board, smart class rooms, models and LCD projectors. Format for Classroom Teaching (FCT) is prepared beforehand against course plan showing learning outcomes, instructional methods and assessment questions. The difficult concepts are explained with reference to real world situations. Question paper scrutiny committee scrutinizes the internal examination question papers composed of questions of different levels

5. Evidence of Success

- Enabled to build a framework for curriculum delivery.
- Well defined assessment procedure for achievement of outcomes.
- Enhanced student core competencies
- Obtained the National Board Accreditation for four engineering programs
- Gained global and national recognition

- Received approval for awarding B.Tech Honors under APJ Abdul Kalam Technological University(KTU)
- Obtained the AICTE approval of new programs viz:B.Tech in Robotics & Automation
- Received AICTE approval for increase in intake for the NBA accredited courses B.Tech Computer Science &Engineering and Civil Engineering.
- Promoted industry-institute interactions
- Eligibility to avail national/international funds

6. Problems Encountered and Resources Required

Course Outcomes provided along with the curriculum may not always be defined using RBT; hence TIST designed its own guidelines and additional verbs for framing the course outcomes. Question papers of university exams may not always be following pedagogical approach and so TIST adopted the strategy of uniformly distributing its attainment to all course outcomes in the procedure of calculating course outcome attainment. Industry relevance for concerned courses is not addressed completely in the curriculum. Steps for mitigating the industry-institute gaps are discussed in the Academic Advisory Committee of the departments. Separate academic calendar is prepared which includes all academic activities as per university calendar along with co-curricular and extracurricular activities. Trainings on Pedagogy and orientation on OBE, identification of assessment tools to measure the achievement of outcomes are required.

1. Title of the practice

Innovation and Entrepreneurship Development Center (IEDC)

2. Objectives of the practice

- Create a startup ecosystem by providing value added trainings
- Identify students with innovative ideas and create a platform for them.
- Enhance student entrepreneurial skills
- Enhance awareness about modern tools, software and designs
- Acquire knowledge about current technological developments in industries.
- Impart professional technical mentoring by experts of various domains
- Channelize idea to product by mentoring, prototyping, and networking

3. The context

An Entrepreneurship Development club was started in 2013. A team of students represented India and won Black Berry Jam Asia Pacific Hackathon. The cell paved to generate genuine interest in participating in similar national/international competitions. With a view to have a recognized platform TIST IEDC entered

into an MoU with Startup village on 24th March 2015. **4. The Practice**

As per the guidelines of Kerala Startup Mission IEDC is governed by an executive committee with a pool of exceptional students who are selected based on the recommendations of respective HODs. The executive committee of IEDC is headed by Nodal Officer staff coordinators and student members to coordinate different programs. Participation in various workshops and in national/international level competitions is promoted. Students are motivated and supported for setting up startups. It provides platform to interact with entrepreneurs constantly to empower budding entrepreneurs. TIST IEDC organizes visits to Startup village. Fab-lab visits helps to experience the technical prototyping platform which enables the students to launch innovative products and to prototype the new models developed. Technological developments are familiarized through various programs in association with concerned departments in the institute. Residential workshops are also organized for creative and high potential aspiring entrepreneur-students. Members are to participate in government supported projects like Map my Home project, funded and organized by Google in association with Kerala Land Records and Survey department. IEDC also promotes social outreach programs, intercollegiate technical events like programs on FOSS which promote the virtues of free software. Maker Expo, attempts to map and empower a community of educators and creative people was also organized under IEDC.

5. Evidence of Success

- Participated in the annual CANSAT competition held in USA and the University Rover Challenge (URC)
- Aravind Sanjeev and Jibin Jose were the first winners of the Annual SV Square project which was officially rolled out by startup village offering an all- expenses-paid trip to Silicon Valley, USA.
- Juhaim Ibnu Mohammed, the founder and CEO of Reckone Inventions launched 'Ridelogik' a fit bit for motorcycles, which diagnoses the real time engine performance.
- Participated in Google Map My Home- project funded and organised by Google
- Abraham Solomon, selected by Kerala Startup Mission grabbed the opportunity to visit Silicon Valley in June 2017.
- Seventeen companies incubated
- Started outreach programs, developed communities through various Summits.
- Manju Mohan teamed up with students from multiple engineering colleges across the nation to put forward a project which maps Block chain with the healthcare industry.

