

ANNUAL QUALITY ASSURANCE REPORT (2016-2017)

Submitted by



**Internal Quality Assurance Cell
Shanmuganathan Engineering College**

(Accredited by NAAC)

Pudukkottai – 622507, TN, INDIA

November 2017

**THE ANNUAL QUALITY ASSURANCE REPORT (AQAR)
OF THE IQAC (2016-2017)**

PART – A

1. Details of the Institution

1.1	Name of the Institution	SHANMUGANATHAN ENGINEERING COLLEGE
1.2	Address Line 1	ARASAMPATTI
	Address Line 2	PULIVALAM (Po) , THIRUMAYAM (Tk)
	City / Town	PUDUKKOTTAI (Dt)
	State	Tamil Nadu
	Pin Code	622507
	Institution e-mail address	shanmuganathanengg@gmail.com
	Contact Nos.	04333-274914, 274913
	Name of the Head of the Institution	Dr. KL. MUTHURAMU
	Tel. No. with STD Code	04333-274914
	Mobile	9443440692
	Name of the IQAC Co-ordinator	Dr M. VARADARAJAN
	Mobile	9840409497
	IQAC e-mail address	varadarajan_eee@sneec.ac.in
1.3	NAAC Track ID	TNCOGN25112
1.4	NAAC Executive Committee No. & Date:	12,13 and 14 th August 2016
1.5	Website address	www.sneec.ac.in
	Web-link of the AQAR:	

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 st Cycle	B	2.13	2016-17	5
2	2 nd Cycle				
3	3 rd Cycle				
4	4 th Cycle				

1.7 Date of Establishment of IQAC

14/05/2012

1.8 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC

Not Applicable

1.9 Institutional Status

University	State	<input type="checkbox"/>	Central	<input type="checkbox"/>
	Deemed	<input type="checkbox"/>	Private	<input type="checkbox"/>
Affiliated College	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Constituent College	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Autonomous College of UGC	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Regulatory Agency approved Institution (eg. AICTE, BCI, MCI, PCI, NCI)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Type of Institution	Co-education	<input checked="" type="checkbox"/>		
	Men	<input type="checkbox"/>	Women	<input type="checkbox"/>
	Urban	<input type="checkbox"/>	Rural	<input checked="" type="checkbox"/>
	Tribal	<input type="checkbox"/>		

Financial Status	Grant-in-aid	<input type="checkbox"/>
	UGC 2(f)	<input type="checkbox"/>
	UGC 12B	<input type="checkbox"/>
	Grant-in-aid + Self Financing	<input type="checkbox"/>
	Totally Self- financing	<input checked="" type="checkbox"/>

1.10 Type of Faculty/Programme

University	Arts	<input type="checkbox"/>	Science	<input type="checkbox"/>
	Commerce	<input type="checkbox"/>	Law	<input type="checkbox"/>
	PEI (Phy. Edu)	<input type="checkbox"/>	TEI (edu)	<input type="checkbox"/>
	Engg.	<input checked="" type="checkbox"/>	Health Science	<input type="checkbox"/>
	Management	<input type="checkbox"/>	Others	<input type="checkbox"/>

1.11 Name of the Affiliating University

ANNA UNIVERSITY, CHENNAI

1.12 Special status conferred by Central/ State Government--

UGC/CSIR/ DST/DBT/ICMR etc.

Autonomy by State/Central Govt. / University	<input type="checkbox"/> -		
University with Potential for Excellence	<input type="checkbox"/> -	UGC-CPE	<input type="checkbox"/> -
DST Star Scheme	<input type="checkbox"/> -	UGC-CE	<input type="checkbox"/> -
UGC-Special Assistance Programme	<input type="checkbox"/> -	DST-FIST	<input type="checkbox"/> -
UGC-COP Programmes	<input type="checkbox"/> -	DST-SERB	
UGC-Innovative PG programmes	<input type="checkbox"/> -	Any other (Specify)	<input type="checkbox"/> -

2. IQAC Composition and Activities

2.1	No. of Teachers			<input type="text" value="14"/>		
2.2	No. of Administrative/ Technical staff			<input type="text" value="1"/>		
2.3	No. of students			<input type="text" value="10"/>		
2.4	No. of Management representatives			<input type="text" value="1"/>		
2.5	No. of Alumni			<input type="text" value="2"/>		
2.6	No. of any other stakeholder & community representatives			<input type="text" value="-"/>		
2.7	No. of Employers/ Industrialists			<input type="text" value="-"/>		
2.8	No. of other External Experts			<input type="text" value="-"/>		
2.9	Total No. of members			<input type="text" value="28"/>		
2.10	No. of IQAC meetings held			<input type="text" value="2"/>		
2.11	No. of meetings with	Various Stake holders	<input type="text" value="-"/>	Faculty	<input type="text" value="2"/>	
		Non-Teaching Staff	<input type="text" value="1"/>	Alumni	<input type="text" value="3"/>	
2.12	Has IQAC received any funding from UGC during the year?	Yes	<input type="text"/>	No	<input checked="" type="text" value="✓"/>	
	If yes, mention the amount	<input type="text" value="-"/>				
2.13.	Seminars and Conferences (only quality related)					
(i)	No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC					
	Total Nos.	<input type="text"/>	International	<input type="text" value="1"/>	National	<input type="text" value="4"/>
	State	<input type="text"/>	Institution Level	<input type="text"/>		

(ii) Themes	<ol style="list-style-type: none"> 1. “An Initiative to Write Research Proposal for Funded projects” 2. “Effective Curriculum Implementation ” 3. “Instructional Model for Outcome Based Education” 4. “Intellectual Properties of Copyrights and Innovations” 5. “International Conference on Emerging Trends in Engineering and Technology”
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2.14. Significant Activities and contributions made by IQAC

<ul style="list-style-type: none"> • Planning and monitoring academic activities. • Provide training on outcome based education. • Promoting research and consultancy through R&D cell. • Conducting faculty development programmes on emerging trends. • Evaluating teaching-learning process through feed-back. • Identifying gaps between curriculum and industry. • Organising value-added courses and workshops to bridge the gap. • Mentorship programmes for employment opportunities. • Training on employability skills and personality development. • Creating awareness about anti-ragging and societal values. • Extension activities of students and faculties.

