



Yearly Status Report - 2019-2020

Part A

Data of the Institution

1. Name of the Institution	TIRUMALA ENGINEERING COLLEGE
Name of the head of the Institution	Dr. Y.V. Narayana
Designation	Principal
Does the Institution function from own campus	Yes
Phone no/Alternate Phone no.	08647218221
Mobile no.	9440453866
Registered Email	tecnrt@gmail.com
Alternate Email	principal@tecnrt.org
Address	Jonnalagadda (V)
City/Town	Narasaraopet
State/UT	Andhra Pradesh
Pincode	522601
2. Institutional Status	

Affiliated / Constituent	Affiliated
Type of Institution	Co-education
Location	Rural
Financial Status	Self financed
Name of the IQAC co-ordinator/Director	Dr. K. Sathish
Phone no/Alternate Phone no.	08647218221
Mobile no.	7989872923
Registered Email	iqactec@gmail.com
Alternate Email	iqac@tecnrt.org

3. Website Address

Web-link of the AQAR: (Previous Academic Year)	https://www.tecnrt.org/iqac/TECAQAR201819.pdf
4. Whether Academic Calendar prepared during the year	Yes
if yes,whether it is uploaded in the institutional website: Weblink :	http://www.tecnrt.org/iqac/201920ac.pdf

5. Accreditation Details

Cycle	Grade	CGPA	Year of Accreditation	Validity	
				Period From	Period To
1	B+	2.43	2016	05-Nov-2016	04-Nov-2021

6. Date of Establishment of IQAC

15-Mar-2016

7. Internal Quality Assurance System

Quality initiatives by IQAC during the year for promoting quality culture		
Item /Title of the quality initiative by IQAC	Date & Duration	Number of participants/ beneficiaries
Clean and green and Environmental free campus	23-Nov-2019 1	100
STTP program on writing effective research	18-Nov-2019 14	100

proposal and IPR		
Induction program for the first-year students	05-Aug-2019 7	470
Consideration for further Accreditation of UG Engineering programs	24-Jul-2019 1	60
certification /value add courses	19-Jul-2019 2	300
Teaching learning methods towards experimental learning	17-Jul-2019 2	100
Awareness programme for students on	10-Jul-2019 4	450
Orientation program for the faculty of our college	12-Jun-2019 1	110
Preparation of yearly Academic calendars	04-Jun-2019 3	12
IQAC Meeting(s)	27-May-2019 1	35
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8. Provide the list of funds by Central/ State Government- UGC/CSIR/DST/DBT/ICMR/TEQIP/World Bank/CPE of UGC etc.

Institution/Department/ Faculty	Scheme	Funding Agency	Year of award with duration	Amount
Nil	Nil	Nil	2019 0	0
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9. Whether composition of IQAC as per latest NAAC guidelines:	Yes
Upload latest notification of formation of IQAC	View File
10. Number of IQAC meetings held during the year :	2
The minutes of IQAC meeting and compliances to the decisions have been uploaded on the institutional website	Yes
Upload the minutes of meeting and action taken report	View File
11. Whether IQAC received funding from any of the funding agency to support its activities during the year?	No

12. Significant contributions made by IQAC during the current year(maximum five bullets)

• Provision of Hardware and Software facilities to conduct the classwork during pandemic situation through online mode was initiated. • IQAC working continuously and streamlines all departments to prepare qualitative quantitative data. • Precautions and measures are taken in the campus against COVID19 unlock was initiated. • Provision of free learning resources like MOOCs platform for students and faculty to upgrade their skills during the lockdown period was initiated and succeeded in getting fruitful results. • Collecting feedbacks from stakeholders and taking necessary actions to enhance the quality of education offered by the institution. • Improved the Graduation Results and Enhanced employability of the students by taking necessary corrective measures. • Upgraded Library by taking online subscription to E Journals, E Books, E Learning for SelfLearning • Internal and External Academic and administrative Audit • Student Satisfaction survey is conducted and analyzed. • Applied renewal of NBA accreditation for the department of Computer Science and Engineering • Promoted research culture among faculty members by providing incentives to quality research publications.

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13. Plan of action chalked out by the IQAC in the beginning of the academic year towards Quality Enhancement and outcome achieved by the end of the academic year

Plan of Action	Achievements/Outcomes
Academic audit for the year 2019-20.	Academic audit has been done by internal members and Unifying the activities within the college
Administrative audit for the year 2019-20	Administrative audit has been done by internal members and Unifying the activities within the college
Training and Placement Record	Eligible 200 students have taken training from all branches and 195 students were placed in different MNCs and other companies
NPTEL and MOOC course	Good number of students and faculty was undergone the NPTEL course, by which students and faculty self-learning skills has improve
Student progress	89 of academic result have achieved, remedial classes have arranged and improve the 5 academic results, Number of students have participated in cocurricular actives through online programs.
Research Publications and patents	Good number of Journals and patents has published in each department.
Organisation and Participation of Workshops /Conferences/Seminars	All departments have conducted workshops and seminars in latest technologies. Most of the faculty members are participated in many

	faculty developments programs and workshops, webinars through online mode				
OBE based classroom delivery and attainments are tabulated	Gaps identified and necessary corrective actions are suggested to the faculty				
Review on further improvement of faculty pursuing PhD & new PhD registration and quality publications	Initiated all faculty members. 5% faculty members have joined Ph. D in various Universities. some of the faculty members have published papers in well reputed journals				
Effective utilization of Alumni contributions	Improvement in R&D, Consultancy, Start-ups, etc with the support of enthusiastic old students at the Institute.				
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14. Whether AQAR was placed before statutory body ?	Yes				
<table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 50%;">Name of Statutory Body</th> <th style="width: 50%;">Meeting Date</th> </tr> </thead> <tbody> <tr> <td>Governing Council Body</td> <td>28-Dec-2019</td> </tr> </tbody> </table>		Name of Statutory Body	Meeting Date	Governing Council Body	28-Dec-2019
Name of Statutory Body	Meeting Date				
Governing Council Body	28-Dec-2019				
15. Whether NAAC/or any other accredited body(s) visited IQAC or interacted with it to assess the functioning ?	Yes				
Date of Visit	03-Feb-2020				
16. Whether institutional data submitted to AISHE:	Yes				
Year of Submission	2020				
Date of Submission	13-Feb-2020				
17. Does the Institution have Management Information System ?	Yes				
If yes, give a brief description and a list of modules currently operational (maximum 500 words)	YES, Institute currently has MIS operational modules like CMS Software Tool, Examination software, Tally accounting software. CMS MODULES consists of 1. Student Module 1. Preadmission, 2. Admission, 3. Scholarships etc. The MIS is designed to provide inputs to the Management on key parameters on real time basis. The information provided will help in monitoring and decisions making by the management and head of the Institution. The MIS collects data regarding				

curriculum, academic programs, research activities from the department which is analyzed, and presented through statistical tools. The information generated can be shared with the management through IQAC cell. MIS Currently working on the following modules. • Students Attendance - Daily, Weekly, Monthly, and consolidated reports • Online Feedback • University Result Analysis • Accounts • Billing • Stock • Inventory • Online Exam • Placement • Security Monitoring • Sending SMS to parents

Part B

CRITERION I – CURRICULAR ASPECTS

1.1 – Curriculum Planning and Implementation

1.1.1 – Institution has the mechanism for well planned curriculum delivery and documentation. Explain in 500 words

Depending on our resource potentiality, institutional goals, and concern towards the students, we impart quality policies and Education. The institution has developed a structured and effective implementation of the curriculum.

Following are the various means through which Institute executes the curriculum. Head of the Institution conduct meeting with HOD's and section in-charges every fortnight. In this meeting HOD's can give the road map of academic curriculum and other programs. HOD's should prepare Academic Calendar as per the guidelines of the University academic schedule and the requirements at the department level as per the action plans formed. Based on Academic Calendar, which is approved by the Principal, Timetables have been prepared strictly in accordance with guidelines of IQAC and University curriculum. For each course, its pre-requisites, concepts and learning objectives are clearly stated, based on which the teaching plan is prepared. The timetable and faculty load maintained strictly as per the University credits. Value addition activities are also included in the timetable to benefit the students in their career opportunities. Timetable is also communicated to all students by putting it into the Notice Boards and communicated through CR. The respective faculty members who are handling subjects can prepare course file as per the instructions of IQAC which includes lesson plan, course outcomes, course objectives, content topics, reference books and the expected outcomes from the students by learning through the topics prepared by respective faculty members at the beginning of each semester. It gives an insight how the lecture class will be handled throughout the semester. The faculty members should take the class work as per the academic calendar and all follows the annual calendar. In semester exams are conducted as prescribed by the University. The academic performance of students is continuously monitored by class tests, assignments, and oral evaluations along with result analysis of Online and In-semester examinations CO-PO-PSO mapping is computed by each staff member for the respective subjects to meet attainment.. Audit is conducted in very semester to evaluate and ensure smooth academic functioning in the department. Course wise feedback is taken from students. Individual course feedback is collected though an online portal, where each student must give course wise feedback. The feedback is analysed by the Head of Department and corrective actions are taken accordingly Department identify the slow learners and advanced learners in each class and section and give remedial coaching for slow learners to enhance

academic results, whereas self-learning through NPTEL/MOOC, can be encouraged to the advanced learners to meet the industrial standards. In addition to that soft skill training and value-added course are impart to the students for getting good placements. Students are also encouraged to participate co-curricular and extra-curricular activities. LCD projectors are used for demonstration, video, and audio lectures. Efforts are made to maximize the use of Modern resources and aid to improve the teaching in the classrooms. The students are also encouraged to use computer software packages for their projects. Department also conduct workshops, internships, industrial visits, seminars, skill development programs, webinars,