6. Problems Encountered and Resources Required

To create an ecosystem several talks and workshops on entrepreneurship by eminent personalities were a necessity. The hunt for proper resource persons in any domain was another hurdle and Kerala Startup Mission (KSUM) enabled to get access to the pool of experts. KSUM funding and investors pitching made product and prototype development financially viable. For sharing the innovative ideas online communication groups are behind each creative out-puts.

Entrepreneurship and Development Club was funded by TIST management. After merger of the club in IEDC, it is supported by KSUM, under the Government of Kerala. KSUM also had come up with an initiative to support students for developing their ideas into a product by Angel funding. For providing hands on exposure Arduino and Raspberry pi boards were purchased.

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

7.3 Institutional Distinctiveness

7.3.1 Describe/Explain the performance of the institution in one area distinctive to its vision, priority and thrust

Response:

Scholarship Schemes offered by Institute:

TIST Foundation for Economically Backward Rural Students (TIFERS) is a wing of TIST, started in the year 2005 for the welfare of economically backward and academically brilliant rural students for pursuing higher education. TIFERS makes special efforts to remove disparities and equalize educational opportunities for all students. Another striking feature of this scheme is the Book Bank, providing deserving students with text books free of cost. This section includes 4619 books. Academic progress of every beneficiary is strictly monitored. Scholarship offered by TIFERS falls under the following categories:

- Waving of Full Tuition fees and free hostel accommodation.
- Waving of Full Tuition fees.
- Partial Waving of Tuition fees
- Book Bank Scheme

Selection is based on the following criteria:

- Students residing in rural area and their parents' annual income not exceeding

Rs.10,0000/- p.a.

- Having no regular income.
- Having good academic records, but unable to pursue higher studies.
- Written test and interview by the Institute.

Selection Procedure

1. Due publicity in dailies through detailed advertisement.
2. Candidates applying should fill the application form which includes the personal and academic details and location of residence. Applicants should also enclose copies of mark list concerned and income certificate issued by the village office.
3. Applicants will be issued hall tickets to appear in the written test of 1hr 30 minutes duration, carrying 100 marks covering Mathematics, Physics and Chemistry.
4. Rank list is prepared on the basis of marks obtained in the written test, State Entrance Examination and HSSE (Physics, Chemistry, Maths) at the ratio of 40:30:30.
5. A report is obtained on the spot inspection of the living premises of the candidates by a team from the institute.
6. Interview conducted by an interview board consisting of representatives of management and the Principal, resulting in the final identification of backward and academically brilliant rural candidates.
7. Offer letters stating the scheme offered, terms and conditions to be met for the annual renewal of the scholarship duly signed by the authority will be send to the parents of the selected candidates. Confirmation of acceptance is to be signed by the ward and the parent or the final approval and admission.

TIST also offers fee concession for students who are already undergoing the course in case of unexpected financial crisis or if the family is suffering from any critical illness.

From the academic year 2017-18 onwards TIFERS is offered under TIST Income – cum – Merit Scholarship. TIST also offers other scholarship schemes mentioned below.

- Excellence Scholarship for Entrance toppers
- Excellence Scholarship for XII Standard toppers
- Excellence Scholarship for National / State level achievers in ARTS
- Excellence Scholarship for National / State level achievers in SPORTS
- Scholarships for BTech lateral entry, MTech and MBA students

Nature and criteria of all the above mentioned schemes are available at institution website.

Upon completion of course many of the beneficiaries of the above mentioned schemes are provided job opportunities in the institute itself.