2.15. Plan of Action by IQAC/Outcome

Plan of Action	Outcome
Year Plan	<ol style="list-style-type: none"> 1. Prepared academic calendar for academic year 2016-17 2. Budget preparation 3. Strategic plan for advanced learners and slow learners 4. Motivational classes for first year students

Teaching & Learning	<ol style="list-style-type: none"> 1. Guest Lecture on <i>Recent Trends in Steel Structures</i> on 2nd September 2016. 2. Technical seminar on <i>Effective Use of Open Source Systems</i> on 2nd September 2016 3. Guest Lecture on <i>Behaviour of RCC Elements with Basalt Rod as Reinforcements</i> on 9th September 2016. 4. FDP on <i>Effective Curriculum Implementation</i> during 19th to 23rd September 2016. 5. Guest Lecture on <i>Smart Structures and Smart Materials</i> on 21st September 2016. 6. Guest Lecture on <i>Microcontroller Applications in Electrical Engineering</i> on 23rd September 2016. 7. Guest Lecture on <i>Remission Control Systems</i> on 30th September 2016. 8. Guest Lecture on <i>Ultra High Performance Concrete: from Materials to Construction</i> on 26th October 2016. 9. FDP on <i>Instructional Model for Outcome Based Education</i> during 28th November to 3rd December 2016. 10. Feedback from the students about the course and course teachers. 11. Industrial visit arranged for 2nd year and third year students.
Research and development	<ol style="list-style-type: none"> 1. Workshop on <i>Writing Research Proposal</i> on 1st August 2016. 2. Workshop on <i>An Initiative to Write Research Proposal for Funded Project</i> on 1st October 2016 3. Workshop on <i>Intellectual Properties of Copyrights and Innovations</i> on 5th May 2016 4. International Conference on <i>Emerging Trends in Engineering and Technology</i> on 1st and 2nd June 2017. 5. 20 technical papers are published in the

	<p>referred/indexed journals.</p> <p>6. Three proposals were submitted to the funding agencies.</p> <p>7. Dr. KL. Muthuramu and Dr. T. Kanimozhli received a fund of Rs 15000/- from TNSCST for “Popularization of Science Activities”.</p>
Student Progression	<p>1. Overall pass percentage 2015-16 Batch : 70.27% (66.20%*)</p> <p>2. No. university ranks secured : 8 (6*)</p> <p>3. Number of students placed on campus: 83</p> <p>4. Number of students appeared for GATE-17: 50</p>

*Academic Year 2014-15 Batch

2.16 Whether the AQAR was placed in statutory body

Yes No

Management Syndicate Any other body

Provide the details of the action taken

1. Conducting Weekly test, Internal Assessments and Model Examinations as per schedule.
2. Intensive coaching classes conducted for slow learners.
3. Value added courses taken in each department.
4. Organised guest lectures on the emerging subjects.
5. Co and Extra-curricular activities through department association.
6. Coaching classes conducted for competitive examinations.
7. Aptitude and technical training to strengthen the on-campus placement.
8. Alumni meet organized at Chennai 2005 to 2014 batches on 4.6.17.

PART – B

Criterion – I

1. CURRICULAR ASPECTS

1.1 Details about Academic Programmes 2016-2017

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD	--	--	1	--
PG	--	--	3	--
UG	--	--	5	5
PG Diploma	--	--	--	--
Advanced Diploma	--	--	--	--
Diploma	--	--	--	--
Certificate	--	--	--	--
Others (M.Phil)	--	--	--	--
Total			9	5

Interdisciplinary	--	--	--	--
Innovative	--	--	--	--
Integrated (PG)	--	--	--	--

1.2 (i) **Flexibility of the Curriculum:** CBCS/Core/Elective option/Open options
(As the Institute is affiliated to Anna University Chennai)

(ii) **Pattern of programmes:**

Pattern	Number of programmes
Semester	UG: 5, PG: 3
Trimester	--
Annual	--

1.3. **Feedback from stakeholders* (on all aspects)**

Alumni Parents Employers
Students

Mode of feedback

Online Manual Co-operating schools (for PEI)

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects.

