

ANNUAL QUALITY ASSURANCE REPORT (2017-2018)

Submitted by



Internal Quality Assurance Cell
Shanmuganathan Engineering College

(Accredited by NAAC)

Pudukkottai – 622507, TN, INDIA

November 2018

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.	04333-274913, 274914
	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

1.4 NAAC Executive Committee No. & Date:

1.5 Website address

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

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 Central

Deemed Private

Affiliated College Yes No

Constituent College Yes No

Autonomous College of UGC Yes No

Regulatory Agency approved Institution (eg. AICTE, BCI, MCI, PCI, NCI) Yes No

Type of Institution Co-education

Men Women

Urban Rural

Tribal

Financial Status

Grant-in-aid

UGC 2(f)

UGC 12B

Grant-in-aid +
Self-Financing

Totally
Self-financing

1.10 Type of Faculty/Programme

University Arts Science

Commerce Law

PEI (Phy. Edu) TEI (edu)

Engg. Health Science

Management Others

1.11 Name of the Affiliating University

1.12 Special status conferred by Central/ State Government-- UGC/CSIR/
DST/DBT/ICMR etc.

Autonomy by State/Central Govt. / University

University with Potential for Excellence UGC-CPE

DST Star Scheme UGC-CE

UGC-Special Assistance Programme DST-FIST

UGC-COP Programmes DST-SERB

UGC-Innovative PG programmes Any other (*Specify*)

2. IQAC Composition and Activities

2.1	No. of Teachers				12
2.2	No. of Administrative/ Technical staff				1
2.3	No. of students				10
2.4	No. of Management representatives				1
2.5	No. of Alumni				5
2.6	No. of any other stakeholder & community representatives				1
2.7	No. of Employers/ Industrialists				1
2.8	No. of other External Experts				2
2.9	Total No. of members				33
2.10	No. of IQAC meetings held				7
2.11	No. of meetings with	Various Stake holders	5	Faculty	2
		Non-Teaching Staff	2	Alumni	1
2.12	Has IQAC received any funding from UGC during the year?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
	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"/>	National	<input type="text" value="4"/>
State	<input type="text"/>	Institution Level	<input type="text" value="5"/>		

(ii) Themes

- | |
|---|
| <ol style="list-style-type: none"> 1. Accreditation and Outcome Based Education – Part I 2. Accreditation and Outcome Based Education – Part II 3. Course Outcome Measurement and Assessment Process |
|---|

4. Outcome Based Education
5. Quality in Higher Education : An Analytical Approach
6. How To Write A Proposal
7. Designing and Drafting of Powerful Course Outcome
8. National Conference on Emerging Trends in Engineering and Technology
9. Principles of Digital Signal Processing

2.14. Significant Activities and contributions made by IQAC

- Planning and monitoring academic activities.
- Provide training on outcome based education.
- Evaluating teaching-learning process through feed-back.
- Identifying gaps between curriculum and industry.
- Organizing value-added courses and workshops to bridge the gap.
- Training on employability skills and personality development.
- Bridge/Motivation classes for first year B.E. students
- Conducting faculty development programmes on emerging trends.
- Promoting research and consultancy through R&D cell.
- Mentorship programmes for employment opportunities.
- Creating awareness about anti-ragging and societal values.

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 2017-18 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>Smart Metering</i> 20th July 2017 2. Guest Lecture on <i>Composite Space Truss</i> on 22nd July 2017. 3. Guest Lecture on <i>Recent Trends in Industrial Automation</i> 26th July 2017.

	<ol style="list-style-type: none"> 4. Guest Lecture on <i>Alternative Building Materials a step towards Green Environment</i> on 31st July 2017. 5. Technical seminar on <i>Water Pollution</i> on 31st July 2017 (AN). 6. Workshop on <i>Raspberry Pi IoT for Electrical Applications</i> on 23rd August 2017. 7. Guest Lecture on <i>Arduino Micro controller for Electronics Projects</i> on 24rd August 2017. 8. Guest Lecture on <i>Roof Trusses and industrial structures</i> on 28th August 2017. 9. Guest Lecture on <i>Common Mistakes in Construction, Remedies and Case Studies</i> on 5th September 2017. 10. Workshop on <i>Raspberry Pi IoT for Electronics Applications</i> from 26th to 27th September, 2017 11. Guest Lecture on <i>Arduino Based Embedded System</i> on 27th December 2017 12. Guest Lecture on <i>Industrial Automation using PLC & SCADA</i> on 03rd January 2018 13. Technical Seminar & Project Demonstration on <i>Cost Effective Home Automation System Using IOT</i> on 10th January 2018. 14. Guest Lecture-1 on <i>Introduction to Embedded Systems</i> on 11th Jan 2018. 15. Guest Lecture on <i>Current Scenario of Renewable Energy sources</i> 24th January 2018. 16. Guest Lecture <i>High Performance Concrete</i> on 6th February 2018. 17. Workshop on <i>Internet of Things</i> on 20th Feb 2018. 18. Seminar on <i>Introduction to VLSI</i> on 22nd Feb 2018. 19. Workshop on <i>CADD PROMO</i> on 26th February. 20. Guest Lecture on <i>Foundation of DSP with Electrocardiogram (ECG) & Electroencephalogram (EEG)</i> on 15th Mar 2018. 21. Work shop on <i>Finite Element Analysis</i> on 16th March 2018. 22. Guest Lecture on <i>Router Configuration</i> on 22nd Mar 2018.
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	<p>23. Feedback from the students about the course and course teachers.</p> <p>24. Industrial visit arranged for 2nd year and 3rd year students.</p>
Research and Development	<p>1. FDP on <i>An How to Write A Proposal</i> on 17th February 2018.</p> <p>2. Seven technical papers were published in the referred/indexed journals.</p> <p>3. Proposal was submitted to the funding agency TNSCST.</p>
Student Progression	<p>1. Overall pass percentage 2017-18 Batch : 55.81% (70.07%*)</p> <p>2. No. university ranks secured : 5 (6*)</p> <p>3. Number of students placed on campus: 54</p> <p>4. Number of students appeared for GATE : 18</p>