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

NAAC

5. CONCLUSION

Additional Information :

With a view to improve teaching learning process, efforts are being made to enhance and supplement learning resources via NPTEL lectures, MOOC courses for promotion and use of resources for technical advancement in all branches of engineering and Ebsco Management Collection Lite for Management Studies. A good number of activities through professional bodies and student associations are being given more thrust.

Concluding Remarks :

Institute is managed by Toc H Public School Society, a non-profit making charitable trust. It has a clear organizational structure with proper demarcation of duties and responsibilities, duly decentralized with transparent and participatory governance. It also takes special care in welfare measures for staff like insurance scheme, employee's provident fund and medi-claim. The college provides fee concessions, book bank facilities etc. for students from economically vulnerable segments.

The institute's Internal Quality Assurance Cell (IQAC) plans and monitors all activities strictly adhering to universities/AICTE/Government norms along with vital segments, students, parents teachers and technical experts. Best practices, namely Outcome Based Education(OBE) and Innovation and Entrepreneurship Development Cell (IEDC) are being successfully implemented resulting in the four departments being NBA accredited, opening avenues for the award of B.Tech (Hons).

We have a clearcut roadmap for getting autonomy status for all the programs and setting up of an independent research centre producing research publications with impact factor in indexed journals, national board accreditation for all branches, special block for Management Studies and NIRF ranking in the first 100. We also look forward to the establishment of an integrated campus endeavoring to achieve quality technical and management education of global standards

6.ANNEXURE

1.Metrics Level Deviations

Metric ID	Sub Questions and Answers before and after DVV Verification																				
1.1.3	<p>Percentage of participation of full time teachers in various bodies of the Universities/ Autonomous Colleges/ Other Colleges, such as BoS and Academic Council during the last five years</p> <p>1.1.3.1. Number of teachers participating in various bodies of the Institution, such as BoS and Academic Council year-wise during the last five years</p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>34</td> <td>26</td> <td>7</td> <td>7</td> <td>7</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>6</td> <td>2</td> <td>3</td> <td>3</td> </tr> </tbody> </table>	2017-18	2016-17	2015-16	2014-15	2013-14	34	26	7	7	7	2017-18	2016-17	2015-16	2014-15	2013-14	7	6	2	3	3
2017-18	2016-17	2015-16	2014-15	2013-14																	
34	26	7	7	7																	
2017-18	2016-17	2015-16	2014-15	2013-14																	
7	6	2	3	3																	
1.2.1	<p>Percentage of new Courses introduced out of the total number of courses across all Programs offered during last five years</p> <p>1.2.1.1. How many new courses are introduced within the last five years</p> <p>Answer before DVV Verification : 3</p> <p>Answer after DVV Verification: 657</p>																				
1.2.2	<p>Percentage of programs in which Choice Based Credit System (CBCS)/Elective course system has been implemented</p> <p>1.2.2.1. Number of programs in which CBCS/ Elective course system implemented.</p> <p>Answer before DVV Verification : 3</p> <p>Answer after DVV Verification: 14</p>																				
1.2.3	<p>Average percentage of students enrolled in subject related Certificate/ Diploma programs/Add-on programs as against the total number of students during the last five years</p> <p>1.2.3.1. Number of students enrolled in subject related Certificate or Diploma or Add-on programs year-wise during the last five years</p> <p>Answer before DVV Verification:</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>274</td> <td>311</td> <td>544</td> <td>169</td> <td>197</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>111</td> <td>55</td> <td>44</td> <td>00</td> <td>00</td> </tr> </tbody> </table>	2017-18	2016-17	2015-16	2014-15	2013-14	274	311	544	169	197	2017-18	2016-17	2015-16	2014-15	2013-14	111	55	44	00	00
2017-18	2016-17	2015-16	2014-15	2013-14																	
274	311	544	169	197																	
2017-18	2016-17	2015-16	2014-15	2013-14																	
111	55	44	00	00																	

Remark : The HEI has not provided any data as requested by DVV for verification. The Lists have been not numbered serially, some lists do not complete information and not even AY. Hence as per DVV understanding and data interpretation HEI input updated .