1.1.2 – Certificate/ Diploma Courses introduced during the academic year

Certificate	Diploma Courses	Dates of Introduction	Duration	Focus on employability/entrepreneurship	Skill Development
CATIA	NA	19/08/2019	14	Employability	Design and drawing of machine elements
PCB Design Fabrication	NA	19/09/2019	5	Employability	PCB designs find numerous applications in various fields such as digital electronics, telecommunications, computing network, smartcards
Programming with Mentor Graphic Tools	NA	28/09/2019	5	Employability	It explains the process to do the digital circuits in reduction of its area and increasing speed.
Programming using MATLAB for beginners	NA	12/12/2019	5	Employability	The basics of MATLAB enable the student to do the understand the areas like digital image processing, machine learning, etc
Advanced	NA	23/12/2019	5	Employability	MATLAB-2

Programming using MATLAB					ity	enable the student to do the project works in advanced areas like machine learning, deep learning, etc.
Remote sensing its applications	NA	13/02/2020	5	Employability	ity	It explains the importance of ground-based systems and their working. It analyses the optical. Microwave, hyperspectral images, etc.
PLC fundamentals	NA	30/01/2020	14	Employability	ity	Designing of PLC Models
Design and simulation of power converters using MATLAB	NA	09/09/2019	14	Employability	ity	Designing of Various Power converters
Robotics Training	NA	10/02/2020	14	Employability	ity	Understanding Robotic applications
Data Science using Machine learning	NA	05/08/2019	7	Employability	ity	Predictive Analytics using Python, Machine Learning Algorithms, Data Visualization, Big Data, Natural Language Processing
Software Engineering for Cloud, Blockchain IoT	NA	11/09/2019	7	Employability	ity	Design Architecture of Software Systems develop various application

using IOT

Computer
vision

NA

03/02/2020

7

Employabil
ity

Image segm
entation,
Object
detection, C
lassificatio
n of images,
Tracking
moving
objects over
time, Face
detection
and
recognition,
Optical
character
recognition,
Image
generation.

Web
Technologies
for Mobile
Platforms

NA

25/02/2020

7

Employabil
ity

Developing
Mobile Web
Applications

Computatio
nal Thinking
using Python

NA

23/03/2020

7

Employabil
ity

This
course will
teach you
how to use
computation
to
accomplish a
variety of
goals and
provides you
with a brief
introduction
to a variety
of topics in
computational
problem
solving.

Building
Drafting by
using
AutoCAD

NA

03/02/2020

6

Employabil
ity

Design of
building
structures
and plans

Architectu
ral
Modelling by
Revit

NA

10/02/2020

6

Employabil
ity

The job-
modern
skills
required,
such as how
to design
the
structures
with
developed
technology
and enhance

					knowledge that are very specific to that role or company
Arc GIS Software	NA	27/01/2020	6	Employability	enhance practical knowledge that are very specific to that role or company.
Computational chemistry and molecular machines	NA	08/10/2019	7	Employability	Knowledge on molecular mechanics
Physics of semiconductor	NA	08/10/2019	7	Employability	Knowledge on semiconductor
Visual Studio	NA	25/01/2020	7	Employability	Develop apps and games
Industrial Robotics and its applications	NA	10/09/2019	7	Employability	Robotics skills
Industrial Automation	NA	23/12/2019	7	Employability	Use of control systems, such as computers or robots, and information technologies for handling different processes and machineries in an industry

1.2 – Academic Flexibility

1.2.1 – New programmes/courses introduced during the academic year

Programme/Course	Programme Specialization	Dates of Introduction
Mtech	Computer Science and Engineering	30/04/2019
BTech	Information Technology	30/04/2019
No file uploaded.		

1.2.2 – Programmes in which Choice Based Credit System (CBCS)/Elective course system implemented at the affiliated Colleges (if applicable) during the academic year.

Name of programmes adopting CBCS	Programme Specialization	Date of implementation of CBCS/Elective Course System
BTech	CSE	10/06/2019
BTech	ECE	10/06/2019
BTech	EEE	10/06/2019
BTech	ME	10/06/2019
BTech	CIVIL	10/06/2019
Mtech	CSE	30/12/2020

1.2.3 – Students enrolled in Certificate/ Diploma Courses introduced during the year

	Certificate	Diploma Course
Number of Students	882	Nil

1.3 – Curriculum Enrichment

1.3.1 – Value-added courses imparting transferable and life skills offered during the year

Value Added Courses	Date of Introduction	Number of Students Enrolled
Visual basic .NET	30/12/2019	210
Android	18/02/2020	240
IOT ROBOTICS	20/03/2020	190
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1.3.2 – Field Projects / Internships under taken during the year

Project/Programme Title	Programme Specialization	No. of students enrolled for Field Projects / Internships
BTech	CSE	104
BTech	ECE	112
BTech	EEE	69
BTech	CIVIL	66
BTech	MECHANICAL	77
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1.4 – Feedback System

1.4.1 – Whether structured feedback received from all the stakeholders.

Students	Yes
Teachers	Yes
Employers	Yes
Alumni	Yes
Parents	Yes

1.4.2 – How the feedback obtained is being analyzed and utilized for overall development of the institution? (maximum 500 words)

Feedback Obtained
Institute has "college centric feedback system "taken through online once in a

semester to evaluate the quality of education in the institute. The feedback is collected at various levels from various stakeholders like Students, Parents, Teachers and Alumni. Feedback is analyzed and score obtained in the feedback is taken as a part in the faculty appraisal, so the faculty submits appraisal form for each semester. The total score obtained by the faculty for an academic year is taken as a criterion for the award of Best Teacher (Best Teacher Award is given during Teacher's day celebration). The faculty who is scoring less than 75 in student feedback is counselled. Feedback from alumni is collected every year and their suggestions are incorporated in revising Programme Educational Outcome (PEO). Feedbacks from parents are collected periodically about the academic environment, academic standard and overall development and progress of the student. Feedback from recruiters is obtained at the end of their recruitment process. This is used for improving the employability skills of the students. Then the feedback is analyzed at upper management level and the appropriate action will be taken.

CRITERION II – TEACHING- LEARNING AND EVALUATION

2.1 – Student Enrolment and Profile

2.1.1 – Demand Ratio during the year

Name of the Programme	Programme Specialization	Number of seats available	Number of Application received	Students Enrolled
Mtech	CSE	30	10	5
BTech	IT	60	167	60
BTech	CSE	180	370	179
BTech	ECE	180	320	168
BTech	MECHANICAL	60	20	17
BTech	EEE	60	40	30
BTech	CIVIL	60	45	34
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2.2 – Catering to Student Diversity

2.2.1 – Student - Full time teacher ratio (current year data)

Year	Number of students enrolled in the institution (UG)	Number of students enrolled in the institution (PG)	Number of fulltime teachers available in the institution teaching only UG courses	Number of fulltime teachers available in the institution teaching only PG courses	Number of teachers teaching both UG and PG courses
2019	1946	5	113	3	116

2.3 – Teaching - Learning Process

2.3.1 – Percentage of teachers using ICT for effective teaching with Learning Management Systems (LMS), E-learning resources etc. (current year data)

Number of Teachers on Roll	Number of teachers using ICT (LMS, e-Resources)	ICT Tools and resources available	Number of ICT enabled Classrooms	Number of smart classrooms	E-resources and techniques used
116	116	10	26	Nil	12

[View File of ICT Tools and resources](#)

[View File of E-resources and techniques used](#)

2.3.2 – Students mentoring system available in the institution? Give details. (maximum 500 words)

The IQAC had taken the initiative of implementing the mentoring of students. In our institution, mentoring system has been introduced for establishing a better and effective relationship between student and teacher and continuously monitor, council and guide students in educational and personal matter. All teachers work as mentors for students allotted to them. The students must feel to confide in their mentors. This is a continuous process till the end of academic career of student. The aim of student mentorship is – 1. To enhance teacher –student relationship. 2. To enhance student’s academic performance and attendance. 3. To minimize student’s dropout ratio. 4. To monitor the student’s regularity and discipline. 5. To enable the parents to know about the performance of regularity of wards. They are divided into groups of 20-25 students. Mentors maintain and update the mentoring format after collecting all necessary information. Mentors are expected to offer guidance and counselling as and when they required. It is the practice of mentors to meet students individually or in groups. In isolated cases parents are called for counselling and their special meeting with the principal at the suggestion of the mentor. If a student is identified as having weakness in particular subject, it is duty of mentor to apprise the concerned subject teacher. At least 3 to 4 meeting are arranged by mentors for their mentee in each semester. This system has been useful in identifying slow and advanced learner and through a careful examination of mentors report, the college has organized ‘Remedial Classes’ in identified topics for slow learners. HOD will meet all mentors of his/her department at least once in a month to review mentoring system. Advice mentors wherever necessary. Type of mentoring done in our institution are: 1. Professional Guidance – Regarding professional goals, selection of career and higher education. 2. Career Advancements – Regarding self-employment, entrepreneurship development, opportunities, morale, honesty, integrity required for career growth. 3. Coursework Specific – Regarding attendance and performance in present semester and overall performance in the previous semester. 4. Lab Specific – Regarding Do’s and Don’ts in the lab. Outcomes of the system a) The attendance percentage of the students has increase to greater extend. b) The number of detainment of students has decrease consistently. c) Due to direct communication between mentor and the student, there was good improvement in student-teacher relationship.