Not Applicable

1.5 Any new Department/Centre introduced during the year. If yes, give details.

Not Applicable

Criterion – II

2. TEACHING, LEARNING AND EVALUATION

2.1 Total No. of permanent faculty

Total	94	Asst. Professors	87	Associate Professors	03
Professors	04	Others (Professor Emeritus)	-		

2.2 No. of permanent faculty with Ph.D.

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
15	-	-	-	2	-	7	-	-	-

2.4 No. of Guest and Visiting faculty and Temporary faculty

<input type="text" value="--"/>	<input type="text" value="5"/>	<input type="text" value="--"/>
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2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended Seminars	-	8	-
Presented papers	31	9	-
Resource Persons	-	1	1

2.6 Innovative processes adopted by the institution in Teaching and Learning:

- NPTEL course materials and videos
- Value added courses to increase employability
- Guest lectures on emerging topics
- Open courseware materials to supplement teaching
- Industrial visits for case studies
- Application of open source software for assignment and simulation lab
- Question banks were prepared for slow learners to improve success rate
- Alumni Buddy Connect programme to enhance global competency
- Microsoft Certification programmes for skill development



Guest lecture conducted by EEE Department

2.7 Total No. of actual teaching days during this academic year

180 (as per calendar)

2.8 Examination/ Evaluation Reforms initiated by the Institution:

- As the institution is affiliated, it follows the norms of the Anna University Chennai
- Performance in each course shall be evaluated based on continuous internal assessment and university examinations
- Continuous internal assessment will carry 20 marks and end semester examination will carry 80 marks
- End semester examination will be conducted by Anna University
- The continuous assessment will be based on three tests conducted by the Institutions (Internal Assessment I, Internal Assessment II, Model Exam)
- In addition to above weekly test conducted as per the schedule
- Failure and absentee students will appear for retest after regular working hours

2.9 No. of faculty members involved in curriculum restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development Workshop

Not Applicable

2.10 Average percentage of attendance of students

78%

2.11 Course/Programme wise distribution of pass percentage:

For the Academic year 2016-17

Title of the Programme	Total no. of students appeared	Division			
		Distinction %	I %	II %	Over all Pass %
B.E. CIVIL	352	1	21	28	30.68
B.E. CSE	121	1	19	13	50.41
B.E. ECE	156	1	38	16	51.92
B.E. EEE	110	-	12	19	42.73
B.E. MECH.	363	-	24	17	27.82
M.E. CSE	09	2	7	-	100
M.E. STRUCTURAL ENGINEERING	11	2	9	-	81.82
M.E. VLSI	05	1	4	-	100

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

- To prepare yearly plan to achieve academic objectives
- To form class committee for each year to identify problem faced by the students
- Class committee meeting will be conducted 3 times in each semester
- To collect feedback from the students and analyse the effectiveness of Teaching
- Conducts faculty meetings to ensure the implementation of course objectives
- Organising faculty development programmes in emerging trends/areas
- Promotes quality research in terms of publications and consultancy works
- Technical and aptitude training for the students through training and placement cell



One day workshop on “Write Research Proposal”

2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	Number of faculty benefitted
Refresher courses	38
UGC – Faculty Improvement Programme	nil
HRD programmes	nil
Orientation programmes	nil
Faculty exchange programme	nil
Staff training conducted by the university	Nil
Staff training conducted by other institutions	54
Summer / Winter schools, Workshops, etc.	48
Others	International conference 72

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	16	-	1	-
Technical Staff	25	-	6	-

Criterion – III
3. RESEARCH, CONSULTANCY AND EXTENSION

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution

- Research cell formed to inculcate research culture in the institute.
- Teaching faculties are encouraged to apply for funded research projects
- Financial assistance for attending workshops and conferences.
- Financial assistance for presenting paper in national and international conferences.
- Research publications in referred and indexed journals are rewarded.
- Taken initiative to become research nodal center
- Subscriptions of e-journals to promote the quality of research.
- Dr. KL. Muthuramu and Dr. T. Kanimozhli received funded project under the scheme “Popularization of Science Activities” from Tamilnadu State Council for Science and Technology (TNSCST)
- Conducted 1st International Conference on Emerging Trends in Engineering & Technology on 1st and 2nd June 2017.



3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number of projects	-	-	-	1
Total cost (Rs)	-	-	-	9,75,656.00

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number of projects	--	--	--	-
Total cost (Rs)	--	--	--	-

3.4 Details on research publications

	International	National	Others
Peer Reviewed Journals*	19	-	-
Non-Peer Reviewed Journals	-	-	-
e-Journals*	1	-	-
Conference proceedings	79	-	-

**Details of peer reviewed journals and e-journals are provided as Annexure I*

3.5 Details on Impact factor of publications:

S.No.	Title of the paper	Author(s)	Impact factor
1.	Outlier Detection for High Dimensional Data Streams	Dr.K.Krishnamoorthy G.R. Thippeswamy	1.090
2.	An evolutionary approach for optimizing content based image retrieval using a support vector machine	T. Kanimozhi K. Latha	0.197
3.	Performance improvement and size reduction scheme over circuits by using LUT/MUX Architecture.	S.P. Senthil Kumar	6.209
4.	Integrity verification scheme in cloud environment using dynamic key update	B. Senthilrajanokar	0.453
5.	Proxy Re-Encryption (Pre) Based Deduplication Scheme on Encrypted Big Data for Cloud	Dr. V. Saishanmuga raja	6.209
6.	Big Data-Efficient Packet Transmission To Mitigate The Fatigue Network	Dr. V. Saishanmuga raja	0.453
7.	FPGA Implementation of standard basis CDMA encoding/decoding	K.Balamurugan and A.Visithra	6.209
8.	Performance analysis of hybrid WDM-FSO system under various weather conditions	A. Muthumanicckam, R. Sornalatha, S.P. Senthil kumar, M. Palaniappan, M. Lorate Shiny	3.689
9.	Design of block ciphers and stream ciphers using cryptographic algorithm	M.G. Ajithra, A. Muthumanicckam, R. Sornalatha	3.23
10.	Multi-performance optimization of wire cut EDM process parameters on surface roughness of AA7075/B4CP metal matrix composite	S. Vignesh	9.23
11.	A review on natural fibre reinforced polymer composites	S. Vignesh	4.116
12.	A Review on Water Absorption Porosity	R. Vijaya Kumar	3.166

	and Sorptivity of cement mortar made with copper slag and green sand as partial replacement of fine aggregate.		
13.	An Experimental Study on Effective utilization of bottom ash (ennore) as fine aggregate in concrete under flexure.	R.Vijaya Kumar, Kai Kannan	4.32