1.3.2 Number of value added courses imparting transferable and life skills offered during the last five years

1.3.2.1. Number of value-added courses imparting transferable and life skills offered during the last five years

Answer before DVV Verification : 23

Answer after DVV Verification: 06

1.4.1 Structured feedback received from

1) Students, 2)Teachers, 3)Employers, 4)Alumni and 5)Parents for design and review of syllabus-Semester wise/ year-wise

Answer before DVV Verification : B.Any 3 of the above

Answer After DVV Verification: B.Any 3 of the above

2.1.2 Average Enrollment percentage

(Average of last five years)

2.1.2.1. Number of students admitted year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14

2.1.2.2. Number of sanctioned seats year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
696	756	756	756	732

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
696	756	756	756	672

2.1.3 Average percentage of seats filled against seats reserved for various categories as per applicable reservation policy during the last five years

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
97	102	115	113	113

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
97	102	117	109	113

Remark : The HEI input updated and corrected as per attached HEI clarification

2.3.2 Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc.

2.3.2.1. Number of teachers using ICT

Answer before DVV Verification : 140

Answer after DVV Verification: 139

2.4.2 Average percentage of full time teachers with Ph.D. during the last five years

2.4.2.1. Number of full time teachers with Ph.D. year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
20	23	22	23	25

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
19	23	22	23	25

Remark : The HEI input updated/ corrected as per HEI clarification response

2.4.4 Percentage of full time teachers who received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years

2.4.4.1. Number of full time teachers receiving awards from state /national /international level from Government recognised bodies year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
3	3	2	1	0

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
03	01	01	00	01

Remark : The HEI input updated/ corrected based on relevant awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the last five years

2.6.3	<p>Average pass percentage of Students</p> <p>2.6.3.1. Total number of final year students who passed the examination conducted by Institution. Answer before DVV Verification : 367 Answer after DVV Verification: 347</p> <p>2.6.3.2. Total number of final year students who appeared for the examination conducted by the institution Answer before DVV Verification : 520 Answer after DVV Verification: 505</p> <p>Remark : The HEI input updated/ corrected based on the HEI clarification response</p>																				
3.1.1	<p>Grants for research projects sponsored by government/non government sources such as industry ,corporate houses, international bodies, endowment, chairs in the institution during the last five years (INR in Lakhs)</p> <p>3.1.1.1. Total Grants for research projects sponsored by the non-government sources such as industry, corporate houses, international bodies, endowments, Chairs in the institution year-wise during the last five years(INR in Lakhs) Answer before DVV Verification:</p> <table border="1" data-bbox="306 949 1046 1081"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>0.8</td> <td>2.89</td> <td>11.09</td> <td>41.96</td> </tr> </tbody> </table> <p>Answer After DVV Verification :</p> <table border="1" data-bbox="306 1162 1046 1294"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>0.8</td> <td>00</td> <td>00</td> <td>00</td> </tr> </tbody> </table>	2017-18	2016-17	2015-16	2014-15	2013-14	7	0.8	2.89	11.09	41.96	2017-18	2016-17	2015-16	2014-15	2013-14	7	0.8	00	00	00
2017-18	2016-17	2015-16	2014-15	2013-14																	
7	0.8	2.89	11.09	41.96																	
2017-18	2016-17	2015-16	2014-15	2013-14																	
7	0.8	00	00	00																	
3.1.3	<p>Number of research projects per teacher funded, by government and non-government agencies, during the last five year</p> <p>3.1.3.1. Number of research projects funded by government and non-government agencies during the last five years Answer before DVV Verification : 10 Answer after DVV Verification: 3</p> <p>3.1.3.2. Number of full time teachers worked in the institution during the last 5 years Answer before DVV Verification : 246 Answer after DVV Verification: 363</p>																				
3.2.2	<p>Number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the last five years</p> <p>3.2.2.1. Total number of workshops/seminars conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices year-wise during the last five years Answer before DVV Verification:</p> <table border="1" data-bbox="306 2013 1046 2089"> <thead> <tr> <th>2017-18</th> <th>2016-17</th> <th>2015-16</th> <th>2014-15</th> <th>2013-14</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	2017-18	2016-17	2015-16	2014-15	2013-14															
2017-18	2016-17	2015-16	2014-15	2013-14																	