Number of students enrolled in the institution	Number of fulltime teachers	Mentor : Mentee Ratio
1951	116	1:17

2.4 – Teacher Profile and Quality

2.4.1 – Number of full time teachers appointed during the year

No. of sanctioned positions	No. of filled positions	Vacant positions	Positions filled during the current year	No. of faculty with Ph.D
116	116	Nil	34	15

2.4.2 – Honours and recognition received by teachers (received awards, recognition, fellowships at State, National, International level from Government, recognised bodies during the year)

Year of Award	Name of full time teachers receiving awards from state level, national level, international level	Designation	Name of the award, fellowship, received from Government or recognized bodies
2019	Dr.Y.V.Narayana	Principal	Certificate of Appreciation for Mentoring project expo
Nil	Dr.K .Sathish	IQAC / CIQA coordinator	Sr. IEEE/award

[View File](#)

2.5 – Evaluation Process and Reforms

2.5.1 – Number of days from the date of semester-end/ year- end examination till the declaration of results during the year

Programme Name	Programme Code	Semester/ year	Last date of the last semester-end/ year-	Date of declaration of results of semester-
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			end examination	end/ year- end examination
Mtech	CSE	I-II	09/11/2020	30/12/2020
Mtech	CSE	I-I	03/02/2020	29/08/2020
BTech	(CE: 01 EEE: 02, MECH:03,ECE :04,CSE: 05)	IV-II	12/09/2020	27/02/2020
BTech	(CE: 01 EEE: 02, MECH:03,ECE :04,CSE: 05)	III-II	31/10/2020	27/02/2020
BTech	(CE: 01 EEE: 02, MECH:03,ECE :04,CSE: 05)	II-II	16/11/2020	27/02/2020
BTech	(CE: 01 EEE: 02, MECH:03,ECE :04,CSE: 05)	I-II	14/12/2020	27/02/2020
BTech	(CE: 01 EEE: 02, MECH:03,ECE :04,CSE: 05)(CE: 01 EEE: 02, MECH:03,ECE :04,CSE: 05)	IV-I	21/10/2019	02/01/2020
BTech	(CE: 01 EEE: 02, MECH:03,ECE :04,CSE: 05)	III-I	21/10/2019	02/01/2020
BTech	(CE: 01 EEE: 02, MECH:03,ECE :04,CSE: 05)	II-I	21/10/2019	02/01/2020
BTech	(CE: 01 EEE: 02, MECH:03,ECE :04,CSE: 05)	I-I	06/01/2020	23/06/2020

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2.5.2 – Reforms initiated on Continuous Internal Evaluation(CIE) system at the institutional level (250 words)

The institute has taken efforts to improve the performance of students by framing significant reforms in Continuous Internal evaluation at the institute level. The institution strictly follows the evaluation procedure prescribed by the affiliating university. The evaluation weightage is 25 for continuous assessment tests and 75 for the end semester. The academic calendar for each semester is prepared in line with the University schedule of events, which provides the information on scheduled timetable for internal assessments, model examinations and the tentative schedule of University practical examinations in regard to this the students can plan the course of action. The question paper pattern for the internal examinations has been standardized by the institution. Blooms taxonomy is strictly followed in setting up the mid question papers for Internal Assessment. With regard to the tests, faculties prepare 3 sets of question papers that are submitted to the exam cell, wherein the Head of the Institution select a question paper from the sets and it is distributed to the students at the time of examination. Student marks are intimated to the students immediately after the completion of assessment and the same is communicated to their parents through SMS/Phone call. The academic performance of the student and attendance of the student have maintained and recorded in each department. Unit tests are conducted prior to MID examinations. Topic wise

question banks are provided for all subjects. Students are encouraged to solve previous years University Exam question papers and prefinal exams are conducted prior to University Exams.

2.5.3 – Academic calendar prepared and adhered for conduct of Examination and other related matters (250 words)

Every Academic year starts as prescribed by JNTUK Kakinada. The University will give in advance, publishes the Academic Calendar containing plans for curricular and co-curricular activities based on the available working days as per their norms. The Head of the department and exam cell can prepare Academic calendar in concurrence with the University Calendar. So that the college carries out effective planning that sticks to academic calendar. This allows the teachers and the students to space out their teaching and learning and regular assessment of the same. Approval for the same is given by the Principal after effecting minor changes if required. The academic calendar provides the date of commencement of the academic session, duration of semester, period of internal assessment tests, final semester examinations, etc. The heads of the department can prepare timetable well before starting of every semester to avoid any shortfall in syllabus coverage. Syllabus completion is tracked through periodic checking of lesson plan sheets, class committee meetings, record of class work and Department meetings. The laboratory Schedule is prepared by the concerned Timetable in charge of each department and batch wise details are specified in laboratory schedule. Timetable of regular lectures for the semester is prepared and displayed on the notice board and College Official Website. There is an academic monitoring committee appointed by the Principal who monitors the day to day conduct of the lectures based on the timetable.

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 in website of the institution (to provide the weblink)

<https://www.tecnrt.org>

2.6.2 – Pass percentage of students

Programme Code	Programme Name	Programme Specialization	Number of students appeared in the final year examination	Number of students passed in final year examination	Pass Percentage
01	BTech	Civil	53	43	81.13
02	BTech	EEE	36	33	91.66
03	BTech	MECHANICAL	53	47	88.67
04	BTech	ECE	162	140	86.41
05	BTech	CSE	114	105	92.10
58	Mtech	CSE	5	5	100

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2.7 – Student Satisfaction Survey

2.7.1 – Student Satisfaction Survey (SSS) on overall institutional performance (Institution may design the questionnaire) (results and details be provided as weblink)

<http://www.tecnrt.org/sss/sss.php>

CRITERION III – RESEARCH, INNOVATIONS AND EXTENSION

3.1 – Resource Mobilization for Research

3.1.1 – Research funds sanctioned and received from various agencies, industry and other organisations

Nature of the Project	Duration	Name of the funding agency	Total grant sanctioned	Amount received during the year
Any Other (Specify)	120	Tirumala Engineering College	2.5	2.5
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3.2 – Innovation Ecosystem

3.2.1 – Workshops/Seminars Conducted on Intellectual Property Rights (IPR) and Industry-Academia Innovative practices during the year

Title of workshop/seminar	Name of the Dept.	Date
Data Science using Machine learning	CSE	05/08/2019
Software Engineering for Cloud, Blockchain IoT	CSE	11/10/2019
Computer vision	CSE	24/02/2020
Web Technologies for Mobile Platforms through online	CSE	25/03/2020
Computational Thinking using Python through online	CSE	23/04/2020
PCB Design and Fabrication	ECE	19/09/2019
Programming with Mentor Graphic Tools	ECE	18/10/2019
Programing using MATLAB for beginners	ECE	12/12/2019
Advanced Programing using MATLAB	ECE	23/12/2019
Remote sensing its applications	ECE	13/02/2020
Design and simulation of power converters using MATLAB.	EEE	09/09/2019
PLC fundamentals	EEE	30/01/2020
Robotics	EEE	10/02/2020
CATIA	Mechanical	19/08/2019
Building Drafting using AutoCAD	Civil	03/02/2020
Architectural Modelling by Revit	Civil	10/02/2020
A Short-Term Training Program on Arc GIS Software	Civil	27/01/2020
Computational chemistry and molecular machines	ASH	08/10/2019

Physics of semiconductor	ASH	08/10/2019
WEBINAR ON 'ENTREPRENEURSHIP IS OWNERSHIP'	ED cell	06/06/2020
Entrepreneurs and Their impact on society	ED cell	19/09/2019
Development of Research proposals and funding opportunities	RD cell	03/06/2020
Workshop on Indian Patent Filing	RD cell	20/12/2019
Visual Studio	CSE	25/01/2020
Two Days Workshop on Computer Networks	CSE	12/05/2020
Webinar on Passion into Career	EEE	19/06/2020
INTELLECTUAL PROPERTY RIGHTS IN ENGINEERING SECTOR	MECHANICAL	19/09/2019
Industrial Automation	MECHANICAL	23/12/2019
Industrial Robotics and its applications	MECHANICAL	10/09/2019
Seminar on Colouring of Graphs	ASH	26/06/2020
Seminar on Microscopy of Functional Materials and Spectroscopy	ASH	22/06/2020
Seminar on Role of Composites in Modern Engineering Era	ASH	29/06/2020
Workshop on documentation with LATEX	RD CELL	27/12/2019