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations

Nature of the Project	Duration Year	Name of the funding Agency	Total grant Sanctioned Rs.	Received Rs.
Major projects	--	--	--	--
Minor Projects	1 Year	TNSCST	15,000.00	15,000.00
Interdisciplinary Projects	--	--	--	--
Industry sponsored	--	--	--	--
Projects sponsored by the University/ College	--	--	--	--
Students research projects (other than compulsory by the University)	--	--	--	--
Any other(Specify)	--	--	--	--
Total Rs.			15,000.00	15,000.00

3.7 No. of books published

(i) With ISBN NO.	<input type="text" value="-"/>	Chapters in Edited Books	<input type="text" value="-"/>
(ii) Without ISBN NO.	<input type="text" value="-"/>		

3.8 No. of University Departments receiving funds from

UGC-SAP	<input type="text" value="NA"/>	CAS	<input type="text" value="NA"/>	DST-FIST	<input type="text" value="NA"/>
DPE	<input type="text" value="NA"/>	DBT Schemes / Funds		<input type="text" value="NA"/>	

3.9 For Colleges

Autonomy	<input type="text" value="NA"/>	CPE	<input type="text" value="NA"/>	DBT Star Scheme	<input type="text" value="NA"/>
INSPIRE	<input type="text" value="NA"/>	CE	<input type="text" value="NA"/>	Any other specify	<input type="text" value="NA"/>
DST-SERB	<input type="text" value="NA"/>	UGC-COP	<input type="text" value="NA"/>	NSQF	

3.10 Revenue generated through consultancy

Sl.no.	Details	Consultancy cost (Rs)
1.	Residential Building, Avinipatti	75,000
2.	Marriage Hall, Thirumayam	20,000
3.	Residential Building, Pudukkottai	20,000
4.	Residential Building, RS.Mangalam	3,000
5.	Residential Building, Pudukkottai	45,000
6.	Cube Test	21,230
Total Cost		1,84,230 /-

3.11 No. of conferences organized by the Institution

	International	National	State	University	College
Total	1				

3.12 No. of faculty served as experts, chairpersons or resource persons

1. Dr.KL.Muthuramu, CIVIL Department

2

2. Dr.L.Noarayanan, CIVIL Department

3.13 No. of collaborations

International National Any Other

3.14 No. of linkages created during this year

NA

3.15 Total budget for research for current year in lakhs:

From Funding agency	Rs 15000/-
From Management of University/College	-
Total	-

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	NIL
	Granted	NIL
International	Applied	NIL
	Granted	NIL
Commercialised	Applied	NIL
	Granted	NIL

3.17 No. of research awards/ recognitions received by faculty and research fellows of the institute in the year

Total	International	National	State	University	Dist	College
NIL	NIL	NIL	NIL	NIL	NIL	NIL

3.18 No. of faculty from the Institution who are Ph.D. Guides

1. Dr.KL.Muthuramu, CIVIL Department 3
2. Dr.K.Krishnaamoorthy , CSE Department
3. Dr.T.Kanimozhi, ECE Department

and students registered under them 18

3.19 No. of Ph.D. awarded by faculty from the Institution NA

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF	NA	SRF	NA
Project Fellows	NA	Any Other	NA
CSIR	NA	ICSSR	NA

3.21 No. of students Participated in NSS events:

University level	--	State level	--
National level	--	International level	--

3.22 No. of students participated in NCC events:

University level	--	State level	--
National level	--	International level	--

3.23 No. of Awards won in NSS:

University level	--	State level	--
National level	--	International level	--

3.24 No. of Awards won in NCC:

University level State level

National level International level

3.25 No. of Extension activities organized

University Forum College Forum NCC

NSS Any other

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

S.No.	Date	Name of the programme	No. of Beneficiaries
1	14.07.16	Abdul Kalam Kanavunaal (Awareness)	100
2	14.07.16	Arduino Scientific Project (Demonstration)	50
3	22.07.16	Skill Development programme	100
4	27.07.16	Blood Donation Camp	100
5	29.07.16	World Population Day Conference	250
6	17.08.16	Deworming Day (Awareness)	400
7	01.09.16	Anti-ragging (Awareness)	300
8	19.09.16	Licence Seva (2 and 4 wheeler)	100
9	22.09.16	Carrier Guidance	50
10	13.10.16	National Disaster Day	200
11	05.11.16	SECFEST	400
12	17.11.16 18.11.16	E- literacy Training at NSMVPS Elementary school, Devakottai	125
13	05.03.17	Entrepreneurship Awareness Programme	100
14	28.04.17	Pool Campus Recruitment Drive	200
15	03.05.17	Carrier Orientation Programme (School)	400



Blood Donation Camp



Pool Campus Recruitment Drive

Criterion – IV

4. INFRASTRUCTURE AND LEARNING RESOURCES

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area	1,01,697.5 Sq.mt.	--	--	1,01,697.5 Sq.mt.
Class rooms	3,531 Sq.mt.	--	--	3,531 Sq.mt.
Laboratories	8, 117 Sq.mt.	--	--	8, 117 Sq.mt.
Seminar Halls	1, 366 Sq.mt.	--	--	1, 366 Sq.mt.
No. of important equipment's purchased (\geq 1 lakh) during the current year.	--	2	Management	2 Nos
Value of the equipment purchased during the year (Rs)	---	2,66,791.00	Management	2,66,791.00
Others (Rs)	--	1,75,000.00	Management	1,75,000.00

4.2 Computerization of administration and library

- ✓ Staffs and students can access e-Journals and magazines through digital library.