59	63	79	73	32
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Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
18	05	06	03	12

3.3.3 Number of Ph.D.s awarded per teacher during the last five years

3.3.3.1. How many Ph.Ds awarded within last five years

Answer before DVV Verification : 2

Answer after DVV Verification: 2

3.3.3.2. Number of teachers recognized as guides during the last five years

Answer before DVV Verification : 8

3.3.4 Number of research papers per teacher in the Journals notified on UGC website during the last five years

3.3.4.1. Number of research papers in the Journals notified on UGC website during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
13	15	16	11	8

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
10	12	18	08	06

Remark : The HEI has submitted data a format which cannot be verified without any summary or serial numbers, even the PDF document created from excel is not correct. as HEI has highlighted only 2 ISSN numbers, DVV has updated the input.

3.3.5 Number of books and chapters in edited volumes/books published and papers in national/international conference proceedings per teacher during the last five years

3.3.5.1. Total number of books and chapters in edited volumes / books published, and papers in national/international conference-proceedings year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
83	39	53	32	20

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
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22	14	11	15	09
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3.4.2 Number of awards and recognition received for extension activities from Government /recognised bodies during the last five years

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
4	3	2	2	0

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
00	00	00	00	0

3.5.1 Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc during the last five years

3.5.1.1. Number of linkages for faculty exchange, student exchange, internship, field trip, on-the-job training, research, etc year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
40	79	23	42	17

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
25	29	18	19	14

3.5.2 Number of functional MoUs with institutions of National/ International importance, Other Institutions, Industries, Corporate houses etc., during the last five years (only functional MoUs with ongoing activities to be considered)

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 (only functional MoUs with ongoing activities to be considered)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
19	16	15	4	4

Answer After DVV Verification :

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2017-18	2016-17	2015-16	2014-15	2013-14
02	02	02	01	00

Remark : The HEI input updated / corrected based on MOU's attached as proof by HEI.

4.2.3 Does the institution have the following:

1. e-journals
2. e-ShodhSindhu
3. Shodhganga Membership
4. e-books
5. Databases

Answer before DVV Verification : B. Any 3 of the above

Answer After DVV Verification: B. Any 3 of the above

Remark : The HEI input updated as per HEI proof submission

4.2.4 Average annual expenditure for purchase of books and journals during the last five years (INR in Lakhs)

4.2.4.1. Annual expenditure for purchase of books and journals year-wise during the last five years (INR in Lakhs)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
23.34	19.54	19.1	39.86	32.06

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
23.34	19.54	19.1	39.86	32.06

Remark : The HEI input updated as per attached supporting document

4.2.5 Availability of remote access to e-resources of the library

Answer before DVV Verification : Yes

Answer After DVV Verification: Yes

4.3.3 Available bandwidth of internet connection in the Institution (Lease line)

Answer before DVV Verification : ≥ 50 MBPS

Answer After DVV Verification: ≥ 50 MBPS
 Remark : The HEI input updated as per supporting document/clarification

4.4.1 Average Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, as a percentage during the last five years

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
661.35	851.72	1007.766	1122.07	1076.48

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
174.61	170.74	241.75	228.13	190.93

Remark : The HEI input updated/ corrected for AY 2017-18 as per its attachment in 4.2 for balance sheet of Ay 2017-18

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

5.1.1.1. Number of students benefited by scholarships and freeships provided by the Government year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
36	102	156	123	233

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
36	102	156	123	233

Remark : The HEI input updated/ corrected as per HEI clarification response

5.1.2 Average percentage of students benefited by scholarships, freeships, etc. provided by the institution besides government schemes during the last five years

5.1.2.1. Total number of students benefited by scholarships, freeships, etc provided by the institution besides government schemes year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
28	44	24	27	25