3.2.2 – Awards for Innovation won by Institution/Teachers/Research scholars/Students during the year

Title of the innovation	Name of Awardee	Awarding Agency	Date of award	Category
Best Project Award	Ms. Sivanandini Velpula	Tirumala Engineering College	04/05/2020	Student
Best Project Award	G. Radha Madhavi	Tirumala Engineering College	04/05/2020	Student
Best Project Award	G. Naga Swarna Bharathi	Tirumala Engineering College	04/05/2020	Student
Best Project Award	A. Uma Devi	Tirumala Engineering College	04/05/2020	Student
Certificate of Appreciation	Mr. Ch. Rajini Kumar	Tirumala Engineering	04/05/2020	faculty

for the project "Design and simulation of arc welding robot cell based on motosim software"		College		
Best Project Award	B. Pavan Kalyan	Tirumala Engineering College	04/05/2020	Student
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3.2.3 – No. of Incubation centre created, start-ups incubated on campus during the year

Incubation Center	Name	Sponsored By	Name of the Start-up	Nature of Start-up	Date of Commencement
0	NA	0	0	0	01/01/2020
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3.3 – Research Publications and Awards

3.3.1 – Incentive to the teachers who receive recognition/awards

State	National	International
0	68000	15000

3.3.2 – Ph. Ds awarded during the year (applicable for PG College, Research Center)

Name of the Department	Number of PhD's Awarded
NA	Nil

3.3.3 – Research Publications in the Journals notified on UGC website during the year

Type	Department	Number of Publication	Average Impact Factor (if any)
International	ECE	2	0.68
International	EEE	5	0.72
International	CIVIL	2	0.73
International	CSE	10	0.9
International	ASH	4	0.82
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3.3.4 – Books and Chapters in edited Volumes / Books published, and papers in National/International Conference Proceedings per Teacher during the year

Department	Number of Publication
ASH	3
CSE	10
ECE	17
EEE	5
Mechanical	3
Civil	2
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3.3.5 – Bibliometrics of the publications during the last Academic year based on average citation index in Scopus/ Web of Science or PubMed/ Indian Citation Index

Title of the Paper	Name of Author	Title of journal	Year of publication	Citation Index	Institutional affiliation as mentioned in the publication	Number of citations excluding self citation
Comparison of Single loop and Cascade loop Control BLDC motor drive	Manoj Kumar Merugumalla	Journal of Electrical Engineering, I-manager publishers	2019	1	yes	2

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3.3.6 – h-Index of the Institutional Publications during the year. (based on Scopus/ Web of science)

Title of the Paper	Name of Author	Title of journal	Year of publication	h-index	Number of citations excluding self citation	Institutional affiliation as mentioned in the publication
Face Recognition using Raspberry Pi-3 in IOT	Rapolu Anil Kumar	International Journal of Engineering and Advanced Technology	2020	1	1	yes

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3.3.7 – Faculty participation in Seminars/Conferences and Symposia during the year :

Number of Faculty	International	National	State	Local
Attended/Seminars/Workshops	Nill	261	Nill	Nill
Presented papers	39	Nill	Nill	Nill
Resource persons	Nill	Nill	15	Nill

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3.4 – Extension Activities

3.4.1 – Number of extension and outreach programmes conducted in collaboration with industry, community and Non- Government Organisations through NSS/NCC/Red cross/Youth Red Cross (YRC) etc., during the year

Title of the activities	Organising unit/agency/ collaborating agency	Number of teachers participated in such activities	Number of students participated in such activities
Swaccha Bharath in College by staff	NSS UNIT-TEC	5	35

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3.4.2 – Awards and recognition received for extension activities from Government and other recognized bodies

during the year

Name of the activity	Award/Recognition	Awarding Bodies	Number of students Benefited
Creating Awareness about waste Management	Swachhata Hi Seva	Municipality,Narsaraopet	50
Blood Donation Camp	Award of excellent donor	NRT Bloodbank	220
plantation	Letter of Appreciation	Janani Foundation	110
Clean and Green	letter of commendation	Sarpanch,satulur	95
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3.4.3 – Students participating in extension activities with Government Organisations, Non-Government Organisations and programmes such as Swachh Bharat, Aids Awareness, Gender Issue, etc. during the year

Name of the scheme	Organising unit/Agency/collaborating agency	Name of the activity	Number of teachers participated in such activities	Number of students participated in such activities
NSS	NSS UNIT-TEC	Survey on village problems	5	50
NSS	NSS UNIT-TEC	Covid -19 Awareness program to students	5	152
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3.5 – Collaborations

3.5.1 – Number of Collaborative activities for research, faculty exchange, student exchange during the year

Nature of activity	Participant	Source of financial support	Duration
Projects	Students	college	60
Research publications	faculty	college	365
Industrial visits	Students	college	1
Internships	Students	college	30
Faculty Exchange	faculty	college	7
No file uploaded.			

3.5.2 – Linkages with institutions/industries for internship, on-the- job training, project work, sharing of research facilities etc. during the year

Nature of linkage	Title of the linkage	Name of the partnering institution/ industry /research lab with contact details	Duration From	Duration To	Participant
Internship	Internship Training	Palo Alto Networks,	19/08/2019	01/09/2019	10

Chennai

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3.5.3 – MoUs signed with institutions of national, international importance, other universities, industries, corporate houses etc. during the year

Organisation	Date of MoU signed	Purpose/Activities	Number of students/teachers participated under MoUs
Palo Alto Networks, Chennai	20/07/2019	Internships Project works	10

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CRITERION IV – INFRASTRUCTURE AND LEARNING RESOURCES

4.1 – Physical Facilities

4.1.1 – Budget allocation, excluding salary for infrastructure augmentation during the year

Budget allocated for infrastructure augmentation	Budget utilized for infrastructure development
5000000	4815354

4.1.2 – Details of augmentation in infrastructure facilities during the year

Facilities	Existing or Newly Added
Classrooms with Wi-Fi OR LAN	Existing
Others	Newly Added
Value of the equipment purchased during the year (rs. in lakhs)	Newly Added
Seminar halls with ICT facilities	Existing
Classrooms with LCD facilities	Existing
Seminar Halls	Existing
Class rooms	Existing
Laboratories	Newly Added
Campus Area	Existing
No file uploaded.	

4.2 – Library as a Learning Resource

4.2.1 – Library is automated {Integrated Library Management System (ILMS)}

Name of the ILMS software	Nature of automation (fully or patially)	Version	Year of automation
ECAP	Fully	2.3	2013

4.2.2 – Library Services

Library Service Type	Existing		Newly Added		Total	
Text Books	21380	8544087	404	107255	21784	8651342
Reference Books	1154	330660	46	25065	1200	355725
e-Books	10789	13570	Nil	Nil	10789	13570

Journals	74	191975	Nil	Nil	74	191975
e-Journals	296	73660	Nil	Nil	296	73660
Digital Database	1	521882	Nil	Nil	1	521882
CD & Video	960	Nil	Nil	Nil	960	Nil
Library Automation	1	15000	Nil	Nil	1	15000
Weeding (hard & soft)	131	74701	42	13818	173	88519
Others(s pecify)	932	31500	Nil	Nil	932	31500
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4.2.3 – E-content developed by teachers such as: e-PG- Pathshala, CEC (under e-PG- Pathshala CEC (Under Graduate) SWAYAM other MOOCs platform NPTEL/NMEICT/any other Government initiatives & institutional (Learning Management System (LMS) etc

Name of the Teacher	Name of the Module	Platform on which module is developed	Date of launching e-content
Dr.Y.V.Narayana	EMTL	Youtube	06/01/2020
Dr.K.sathish	FLAT	Moodle [local area network]	08/01/2020
No file uploaded.			