4.3 Library Services

	Existing in 2016		Added in 2017		Total	
	No.	Value (Rs)	No.	Value	No.	Value (Rs)
Text Books	32795	85,11,489	540	1,59,000	33335	86,70,489
Reference Books	-	-	-	-	-	-
e-Books	9993	55,000	-	-	9993	55,000
Journals	88	2,04,344	9	38039	97	2,42,383
e-Journals	713	55,000	126	55,500	839	1,10,000
Digital Database	Online database	11,500	-	-		11,500
JOURNAL CD	445		13		468	
BOOK CD	580		20		600	
Others(specify)	657	26,280	32	1,650	689	27,930

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet (MBPS)	Browsing Centres	Computer Centres	Office	Departments PC	Others
Existing	534	11	20	-	-	10	21	5
Added	32	-	30	-	-	-	1	3
Total	566	11	50	All	-	10	22	8

4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)

- ✓ Each department has been provided with computers with wifi/internet facility.
- ✓ Computer laboratory in each department for simulation, project and research work.
- ✓ E-technology in curriculum development, teaching-learning, continuation evaluation and research.
- ✓ Students are encouraged to make use of computers for seminars and projects.
- ✓ On-line feedback system

4.6 Amount spent on maintenance in lakhs:

(i)	ICT	---
(ii)	Campus Infrastructure and facilities	20.22
(iii)	Equipment	---
(iv)	Others	19.33
	TOTAL in Lakhs	39.55

Criterion – V

5. STUDENT SUPPORT AND PROGRESSION

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- Clarifying the regulations of the degree programme
- Awareness programme on Anti Ragging
- Scholarship assistance from the state government
- Tuition fee concession by the management for meritorious students
- Medical aid provided in the campus
- Library facilities and working hours
- Basic amenities, transport facilities and hostel facilities provided by college

5.2 Efforts made by the institution for tracking the progression

- Class advisers to help the students in their course study and for academic advice
- Check the attendance and progress of the students periodically
- Class committee consisting of class-teachers and students representatives to identify the problems and improve teaching-learning process
- Analysing the performance of the students after each continuous assessment tests
- Identifying slow learners, if any, and provide additional guidance/coaching
- Organising Parents-Teachers meet to discuss the progress



Parents-Teachers meet

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others	Total
1138	26	--	--	1164

(b) **No. of students outside the state**

(c) **No. of international students**

(d) **Men**

No	%
834	71.6%

Women

No	%
330	28.3%

(e)

2015-2016						2016-2017					
General	SC	ST	OBC	MBC	Total	General	SC	ST	OBC	MBC	Total
53	208	1	808	444	1514	28	178	1	617	340	1164

(f) **Demand Ratio** = 41% **Dropout** = 3 students

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

- Coaching classes for GATE examination in all disciplines
- Providing training on aptitude and reasoning skills along with M/s FACE Academy, Coimbatore
- Personality development classes to improve the students communication level
- Technical training for developing soft skills
- Activity based training programme by Youth Circle
- Aptitude training programme by T & P cell

No. of student beneficiaries

5.5 No. of students qualified in these examinations

NET	<input type="text" value="--"/>	SET/SLET	<input type="text" value="--"/>	GATE	<input type="text" value="50*"/>
CAT	<input type="text" value="--"/>	IAS/IPS etc	<input type="text" value="--"/>	State PSC	<input type="text" value="--"/>
UPSC	<input type="text" value="--"/>	Tancet	<input type="text" value="31*"/>		

* No of students appeared for the examination

5.6 Details of student counselling and career guidance:

Students benefitted through counselling for problems under the category:

Personal Problem

- Loneliness, Depression/Anxiety

- Confusion or Stress
- Anger, grief and loss
- Issue of self-esteem
- Difficulty in making decisions
- Uncertainty about the future
- Difficulty in adjusting to college life

Academic issues

- Lack of proper communication
- Not attending classes regularly
- Difficulty with concentrating on studies
- Poor academic performance
- Not interested in attending training classes
- Awareness about examinations like GATE/IES
- Preparing for competency examinations
- Choice of higher study or employment

A faculty counsellor/advisor is appointed for every 20 students

Placement coordinator for every department to carry out career counselling

Professional (Psychiatry) counselling by full time doctors

No. of Students Benefitted

42

5.7 Details of Campus Placement

On campus				Off Campus
Academic year	Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
2016-2017	07	157	83	NIL
2015-2016	11	161	139	285

a. No. of students benefited through this programme

157

5.8 Details of Gender Sensitization Programmes

NIL

5.9 Students Activities

5.9.1 No. of students participated in Sports, Games and other events

State/
University level

--

National level

--

International level

--

No. of students participated in cultural events

State/ University level National level International level

5.9.2 No. of medals /awards won by students:**Sports:**

State/ University level National level International level

Cultural:

State/ University level National level International level

5.10 Scholarships and Financial Support

	Number of students	Amount Rs.
Financial support from institution	250	33,54,250.00
Financial support from government	825	37,57,700.00
Financial support from other sources	--	--
Number of students who received International/ National recognitions	--	--

5.11 Student organised / initiatives**Fairs :**

State/ University level National level International level

Exhibitions :

State/ University level National level International level

5.12 No. of social initiatives undertaken by the students**5.13 Major grievances of students (if any) redressed:**

NO MAJOR GRIEVANCES

Criterion – VI

6. GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 State the Vision and Mission of the institution

Vision: To evolve as a Centre of Academic and Research Excellence by providing quality education through modern and best infrastructure facilities and to serve the Rural People, the Nation and the World through our Professional Graduates energized to become Leaders, Innovators, Entrepreneurs and Interpreters in their Profession.