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
38	44	24	27	25

Remark : The HEI input updated as per attached supporting document/clarification

5.2.3 Average percentage of students qualifying in State/ National/ International level examinations during the last five years (eg: NET/ SLET/ GATE/ GMAT/ CAT/ GRE/ TOEFL/ Civil Services/State government examinations)

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
2	12	9	9	29

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
01	12	05	09	22

5.2.3.2. Number of students who have appeared for the exams year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
2	12	12	17	36

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
2	12	12	17	36

Remark : The HEI input updated as per attached supporting document/clarification

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14

8	18	12	15	14
---	----	----	----	----

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
00	00	00	00	00

6.2.3 Implementation of e-governance in areas of operation

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

Answer before DVV Verification : B. Any 4 of the above

Answer After DVV Verification: B. Any 4 of the above

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

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
0	19	8	8	6

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
0	18	8	8	6

6.3.4 Average percentage of teachers attending professional development programs viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Program during the last five years

6.3.4.1. Total number of teachers attending professional development programs, viz., Orientation Program, Refresher Course, Short Term Course, Faculty Development Programs year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
118	155	157	92	156

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
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06	26	29	10	23
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6.5.3 Average number of quality initiatives by IQAC for promoting quality culture per year

6.5.3.1. Number of quality initiatives by IQAC for promoting quality year-wise for the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
2	2	3	2	2

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
00	00	00	00	00

6.5.4 Quality assurance initiatives of the institution include:

1. Regular meeting of Internal Quality Assurance Cell (IQAC); timely submission of Annual Quality Assurance Report (AQAR) to NAAC; Feedback collected, analysed and used for improvements
2. Academic Administrative Audit (AAA) and initiation of follow up action
3. Participation in NIRF
4. ISO Certification
5. NBA or any other quality audit

Answer before DVV Verification : A. Any 4 of the above

Answer After DVV Verification: B. Any 3 of the above

Remark : The HEI input updated as per attached supporting document/clarification. only AAA has been considered along with earlier Quality assurance initiatives

7.1.1 Number of gender equity promotion programs organized by the institution during the last five years

7.1.1.1. Number of gender equity promotion programs organized by the institution year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
10	3	4	25	21

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
06	02	02	01	01

7.1.10 Number of Specific initiatives to address locational advantages and disadvantages during the last five years 7.1.10.1. Number of specific initiatives to address locational advantages and disadvantages year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
13	17	31	4	24

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
01	00	00	00	01

7.1.17 Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties during the last five years

7.1.17.1. Number of activities conducted for promotion of universal values (Truth, Righteous conduct, Love, Non-Violence and peace); national values, human values, national integration, communal harmony and social cohesion as well as for observance of fundamental duties year-wise during the last five years

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
17	9	15	9	14

Answer After DVV Verification :

2017-18	2016-17	2015-16	2014-15	2013-14
04	02	04	02	05

2.Extended Profile Deviations

ID	Extended Questions
1.1	Number of courses offered by the institution across all programs during the last five years Answer before DVV Verification : 15 Answer after DVV Verification : 753
1.2	Number of programs offered year-wise for last five years Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
3	3	3	3	3

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
15	15	15	15	14

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
120	132	132	132	132

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
116	132	132	132	132

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
487	630	558	559	511

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
505	522	661	574	580

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

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
153	159	172	175	176

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
153	159	172	166	152

3.2 Number of sanctioned posts year-wise during the last five years

Answer before DVV Verification:

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2017-18	2016-17	2015-16	2014-15	2013-14
155	157	165	165	160

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
176	176	172	166	152

4.1 Total number of classrooms and seminar halls

Answer before DVV Verification : 59

Answer after DVV Verification : 69

4.2 Total Expenditure excluding salary year-wise during the last five years (INR in Lakhs)

Answer before DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
661.35	851.72	1007.77	1122.07	1076.49

Answer After DVV Verification:

2017-18	2016-17	2015-16	2014-15	2013-14
597.21	589.67	684.69	733.51	640.71