4.3 – IT Infrastructure

4.3.1 – Technology Upgradation (overall)

Type	Total Computers	Computer Lab	Internet	Browsing centers	Computer Centers	Office	Departments	Available Bandwidth (MBPS/ GBPS)	Others
Existing	650	16	90	1	2	1	6	90	0
Added	40	1	50	0	0	0	0	50	0
Total	690	17	140	1	2	1	6	140	0

4.3.2 – Bandwidth available of internet connection in the Institution (Leased line)

140 MBPS/ GBPS

4.3.3 – Facility for e-content

Name of the e-content development facility	Provide the link of the videos and media centre and recording facility
e-PGPathshala	https://epgp.inflibnet.ac.in/
NPTEL Video Course	https://www.nptelvideos.in
Faculty Subject video	https://tmecrnt.codetantra.com/

4.4 – Maintenance of Campus Infrastructure

4.4.1 – Expenditure incurred on maintenance of physical facilities and academic support facilities, excluding salary

component, during the year

Assigned Budget on academic facilities	Expenditure incurred on maintenance of academic facilities	Assigned budget on physical facilities	Expenditure incurred on maintenance of physical facilities
41500000	41449438	4800000	4638390

4.4.2 – Procedures and policies for maintaining and utilizing physical, academic and support facilities - laboratory, library, sports complex, computers, classrooms etc. (maximum 500 words) (information to be available in institutional Website, provide link)

The physical and academic facilities including Laboratories, Classrooms and Computers etc. are made available for the students those who are admitted into the college. The newly installed white boards and class room furniture facilities are utilized regularly by the students but sometimes it is also made available for the government organizations for the event like election, competitive exams and other examination if not in the use for the said period. The maintenance and cleaning of the classrooms are done with the efforts of the non-teaching staff and in major cases the college goes for the maintenance contract to local experts. Sweepers are available in the institution to cleanliness of the college building. The college has lush green garden maintained by the gardener appointed by the institution. The college has adequate number of the computers with internet connections and the utility software's distributed in different locales like office, laboratories, library, departments etc. The central computer laboratory connected in LAN is open for the students and they can avail it in free time. Similarly, the office computers which are also connected through the LAN which consists of office software makes the work easier and restricted to the appointed office staff only. The library is also provided LAN facility for the computers and they are loaded with the library software. The departments and the staff can make use of the computer system with internet at their seating places in addition that majority of the staff has their own laptops and the internet providing instruments, all those computer related facilities are given to Computer science department for annual maintenance as well as general maintenance department caters to any issues that needs to be rectified. As part of virtual Instrumentation laboratory Skill Development has been established in 2017, wherein around 45 students are benefited for learning different skilled courses established by the college in association with AP Govt and IIT, Mumbai. The campus and hostels are Wi-Fi enabled with 140 Mbps. Food court has spacious dining hall and its operation and maintenance including the preparation of food are closely monitored to ensure nutrition and hygiene. The Functional Committee coordinates with the following members to carry out the above activities: The Manager, Maintenance supervisor, Maintenance assistants and Annual Maintenance Contractors for maintenances of ACs, UPS, Lifts, Water Cooler and Fire Extinguisher Other Maintenance services includes Computer Maintenance Cell, Electrical maintenance work, Housekeeping. In addition to that enough sweepers and other worker are employed to keep the places neat and clean. IQAC conduct audits periodically by a team of experts. During class committee meetings, students' feedback is taken on infrastructure facilities and suitable actions are taken, wherever required. Rest rooms in all floors are sanitized and cleaned twice every day. The lawns and gardens are cleaned of any garbage and wastes every day. provide drinking water to the students, water coolers are provided in each floor for each department and cleaning is done every day by the maintenance department. Above all, the infrastructure is refurbished periodically.

<https://www.tecnrt.org>

CRITERION V – STUDENT SUPPORT AND PROGRESSION

5.1 – Student Support

5.1.1 – Scholarships and Financial Support

	Name/Title of the scheme	Number of students	Amount in Rupees
Financial Support from institution	Fee waviness	10	508000
Financial Support from Other Sources			
a) National	0	Nil	0
b) International	0	Nil	0
No file uploaded.			

5.1.2 – Number of capability enhancement and development schemes such as Soft skill development, Remedial coaching, Language lab, Bridge courses, Yoga, Meditation, Personal Counselling and Mentoring etc.,

Name of the capability enhancement scheme	Date of implemetation	Number of students enrolled	Agencies involved
Yoga and Mediation	08/07/2019	160	Art of Living Foundation
Personal Counselling and Mentoring	12/08/2019	380	college
Remedial coaching	25/11/2019	120	College
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5.1.3 – Students benefited by guidance for competitive examinations and career counselling offered by the institution during the year

Year	Name of the scheme	Number of benefited students for competitive examination	Number of benefited students by career counseling activities	Number of students who have passed in the comp. exam	Number of students placed
2020	competitive examinations	260	Nil	32	Nil
2020	career counselling	Nil	510	Nil	490
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5.1.4 – Institutional mechanism for transparency, timely redressal of student grievances, Prevention of sexual harassment and ragging cases during the year

Total grievances received	Number of grievances redressed	Avg. number of days for grievance redressal
52	52	7

5.2 – Student Progression

5.2.1 – Details of campus placement during the year

On campus			Off campus		
Name of organizations visited	Number of students participated	Number of students placed	Name of organizations visited	Number of students participated	Number of students placed

HCL	40	9	TCS	270	22
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5.2.2 – Student progression to higher education in percentage during the year

Year	Number of students enrolling into higher education	Programme graduated from	Depratment graduated from	Name of institution joined	Name of programme admitted to
2020	1	B. Tech	ECE	BOURNEMOUTH UNIVERSITY, ENGLAND	MS
2020	1	B. Tech	ECE	NORTHERN COLLEGE, CANADA	MS
2020	1	B.tech	EEE	University of EAST LONDON	MS
2020	1	B. Tech	ECE	DUVLIN BUSINESS SCHOOL, IRELAND	MS
2020	2	B. Tech	CSE	KECW	MTech
2020	2	B. Tech	CIVIL	Universal College of Engineering	MTech
2020	1	B. Tech	ECE	IIT, Allahabad	M. Tech
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5.2.3 – Students qualifying in state/ national/ international level examinations during the year (eg:NET/SET/SLET/GATE/GMAT/CAT/GRE/TOFEL/Civil Services/State Government Services)

Items	Number of students selected/ qualifying
GATE	4
GRE	3
TOFEL	1
Any Other	15
No file uploaded.	

5.2.4 – Sports and cultural activities / competitions organised at the institution level during the year

Activity	Level	Number of Participants
Dancing	institution	255
Singing	institution	20
Cricket	institution	66
Volley ball	institution	144
Basket ball	institution	30
kabadi	institution	182
khokho	institution	180

Throw Ball	institution	60
Tennikoit	institution	90
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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)

Year	Name of the award/medal	National/ Internaional	Number of awards for Sports	Number of awards for Cultural	Student ID number	Name of the student
2019	Runnerup	National	1	1	17NE1A0594 and Team	Sk . Arshdali and team
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5.3.2 – Activity of Student Council & representation of students on academic & administrative bodies/committees of the institution (maximum 500 words)

Tirumala Engineering College creates a smooth and best platform for the active participation of the students in the various academic administrative bodies including other activities. This empowers the students in gaining leadership qualities, rules, regulations, and execution skills. All the departments have a student society and student chapters of various professional associations. Head of the Department, faculty members, and students of the respective departments in consultation with the Principal to elect the office bearers. The student society of every department conducts National level Symposium every year in which they organize various technical and non-technical events. The students are members and volunteers of the symposium. They get funding from various organisations and partial funding from the institution and by student membership and sponsorship. The College has various academic and administrative bodies that helps them in their overall development. These bodies create more avenues for students to develop technical skill, update knowledge, develop their personality and motivate them to do social service. There are staff advisers to guide students in the smooth and efficient conduct of these activities. Following are the various committees and societies of the college.

Academic and administrative committees • Class Committee • Library Committee • Sports committee • Grievance / Redressal committee • Event management committee • Magazine committee • Placement and training Coordination Committee • Cultural and fine arts committee • Newsletter Committee • Hostel Coordination Committee • Special Committee for Girls Students • Anti-ragging Committee Contribution of the Student Council in Academic Administration

1. Coordination in day to day academic activities at their level
2. Coordination in communicating the information between students and Teaching faculty.
3. Coordination in organizing Cultural events.
5. Coordination in organizing Sports Games for the students
6. Coordination in arranging Industrial Visits for the students
7. Coordination in inviting the external guest speakers and organizing the Seminars Workshops.

5.4 – Alumni Engagement

5.4.1 – Whether the institution has registered Alumni Association?

Yes

An alumni association is an association of graduates or, more broadly, of former students (alumni) of Tirumala Engineering College, Narasaraopet, Guntur(Dt). The body was registered as Tirumala Engineering College Alumni in the year 2017with the sole aim of setting up an excellent network amongst our

former students and our College. The idea was to facilitate and ensure a continuing and lifelong relationship between the alumni students and faculty. The alumni association has a chief faculty coordinator for the college and department alumni coordinators. This team plans and organizes two alumni meets at the college level - one an annual general body meeting and other is alumni meet. The alumni association has office bearers which include President, Vice-President, General Secretary, Treasurer and Joint Secretaries. Every department conducts at least 3 to 4 alumni interactions every year. Many of our alumni are placed in senior positions in companies of repute. They are spread across the length and breadth of the globe. This brings in a wealth of talent from these professionals who share their expertise and experience with the students. Several brainstorming sessions are held on prospective avenues. Periodic meetings are arranged by the alumni coordinators where alumni from different backgrounds are invited to deliver lectures. During these interactions, the alumni throw light on current cutting-edge technical topics. They also give motivational lectures for all students including first years. Alumni contributions also include arranging for campus placements and being part of mock placement drives thus strengthening our efforts towards achieving maximum placement. The alumni also provide inputs to students on project works and Industry-Institution Interaction. Some of our alumni pursue higher studies in premier universities in abroad and in India. Hence such alumni visit the college and share their knowledge on choosing universities, the process to be undertaken for this and guide the students to apply and secure admissions for post graduate studies. Alumni contribute towards institutional development activities and their latest contribution is Rs. six lakhs Twenty Thousand towards setting up Digital Boards and Water plant. They help create opportunities for training and special projects apart from guest lectures, industrial visits, and seminars. They also suggest modifications and updating of curriculum and Value-Added Courses to meet the industrial needs. In addition to that many of our alumni are successful entrepreneurs. So, they deliver guest lectures and conduct seminars to create awareness about Entrepreneurship, nurture and actualize Entrepreneurial talent among students. They also provide Entrepreneurship Development training for interested students on selected product class with orientation on preparing bankable projects. They encourage students to think of small-budget projects with innovative and beneficial ideas.