Mission: It would be the unceasing endeavor of everyone in the institution to prepare the students to face stiff competition and coping with the continuous rapid strides in technology with courage and confidence by providing them every opportunity to attain a high degree of professional competence through sustained rigorous training. Such students should prove to be an asset not only to their families but to the country itself as crusaders of its future progress and prosperity.

6.2 Does the Institution has a Management Information System?

Nil

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum Development

As an affiliated College, the Institution follows Anna University curriculum.

6.3.2 Teaching and Learning

- Lesson plans for theory and laboratory courses
- Teaching aides (ppt presentation, videos etc.) for visualization
- Use of ICT technique for effective teaching
- Tutorials for in-depth understanding of concepts
- Assignments to improve analytical skills
- Inculcating practical knowledge through case studies
- Remedial classes are conducted to improve the learning
- Developing hands on experience through in-plant training
- Testing the ability of the students to correlate the concepts studied through mini projects
- Conducting collaborative workshops

- Encouraging the students to give technical seminars
- Arranging field visits, industrial visits and educational tours
- Group discussion to improve communication skill

6.3.3 Examination and Evaluation

- The institute has a separate examination cell and functioning with controller of examinations
- Performance of the student in each course shall be evaluated based on continuous internal assessment and university examinations
- Continuous internal assessment will carry 20 marks and end semester university examination will carry 80 marks
- Two internal assessment test and one model examination are conducted and evaluated within 3 days
- In addition weekly test are conducted as per the academic calendar
- Retest are conducted for those students who failed or absented in internal assessment tests
- For internal assessments, central valuation is implemented as per university regulations and norms
- Internal marks are awarded based on the performance in continuous assessment

6.3.4 Research and Development

- The institute have a separate R & D cell to promote the research activities
- Motivating faculties to take minor/major research projects from funding agency
- Motivating teaching faculties to register for research /Ph.D (7 members are registered)
- Financial assistance to attend conference, FDP, seminars and workshops.
- Financial assistance to present papers at state, national and international conferences
- Encouraging faculty to organize FDP, seminars and workshops
- Encourage the UG and PG students to do research oriented projects and case studies
- The faculty members have published 20 research papers in reputed and peer reviewed journals

6.3.5 Library, ICT and physical infrastructure / instrumentation

Wi-Fi enabled campus.

Wi-Fi facility is provided for the students and faculties

6.3.6 Human Resource Management

Organization of in-house faculty development programs.

6.3.7 Faculty and Staff recruitment

- Well laid-out policy and process
- Advertisements in major leadings newspapers
- Online submission of resume
- Recruitments are made based on written test and interview performance

6.3.8 Industry Interaction / Collaboration

- MoUs signed with Interlogix Embedded Solutions Pondicherry
- Renewal of MOU signed with ICTACT

6.3.9 Admission of Students

- For admission, the institution following the state government norms
- Strictly adhering the state government reservation policy
- Special preferences are given for the first generation learners, minority communities as per the Vision and Mission of the institution

6.4 Welfare schemes for

Beneficiaries	Details	No. of Beneficiaries
Teaching	Tuition Fees concession to the Children of staff members	01
Non - teaching	Tuition Fees concession to the Children of staff	02
Students	a) Fees Concession b) Tuition fees concession for Sportsmen c) Student Counselling centre	252

6.5 Total corpus fund generated

-

6.6 Whether annual financial audit has been doneYes No **6.7 Whether Academic and Administrative Audit (AAA) has been done?**

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	ISO Audit	Yes	HoD
Administrative	Yes	ISO Audit	Yes	HoD

6.8 Does the University/ Autonomous College declare results within 30 days?

Not applicable

6.9 What efforts are made by the University/ Autonomous College for Examination Reforms?

Not Applicable

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

Not Applicable

6.11 Activities and support from the Alumni Association

Institute conducts alumni meet every year.

Exhaustive alumni database and details are regularly updated on college website.

Alumni facilitating campus placement.

Alumni delivering technical lectures.

Motivate and guide the students to become entrepreneurs.

6.12 Activities and support from the Parent – Teacher Association

Parents meetings conducted regularly by each department. The suggestions made by the parents are forwarded to suitable forum for further course of action.

Department	Meeting				Total
	I Year	II Year	III Year	IV Year	
Civil	4	5	4	5	18
Mech	2	6	5	4	17

ECE	2	3	2	2	09
CSE	3	3	3	2	11
EEE	2	1	8	3	14

6.13 Development programmes for support staff

The supporting staffs are encouraged to pursue higher education.

2

ICT training

6.14 Initiatives taken by the institution to make the campus eco-friendly

- Tree plantation and green environment maintenance.
- Minimizing water wastage
- Deployment of solar heaters and lighting
- Rainwater harvesting
- LED lamps
- Minimising paper use
- Energy conservation

Criterion – VII

7. INNOVATIONS AND BEST PRACTICES

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

- (a) Online Students Feedback System on teaching learning process was introduced.