5.4.2 – No. of enrolled Alumni:

410

5.4.3 – Alumni contribution during the year (in Rupees) :

620000

5.4.4 – Meetings/activities organized by Alumni Association :

S. No	Activity Name of the Former Student	Title	Date
1	Mr.M.Pramodh Groups(CIVIL)	Preparations	1-06-2020
2	Jyothi Current Status	Technical Talk	2-06-2020
3	Mr.Vijaya Bhargave Current Status	Career Opportunities	6-06-2020
4	Technical Talk Ms.B.S.R.Sireesha	Opportunities in Software Industry	8-06-2020
5	Guest Lecture Mr.R.Nandadeep	GATE	9-06-2020
6	Alumni Meet 10-06-2020	Alumni Meet	10-06-2020
7	Mr.M.Naveen Kumar	Passion into CAREEER	19-06-2020
8	Alumni Meet Ms.T.Surya Deepthi	Passion into CAREEER	20-06-2020
9	Alumni Meet Mr.Jhon Sandeep Mannam	Career Opportunities in Mechanical Engineering	26-06-2020
10	Interaction with Student Mr.ASV.Srinivas	Career Opportunities in different Industries	27-06-2020
11	Guest Lecture Mr.Dondeti Mantra Reddy	Quantity Survey of Buildings	03-01-2020
12	Guest Lecture Mr.K.Merin Salman Raju	Repair and Rehabilitation of Structures	

CRITERION VI – GOVERNANCE, LEADERSHIP AND MANAGEMENT**6.1 – Institutional Vision and Leadership**

6.1.1 – Mention two practices of decentralization and participative management during the last year (maximum 500 words)

Our Management is highly committed and dedicated to the service of catering to the contemporary requirements of higher education. The Management gives sufficient freedom to the Principal to function in fulfilling the vision and mission of the college. The Management provides the required infrastructure for the proper functioning of the institute. The responsibilities of each member are communicated to the faculty through regular staff meetings. The Management, Principal and faculty of the college are committed to plan, implement, document, and continually improve effectiveness through a Quality Management System. The Management is committed to ensuring conformity and compliance to institutional standards. The IQAC can frame standards of institution rules and regulations, policy matters which are decided in governing body council meeting and same can be disseminated to all departments. Institute has a Decentralization mechanism for delegating authority and providing operational autonomy to all the various functionaries to work towards a decentralized governance system. Decentralization is having a significant impact on policy education. To promote quality of education to all sections of people in academic and non-academic to develop responsible management. At the same time, decentralization is seen as a means of improving the efficiency of the education system and the quality of educational services. At various levels, the college grooms the leadership. Governing body, Management, Principal, IQAC Members, teaching staff, non-teaching staff, supporting staff, student representatives, Stakeholders, Alumni and various committees jointly empowered to propose, design, formulate and execute their plans within the framework of governance. The Academic, Administrative, NCC, NSS, IQAC all are working together for the smooth running and over all functioning of the college.

6.1.2 – Does the institution have a Management Information System (MIS)?

Yes

6.2 – Strategy Development and Deployment

6.2.1 – Quality improvement strategies adopted by the institution for each of the following (with in 100 words each):

Strategy Type	Details
Admission of Students	Students are admitted on the basis of merit through state-wide entrance examinations EAMCET / PG CET / ECET and / ICET conducted by State Government.
Industry Interaction / Collaboration	With constant encouragement by the management, the departments constantly strive to enter into MoUs with the industries to provide summer internships, main projects for students. Industry experts are invited to give seminars on the advanced technology. Interaction with industry helps to provide industrial visits, arranging training programmes to students. Interaction with industry is providing opportunities for consultancy works and research. Industry

	<p>interaction has provided opportunity for the students to undergo implant training, industrial visit, etc.</p>
<p>Human Resource Management</p>	<p>1. Our institution is very much concerned of its human resources. Employees are given highest importance and their desires are recognized well. 2. The recruitment procedures, service rules and promotion policies are made transparent and employees are benefitted with CL, EL, ML and EPF. 3. Employee's salary will be credited in the bank account directly, 4. Pay slips are issued to the employees every month. 5. Non-Teaching staff have ESI facility for their family members. The institution encourages the employees to their promotional activities in the form of higher education, presenting research papers in National/International conferences with financial assistance.</p>
<p>Library, ICT and Physical Infrastructure / Instrumentation</p>	<p>? Library, ICT and Physical Infrastructure / Instrumentation 1. Availability of textbooks, reference books and journals in the library is ensured for the effective course delivery. Also, special audio-visual room is available in the library to help the students to listen to the lectures delivered on the subjects by experts from IIT through web telecast. 2. The college subscribes to most of the major technical journals includes IEEE, ACE, ASME, ASTM, J-GATE, McGraw-Hill Access Engineer, Science Direct Journals etc. useful for researchers in various departments. Moreover, NPTEL video classes are also available for 400 subjects. Besides central library, there are libraries in each department with ample volume of books, magazines and journals for easy access of reference books for faculties and research scholars. On special request from the research scholars, books required for research is made available and the library facilities can be availed for extended hours. 3. The institution strongly advocates and encourages the use of ICT tools to enrich the learning experience of the students inside and outside the classroom. Nearly 13 classrooms are ICT-enabled including spacious seminar halls and auditorium for specialized needs.</p>

<p>Teaching and Learning</p>	<p>1. The institution always places the students at the center of the teaching learning process. 2. ICT enabled classrooms makes the student, the center of teaching-learning process and the teacher, a facilitator for the students. 3. There are provisions for sending notes and lecture presentations to group mail ids of the students. 4. NPTEL programs help the student to understand the difficult subjects. Students make use of the internet, lab facilities to prepare for seminars/conferences/paper presentations etc. 5. Students are benefitted from Online to access of E-Journals. 6. Online course materials are hosted in the college website to provide access to students. 7. Students are provided with internet facility for their project work and for updating their knowledge. 8. They use technologies developed by the college for solving problems, prepare and analyse different methods for practical applications. 9. The college also conducts various workshop, seminars, guest lectures, conferences for the students, to acquaint them with current emerging trends. 10. Teaching/ Learning process is enhanced based on the feedback given by the students.</p>
<p>Curriculum Development</p>	<p>Our institution is affiliated to JNTUK University, Kakinada. It abides by the changes in curriculum as prescribed by the university. Department advisory board is constituted with senior faculty to analyses the student's feedback on curriculum and study the curriculum implemented in various institutions. The committee will submit a brief report to chairperson/principal. IQAC suggests changes for improvement and upgradation of the curriculum after discussions. The syllabi are prepared, with an objective of making the curriculum to meet the industry requirement. A course end survey is conducted at the end of every course and necessary measures are taken. The results of mid exams are mapped with Course Outcomes and the achievement levels are indexed. It has been made mandatory to map every course objective with the course outcome</p>
<p>Examination and Evaluation</p>	<p>1. The college conducts two internal</p>

assessment tests [MID] during the semester through a centralized Examination Cell 2. Each subject handler gives at least three assignments per semester. 3. A tutorial plan is also prepared and followed for enhanced learning of the subjects. 4. Examinations are conducted as per JNTUK University. 5. End semester examinations are conducted by JNTUK University.

Research and Development

1. Research and Development is one of the main focuses of the Institution. Faculty members were sponsored to pursue their PhD programs by the institution. A functional committee has been constituted by the institution to device the strategies on implementing the research and development activities. 2. Periodical FDPs are organized to encourage in research work. 3. Faculty members are encouraged and supported to publish papers and present papers in conferences. 4. Institution has encouraged to submit funding to various organization like AICTE, UGC, DRDO and University are acquired and utilized for research and developmental activities and for upgrading the laboratories. It is under process.

6.2.2 – Implementation of e-governance in areas of operations:

E-governance area	Details
<p>Planning and Development</p>	<p>1. The Planning and Development Division or IQAC formulates short-term and long-term plans, policies, procedures to operationalize various programmes and activities in the departments. This can be periodically reviewing and monitors the performance of all the schemes and activities of the Departments. 2. The signing of MoU with the reputed industries supports to interact our faculty members with them to identify the industrial related problems. Our faculty members discuss the observed industrial related problems with the faculty members in the concerned departments to find the remedies. 3. A team of faculty members meets the personalities in the industries about the solution for the identified problems in their industries. 4. The team from our college submits the proposal to the funding agency in collaboration with</p>

	the industry to solve the identified problems.
Administration	It mainly Consists of • Board Of Governors • Building and Works Committee • Finance Committee • Principal • Heads of Departments • Central Functionaries • Administrative Officers • Administrative Staff • Webteam Main functions are 1. Takes care of student scholarships . 2. Maintains the Faculty Member leave records like casual leave, vacation, on duty permission. 3. Acts as a Coordinator for all the activities relating to the maintenance of the College. 4. Takes care of service rules policies of the institution side and outside the College. 5. Conducts Interview as per HODs requirement with College constituted selection committee support. 6. Takes care of all admission approval procedure and communicating with universities in person.
Finance and Accounts	1. Student's yearly fee structure and managing fee collection and balances. 2. Managing assets and all applicable accounting info.
Student Admission and Support	• Displaying of student's achievements, Implant -training, Industry specific software training courses, placement training etc.
Examination	1. Conducting the examinations as per the guidelines laid down by JNTUK University for University Examinations. 2. Preparation of Invigilation list, QP seating plan for University Exams 3. Monitoring uploading of attendance and Internal Marks as per the requirement of JNTUK. 4. Maintain Result Analysis, Rank List of all UG 5. Plan, prepare and conduct the practical examinations as per schedule. 6. Provide the hospitality for internal and external examiners during the JNTUK University examinations.

6.3 – Faculty Empowerment Strategies

6.3.1 – Teachers provided with financial support to attend conferences / workshops and towards membership fee of professional bodies during the year

Year	Name of Teacher	Name of conference/ workshop attended for which financial support provided	Name of the professional body for which membership fee is provided	Amount of support
2020	Faculty members	International /National	NA	37000

		Conferences		
2019	Faculty members	International /National Conferences	NA	40000
No file uploaded.				

6.3.2 – Number of professional development / administrative training programmes organized by the College for teaching and non teaching staff during the year

Year	Title of the professional development programme organised for teaching staff	Title of the administrative training programme organised for non-teaching staff	From date	To Date	Number of participants (Teaching staff)	Number of participants (non-teaching staff)
2019	Effective Teaching skills	NIL	15/07/2019	15/07/2019	128	20
2019	Nil	Workshop on Administrative Software's	24/07/2019	24/07/2019	20	20
2019	Workshop on NAAC and Development Activities	Workshop on NAAC and Development Activities	23/10/2019	26/10/2019	120	22
2020	Development of Research Proposals and funding Opportunities	Nil	03/06/2020	09/06/2020	100	10
2020	Digital Teaching Techniques	Digital Teaching Techniques	29/06/2020	04/07/2020	116	20
2020	Recent trends in communication and signal processing	Nil	12/06/2020	16/06/2020	25	5
2020	BlockChain Technology	Nil	18/05/2020	25/05/2020	15	2

[View File](#)

6.3.3 – No. of teachers attending professional development programmes, viz., Orientation Programme, Refresher Course, Short Term Course, Faculty Development Programmes during the year

Title of the professional	Number of teachers who attended	From Date	To date	Duration
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development programme				
Recent Trends in Communication and Signal Processing	24	12/06/2020	16/06/2020	5
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6.3.4 – Faculty and Staff recruitment (no. for permanent recruitment):

Teaching		Non-teaching	
Permanent	Full Time	Permanent	Full Time
116	116	95	95

6.3.5 – Welfare schemes for

Teaching	Non-teaching	Students
<ul style="list-style-type: none"> • Medical concession at the prescribed corporate hospitals • Free Transport from various Places. • Employees who complete more than 10 years of service are honoured. • Tuition fee waiver for the wards of the staff. • Maternity leave those who are completed 3 years in the Institution. • EPF • A group insurance scheme has been started 	<ul style="list-style-type: none"> • Staff welfare fund • EPF • Maternity leave • Free Transport facility • Free Hospital facility • A group insurance scheme has been started 	<ul style="list-style-type: none"> • For students admitted under the sports quota and below poverty line, the academic fees as well as accommodation fees are waived. • Students securing 100 attendance in an academic year are given a concession of Rs.5000/- in the fees collected for the next academic year. • A group insurance scheme has been started for the students. • Sponsorship is given to students to present their papers at both the national and international level. • The college has arranged Skill Development Programs with AP CM's Skill Development centre. • Free transport and Hospital for poor students

6.4 – Financial Management and Resource Mobilization

6.4.1 – Institution conducts internal and external financial audits regularly (with in 100 words each)

<ul style="list-style-type: none"> • Experienced and efficient personnel conduct internal audit once in a semester. • External audits are done by Proficient financial auditors. • In the Audits, Experts verify all transactions. • There were no major observations noticed and the reports of the same are available.
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6.4.2 – Funds / Grants received from management, non-government bodies, individuals, philanthropies during the year(not covered in Criterion III)

Name of the non government funding agencies /individuals	Funds/ Grnats received in Rs.	Purpose

Tirumala Engineering College	732000	FDPS ,WORKSHOPS ,STTP ,SKILLDEVELOPMENT PROGRAMS ETC.
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6.4.3 – Total corpus fund generated

95350000

6.5 – Internal Quality Assurance System

6.5.1 – Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	VVIT	Yes	IQAC
Administrative	Yes	KRISHNA PRABHA ASSOCIATES	Yes	IQAC

6.5.2 – Activities and support from the Parent – Teacher Association (at least three)

<p>1. The management arranges for a parent – teachers meet once in a semester during a weekend. The parents are identified and invited by faculty advisors of all the departments. Student’s academic performance, university results, attendance and other related issues are discussed. 2. It helps to foster and promote good relationship among faculty, staff, student with parents to promote social development. 3. It helps to create keen interest for the smooth functioning of the institute. 4. It helps to understand the diversified need of the students belonging to different backgrounds.</p>

6.5.3 – Development programmes for support staff (at least three)

<p>For the supportive staff at college level : Training programs on computer applications, tally. etc., are organized periodically when the new version software’s are Installed in MIS.</p>
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6.5.4 – Post Accreditation initiative(s) (mention at least three)

<p>• ISO Up gradation • NBA for few More Departments • Centre of Excellence • Students are encouraged for student’s internship programs. • Quality research and patents. • Skill development centre • Approval of cash awards to best teacher</p>

6.5.5 – Internal Quality Assurance System Details

a) Submission of Data for AISHE portal	Yes
b) Participation in NIRF	No
c) ISO certification	Yes
d) NBA or any other quality audit	Yes

6.5.6 – Number of Quality Initiatives undertaken during the year

Year	Name of quality initiative by IQAC	Date of conducting IQAC	Duration From	Duration To	Number of participants
2019	Induction program for newly appointed faculty	06/06/2019	06/06/2019	07/06/2019	34

members

[View File](#)

CRITERION VII – INSTITUTIONAL VALUES AND BEST PRACTICES

7.1 – Institutional Values and Social Responsibilities

7.1.1 – Gender Equity (Number of gender equity promotion programmes organized by the institution during the year)

Title of the programme	Period from	Period To	Number of Participants	
			Female	Male
Womens day celebration	08/03/2020	08/03/2020	250	10
Talk on awareness rules and act on sexual harassment Elimination	13/04/2020	13/04/2020	210	12
Session on "Women in Workforce"	27/04/2020	27/04/2020	250	Nil
Lecture on "Indian Constitution and Human Rights - Equality of Men and Women"	06/05/2020	07/05/2020	300	20
Workshop on Indian women & domestic violence	18/05/2020	18/05/2020	275	10

7.1.2 – Environmental Consciousness and Sustainability/Alternate Energy initiatives such as:

Percentage of power requirement of the University met by the renewable energy sources

1) Environmental Consciousness and Sustainability: Green day celebrated on 24/4/2020 to make campus clean and green, plantation was done in the college premises and felicitated the gardeners of the college for Maintaining the better Environment inside the college. 2.Renewable Energy Sources (RES) have significant potential to contribute to the economic, social, and environmental energy sustainability of Engineering college. It improves access to energy for most of the departments. Tirumala Engineering College has installed Renewable energy source which has a capacity of 110 kw Power to supply entire Institution. 3.RO plant, Solar Water Heater, Reverse Osmosis water facility are installed in college and hostels for sufficient clean water, supply and power backups are in place for use during power failure emergencies. 4.Solar led lights, Solar vehicle in college campus to minimize pollution in the campus area

7.1.3 – Differently abled (Divyangjan) friendliness

Item facilities	Yes/No	Number of beneficiaries
Provision for lift	Yes	1

Ramp/Rails	Yes	1
Braille Software/facilities	Yes	Nil
Rest Rooms	Yes	1
Scribes for examination	Yes	Nil
Special skill development for differently abled students	Yes	Nil

7.1.4 – Inclusion and Situatedness

Year	Number of initiatives to address locational advantages and disadvantages	Number of initiatives taken to engage with and contribute to local community	Date	Duration	Name of initiative	Issues addressed	Number of participating students and staff
2019	3	3	30/12/2019	1	Nirbhaya (Safety Empowerment of Women)	safety for GIRLS	200
2020	1	1	10/01/2020	1	Environment Preservation and Plantation Drive	Environment Preservation and Plantation	300
2020	3	3	15/06/2020	1	Yoga Training Programme	Body's Inner Wisdom And Limitations, Sense Of Humour and Breathe	350
2019	4	4	31/10/2019	1	MEDICAL CAMP HEALTH CHECKUP	Personal health care	130

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7.1.5 – Human Values and Professional Ethics Code of conduct (handbooks) for various stakeholders

Title	Date of publication	Follow up(max 100 words)
College Handbook	03/06/2019	As an institution of higher education, we have the responsibility towards different stakeholders like

students, teachers, parents, employers, and the neighbourhood community. We have been practicing the certain values sourced out of our institutional vision and mission. These we consider as our core values: • Honesty Integrity • Belief in Individual Dignity • Commitment. • Excellence. • Accountability. • Diversity. • Rules and Regulation for Students. • Anti-Ragging. • Disciplinary Rules.