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year

Process of academic planning started in the year 2016-17

7.3 Give two Best Practices of the institution

Best Practice - I

(i). **Title**

Paperless Students' Feedback

(ii). **Objective**

- To enable all the students to provide feedback for class room teaching online.
- To manage and record the feedback digitally for the better functioning of the Departments
- To reduce the environmental impact of paper consumption and avoid wasteful printouts

(iii). **Context**

- Feedback is the fundamental principle that underlies all self-regulating systems. The feedback from all students in terms of its relevance and appropriateness are considered to be a key aspect for enhancing and redefining the college. The college is committed to obtain timely and appropriate feedback from different students to reflect on the progress and development effectively. Feedback, and acting on feedback, is therefore part of the enhancement process for the college. The feedback helps for self evaluation to make Quality as the defining element for the college.

(iv). **Execution of the Practice**

- The online feedback for class room teaching is provided by the students of all the departments by using the login credentials provided to them through the feedback link available in our college website (shanmuganathanengg.ac.in/feedback).
- After entering the username and password, the students have to select appropriate department, Year and semester to give their feedback.

(v). **Evidence of Success**

- The result of this paper less feedback system are :

Time savings

It is no longer necessary to waste time looking for documents. The feedback is digitally stored and can be analysed in less time

Simplicity

With paper less feedback management system, It is very simple for the students to provide their feedback from anywhere in the world.

Money Saving

Usage of papers is considerably reduced for getting feedback from the students thereby saving some money.

Paper less

Less paper means trees need not to be cut down and this makes an indirect impact on the environment

Effective analysis and management

Since the feedback is digitally available it is easier for the staff to effectively manage the data and analyse the feedback. The analysis reports can be immediately sent to the superiors for the necessary action.

Record keeping

The feedback provided can be stored in as documents or databases to be analysed at any time. This feedback documents does not need large room space to store as in the case of paper feedback.

(vi). **Problems Encountered and Resources Required**

- It takes lots of time to create feedback portals for each department.
- Databases may be needed in future to store lots of feedback data

(vii). **Outcome**

- Paper less feedback has made a positive impact on both students and faculty as it is very simple to use and manage.
- Considerable time has been saved for getting feedbacks from students when compared with the traditional paper feedback system
- Considerable amount of paper usage has been reduced

Best Practice – II

(i). **Title**

Management scholarship

(ii). **Objective**

- To help the economically weaker students of the College.
- To fulfil the Mission of the College through serving the poor and the needy.

(iii). **Context**

Many students are first generation learners hailing from a financially poor background. Fulfilling the Vision of the college in uplifting the poor and the needy students, the Management concession is an innovative one to support the cause of the students.

(iv). **Execution of the Practice**

The Management concession, the cell to help the needy, especially for first generation learners, identifies poor / economically weaker students, based on the annual income of their parents, the marks obtained in the school final year or the under-graduate programme, and attendance in the classes.

(v). **Evidence of Success**

Year	No. of Students benefited	Management Scholarship (Rs)
1 st year	52	9,57,000
2 nd year	79	12,96,000
3 rd year	46	9,50,000
4 th year	73	1,51,250
Total		33,54,250

(vi). **Problems Encountered and Resources Required**

- Some of the needy students have failed to apply for the Management concession because they were not able to submit the income certificate in time, owing to the delay in getting it from the government offices.
- Owing to financial constraints, the Management is not able to provide financial support to all the applicants.

(vii). **Outcome**

Management concession is a unique programme offered by Shanmuganathan Engineering College, which has inspired other city colleges to provide similar financial assistance to their needy students.

7.4 Contribution to environmental awareness / protection

Rain water harvesting

Tree planting

Renewable energy club

Deworming day awareness programme

National disaster day awareness rally

License seva camp

Energy conservation

7.5 Whether environmental audit was conducted?

Yes No

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)

SWOT analysis is carried out in all the disciplines.

Strength	:	Well qualified and experienced faculties Young and dynamic team Good lab facilities Excellent academic plan – Coaching classes, Retest
Weakness	:	No PG Program No research lab (except CIVIL Department)
Opportunities	:	Faculty Development Programmes Workshop – Hands on training can be provide
Threats	:	Rapid growth in number of engineering colleges Declining academic quality of the students

8. Plan of Institution for next year

1. Strengthening the placement services for the students.
2. To initiate a few community projects in collaboration with local authorities.
3. Publishing research articles in peer reviewed Journals with high impact factor.
4. Submitting more numbers of project proposals of various funding agencies
5. Strengthening the research infrastructure.
6. Strengthening the Alumni Association and Alumni Projects.
7. Development of sports infrastructure facility of institution.
8. To sign more number of National and International MoU's.
9. Develop the institution as a Center of Excellence

Signature of the coordinator, IQAC

Signature of the Chairperson, IQAC

Annexure-I

Details of Peer Reviewed Journals:

S.No.	Title of the paper	Author(s)	Name,volume,journal, year of publication and impact factor.	Page No. From To
1.	Influence of deformability behaviour in prestressed concrete beam using carbon-fiber-reinforced polymer tendon	Dr. KL. Muthuramu	January-February 2017/PCI Journal	-
2.	Image Retrieval based on Sectional Intensity Tolerance Measure for Color using Fuzzy Rule Sets	Dr.K.Krishnamoorthy & Narayanan, R. C.	Asian Journal of Research in Social Sciences and Humanities Volume 6, issue no. 9 (2016): (Annexure I)	page no. 2220-2228. ISSN 2249-7315
3.	Outlier Detection for High Dimensional Data Streams	Dr.K.Krishnamoorthy & G.R. Thippeswamy	International Journal of Electronics Communication and Computer Engineering, Volume. 7, issue 4, page no. 217 Impact factor:1.0909	page no. 217 ISSN(online):2249-071x
4.	An evolutionary approach for optimizing content based image retrieval using a support vector machine	T.kanimozhi & K.Latha	Science Asia , Volume: 42S and Number 1, July 2016 Impact factor:0.347	ISSN No. (Annexure - I): 1513-1874 pg.no.34 - 41
5.	Performance improvement and size reduction scheme over circuits by using LUT/MUX Architecture.	S.P. Senthilkumar	International journal of innovative Research in Science,Engineering and technology, volume 6, Issue 2,February 2017. Impact factor:6.209	ISSN(online) ; 2319-8753, ISSN(print) : 2347 - 6710
6.	Integrity verification scheme in cloud environment using dynamic key update	B.Senthilrajanokar	International journal of computer science ,volume 5, issue 1, 15 and 16 February 2017 Impact factor:0.453	ISSN: 2348-6600, page no: 1603-1610
7.	Proxy Re-Encryption (Pre)BasedDeduplication Scheme on Encrypted Big Datafor Cloud	Dr.V.Saishanmuga raja	International Journal of Innovative Research in Science,Engineering and Technology, Vol. 6, issue 2, Feb 2017. Impact factor:6.209	ISSN(Online) : 2319-8753

8.	Big Data-Efficient Packet Transmission To Mitigate The Fatigue Network	Dr.V.Saishanmuga raja	International Journal of Computer Science, Vol. 5, issue 1, no.18, February 2017. Impact factor:0.453	ISSN: 2348-6600 page no: 1541-1548
9.	FPGA Implementation of standard basis CDMA encoding/decoding	K.Balamurugan & A.Visithra	International journal of innovative Research in Science,Engineering and technology, volume 6, Issue 2,February 2017. Impact factor:6.209	ISSN(online) ; 2319-8753, ISSN(print) : 2347 - 6710
10.	Performance analysis of hybrid WDM-FSO system under various weather conditions	A.Muthumanicckam, R.Sornalatha, S.P.Senthilkumar, M.Palaniappan, M.Lorate Shiny	International journal of engineering research in electronics and communication engineering(IJERECE) vol.3,Issue 11,November2016 Impact factor:3.689	ISSN(online)2394-6849 Page no: 54-61
11.	Design of block ciphers and stream ciphers using cryptographic algorithm	M.G.Ajithra, A.Muthumanicckam, R.Sornalatha	International Journal of Advanced Research in Electrical, Electronics and Instrumentation engineering, vol.6, Issue 5,may 2017	ISSN(online):2278-8875 ISSN(print):2320-3765
12.	A Novel Methodical Digital Self interference Cancellation Technique for 5G Applications	R.Sornalatha	Advances in Natural and Applied Sciences, Annexure II, 11 th march 2017.	ISSN: (1995-0772)
13.	Multi-performance optimization of wire cut EDM process parameters on surface roughness of AA7075/B4CP metal matrix composite	S.Vignesh	IEEE; April 2016 Impact factor:9.23	ISSN: 978-1-5090-4/16
14.	A review on natural fibre reinforced polymer composites	S.Vignesh	International journal of engineering science and aresearch technology; volume 20, October 2016, Impact factor:4.116	ISSN: 2277-9655
15.	An Experimental investigation on mechanical properties and microstructure of friction stir welding of AA5052.	C.Chanakyan, Dineshbabu, M.P.Jenarthanan, K.Jagathesh	Applied Mechanics and materials, Trans Tech Publications, Switzerland Doi: 10.4028/www.scientific.net	Vols. 592-594(2016) Pp 48-52

16.	Analysis of factors influencing tensile strength in dissimilar welds of AA2024 and AA6061 produced by friction stir welding (FSW)	K.jegathesh, M.P.Jenarthanan, P.DineshBabu C.Chanakyam	Austrialian Journal of mechanical Engineering,2016	ISSN: 1448-4846- (Print)2204-2253
17.	Effect of Tib2p Particulate Addition in Aluminium 6061 Through Stir Casting Technique	RamaDurai.K, C.Chanakyam, Janet.A Bharathaikanna R	International journal of multidisciplinary Research And Modern Education(IJMRME),2016,V olume II	ISSN(Online): 2454-6119
18.	A Review on Water Absorption Porosity and Sorptivity of cement mortar made with copper slag and green sand as partial replacement of fine aggregate.	R.Vijaya Kumar	IJRASET – Volume-4,May-2016	ISSN:2321-9653 page no: 801-803
19.	An Experimental Study on Effective utilization of bottom ash(ennore) as fine aggregate in concrete under flexure.	R.VijayaKumar, Kai Kannan	International journal of research-Grant haa laych Volume-5,JUNE-2017	ISSN:2394-(3629) page no: 152-158

Details of eJournals:

S.No.	Title of the paper	Author(s)	Name,volume,journal, year of publication	Page No. From To
1.	Experimental investigation on Microstructure and mechanical behaviour of Stir cast metal matrix composite AA6061 with MWCNT	K.senthamarai	Internation journal of advanced engineering and technology	E-ISSN:0976-3945

S.No.	Title of the paper	Author(s)	Name,volume,journal, year of publication and impact factor.	Page No. From To
1.	Outlier Detection for High Dimensional Data Streams	Dr.K.Krishnamoorthy & G.R. Thippeswamy	International Journal of Electronics Communication and Computer Engineering, Volume. 7, issue 4, page	page no. 217 ISSN(online):2249-071x

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	cryptographic algorithm	R.Sornalatha	engineering, vol.6, Issue 5,may 2017	ISSN(print):2320-3765
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