7.1.6 – Activities conducted for promotion of universal Values and Ethics

Activity	Duration From	Duration To	Number of participants
Engineers day	15/09/2019	15/09/2019	155
Swachh Bharat Programme	15/09/2019	15/09/2019	35
Covid Awareness program	06/03/2020	06/03/2020	89
Gandhi jayanthi	02/10/2019	02/10/2019	116
Teachers day	05/09/2019	05/09/2019	110
Republic day	26/01/2020	26/01/2020	400
Independence day	15/08/2019	15/08/2019	350
Womens day	07/03/2020	07/03/2020	200
Pongal celebrations	11/01/2020	11/01/2020	100
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7.1.7 – Initiatives taken by the institution to make the campus eco-friendly (at least five)

• Clean and Green Campus • Plastic free and junk food free campus • Solar powered geysers at hostel campus • Recycling of wastewater and irrigation of plants in campus • Use of Renewable Energy • Digital Library and E Learning Centre

7.2 – Best Practices

7.2.1 – Describe at least two institutional best practices

BEST PRACTICE I 1) Title of the Practice: Faculty up-gradation for imparting Quality Teaching. 2) Goal of the Practice: The Institute organizes faculty development programs (FDPs), seminars, workshops, etc. for all the faculty members in order to achieve the following: (i) To enhance and upgrade the knowledge and skills of faculty members. (ii) To promote research work in their field of specialization. (iii) To bring innovation and creativity in the teaching-learning process. (iv) To develop sensitization towards the environment and other social issues. 3) The Context: Generally, such type of activities is being held for the faculty members every year. 4) The Practice:

Financial support provided by the institute to all the faculty members who are willing to participate in FDPs/Workshops/Seminars. Also, the best publication award is being presented to faculty members who publish their research in reputed journals

5) Evidence of Success: Most of the faculty members of the institute get motivated and they show their willingness to attend and organize FDPs, Seminars, Workshops, Conferences and they also concentrate on publishing their research work in proceedings and journals of repute.

BEST PRACTICE II

Title of the Practice: Industry Institution Interaction

Objectives of the Practice: To enhance student knowledge on cutting edge technologies and make them as industry ready.

- To bridge the gap between industry expectations and academic outcomes, continuous interaction with industry is required to the institution.
- To create awareness among the students on societal needs.
- To encourage industrial training for students to get hands-on experience.
- To Exchange of expertise.
- To improve the placement opportunities.
- To give the solutions to industry problems.

The Context: The quality of people influences largely on the success of the industry who work in them. Industry institute interaction cell (IIIC) is aimed to encourage partnership between institute and industry to increase the employable students.

The Practice: The students are encouraged towards the internships during semester break. The final year students are encouraged to do their major projects in the related industries. Industry and alumni are considered as one of the stake holders and feedback taken from them to design value added/certificate courses. This helps the students to identify the needs of the society and give the solutions. Alumni meets are conducted yearly twice to bridge interaction with alumni employees in various industries. This helps in the updating the students according to the requirements of the industry. MOUs are signed with industries which helps in knowledge transfer and for industry readiness. Students are taken to field trips and industrial tours to create exposure on field requirements, steps in the manufacturing process and different stages involved for the product output.

IIIC plays a vital role in getting placements from different organizations. More than 2000 students were trained by different industry resource persons.

Evidence of Success More than ten MOUs were signed with different industries. Many students were participated in industrial visits and internships. More than 400 students were placed in different industries.

Problems Encountered and Resources Required Many of the girl students are not sent to the internships by the parents due to the fear of sending the child to a new area other than the college. The parents of the students are motivated by college faculty members on the importance of industry awareness and the safety measures taken at the time of industrial visits and internships. This helped in the increase in the overall participation.

3. Other Best Practices

- The day starts with 'Vandemataram' at 8:55 A.M and ends with 'Janaganamana' at 4:30 P.M
- Celebration of August 15th and Jan-26th without fail.
- Prohibition of cell phones on campus.
- Discouraging two-wheelers on the campus for students.
- Motivation towards Sports Games for all.
- Induction programme by 'Art of living' every year.
- The campus is under electronic surveillance.
- Utilization of Non-Conventional Energy Sources (Solar) for total campus.
- Inculcating Communication in English on the campus.
- Encouraging faculty, technicians, and students through various awards.
- Organic vegetation on the campus.
- Attaining of Ragging-Free Campus through counseling
- Effective counseling Mentoring system for every student.
- Encouragement towards academics.
- Regular yoga meditation classes.
- Encouragement towards co-curricular extra-curricular activities.
- Regular Parent-Teacher Meet.
- Frequent interaction by industrial experts.
- Thought-provoking quotes on the campus.
- Recreation Classes Faculty Development Programmes.

Upload details of two best practices successfully implemented by the institution as per NAAC format in your institution website, provide the link

<https://www.tecnrt.org>

7.3 – Institutional Distinctiveness

7.3.1 – Provide the details of the performance of the institution in one area distinctive to its vision, priority and thrust in not more than 500 words

The management inspires the Principal, all the HODs, staff and students towards fulfilment of the stated vision and mission. Management discusses in its regular meetings of the academic, administrative plan, policy, and implementation. The college fulfils all the requirements of departments like infrastructure, library, building and extension. We focus on the betterment of students' level, each day try to bring out the best from students, as much, through effective lectures, seminars, guiding sessions, Conferences, bridge courses, remedial lectures, etc. Also, to provide excellence in education standards, give them practical exposure, as per the current market scenario, to equip them with advanced knowledge, imbibe IT culture in them and to make them competitive employable enough. The institution also focuses on Active research practices leading to increased publications in well reputed Journals. In addition, the students are exposed to various sports activities to make them a complete student in all dimensions. As an outcome of this, many of our students have performed well in the State and National level sports events and secured many medals.

1.Skill Development Cell The Institution has set up Skill Development cell to improve the learning outcomes and through projects. Bridge Courses are arranged and conducted regularly for first year students and lateral entry students. Pedagogical Initiatives has been taken through various methodologies like experimental learning, model making, NPTEL videos etc. Value Added Courses are conducted for all students.

2.Placement Cell It makes us feel proud glad that, we are one of the best colleges in Guntur(dt)to provide the maximum placement Opportunities to our students. Apart from this, our faculties are well qualified with dual master's degree having a good period of experience to deliver matured, quality lectures to the students to benefit their I-Q level boost their calibre personality in all sense.In a Structured Manner, resumes are prepared in electronic format and in conventional forms and kept ready in order to make them available for General and Specific Needs of the Industries. Through several preparations, including Group Discussions and Mock Interviews, students are enabled to present themselves successfully in the Campus Interviews.

Provide the weblink of the institution

<https://www.tecnrt.org>

8.Future Plans of Actions for Next Academic Year

To achieve the Title "College with Potential for Excellence" which is granted as per the norms laid down by UGC To start new program in cutting edge areas like Artificial Intelligence and Machine Learning To create an enabling environment for holistic development of Students, Faculty and Support Staff To Implement the recommendations made by Audit Team which conducted Green Audit Energy Audit, carried out by the Institution To facilitate continuous upgradation and updating of Knowledge Use of Technology, by Faculty and Students To submit the AQAR reports intime To create awareness and initiate measures for Protecting and Promoting Environment To promote the activities like YOGA, Faculty development programs, Physical exercise To encourage and facilitate Research Culture, to promote Research by students and Faculty and Consultancy by Faculty To encourage and participate in online programs and courses To Implement Structural Repairs to Building and Electrical Repairs, based on Structural Audit, carried out by the Management To upgrade Library Resources to include digital content, which can be accessed by Students and Faculty online To enter into MOU's with Corporates and Industry Associations to promote Academia - Industry Linkages, to enable placements, internship, training, etc. for the students To encourage faculty to

Organize Faculty Improvement Programs, National and International Conferences To Improve Job-oriented and Skill based courses To give thrust to and create awareness about Cleanliness