*For Academic Year 2016-17 (Based on Passed out 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.
2. Intensive coaching classes for slow learners.
3. Value added courses thought in each department.
4. Organised guest lectures on the emerging topics.
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.

PART – B

Criterion – I

1. CURRICULAR ASPECTS

1.1 Details about Academic Programmes 2017-2018

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 ✓

(The Institute is affiliated to Anna University Chennai and hence flexibility is restricted)

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	UG: 5, PG: 3
Trimester	Not Applicable
Annual	Not Applicable

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.

Anna University introduced new Regulation 2017 for students joined in the academic year 2017-18

- Introduces Choice Based Credit System with program and course outcomes
- Total number of credits to earn 180 compared 189 in R-2013
- The Students may optionally undergo Value Added Courses and the credits earned through the Value Added Courses shall be over and above the total credit requirement prescribed in the curriculum
- Students may be permitted to credit only one online course of 3 credits instead of one elective course.
- Open Elective (OE) courses include the courses from other branches which a student can choose from the list specified in the curriculum
- The students satisfying the conditions shall be permitted to carry out their final semester Project work for six months in industry/research organizations.
- If a student fails to secure a pass in a course (except electives), the student shall do reappearance registration only along with regular students
- Total number of credits that a student is allowed to register per semester cannot exceed 36.
- A student is deemed to have passed and acquired the corresponding credits in a particular course if he/she obtains any one of the following grades: 'O', 'A+', 'A', 'B+', 'B'.

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	82	Asst. Professors	77	Associate Professors	01
Professors	04	Others (Professor Emeritus)	-		

2.2 No. of permanent faculty with Ph.D. 5

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year (2017-18)

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
16	-	-	-	1	-	1	-	18	-

2.4 No. of Guest and Visiting faculty and Temporary faculty

--	--	--
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2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended Seminars	1	19	-
Presented papers	7	-	-
Resource Persons	-	-	-

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

- o NPTEL course materials and videos
- o Value added courses to increase employability
- o Expert guest lectures on emerging topics
- o Open courseware materials to supplement teaching and learning
- o SCILAB/XCOS software used for power system simulation lab
- o Industrial visits for case studies
- o Question banks were prepared for slow learners to improve success rate
- o Alumni Buddy Connect programme to enhance competency
- o Microsoft Certification programmes for skill development



Workshop on Outcome Based Education

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

180 (as per Academic Calendar)

2.8 Examination/ Evaluation Reforms initiated by the Institution:

- o As the institution is affiliated, it follows the norms of the Anna University Chennai
- o Performance in each course shall be evaluated based on continuous internal assessment and university examinations
- o Continuous internal assessment will carry 20 marks and end semester examination will carry 80 marks for both theory and laboratory course
- o End semester university examination will be conducted in November/May by Anna University, Chennai
- o The continues assessment will be based on three test conducted by the Institutions (Internal Assessment I, Internal Assessment II, Model Exam)
- o In addition weekly test conducted as per the academic schedule
- o Failure and absented students have to 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

81%

2.11 Course/Programme wise distribution of pass percentage:

For the Academic year 2017(July)-2018(June)

Title of the Programme (1 st Year to Final Year)	Total No of students appeared	Division/Class			
		Distinction*	I Class*	II Class*	Over all Pass %
B.E. CIVIL	278	13	58	2	22.30
B.E. CSE	107	-	26	-	46.72
B.E. ECE	123	-	45	7	34.95
B.E. EEE (1 st , 2 nd , 3 rd & 4 th)	89	-	22	12	28.08
B.E. MECH	298	4	25	29	07.71
M.E. CSE – 1 st and 2 nd	7	-	3	-	100.00
M.E. STRUCTURAL - 1 st & 2 nd	15	2	6		100.00
M.E. VLSI	9	2	3	-	100.00

* Based on 2017 Passed out Batch

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

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



One day workshop on 'How to Write Proposal'

2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	Number of faculty benefitted
Refresher courses	19
UGC – Faculty Improvement Programme	Nil
HRD programmes	Nil
Orientation programmes	17
Faculty exchange programme	Nil
Staff training conducted by the university	Nil
Staff training conducted by other institutions	84
Summer / Winter schools, Workshops, etc.	59
Others	Nil

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	4	-	-	-
Technical Staff	18	-	2	-

Criterion – III

3. RESEARCH, CONSULTANCY AND EXTENSION

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

- o Research cell formed to inculcate research culture in the institute.
- o Subscriptions of e-journals to promote the quality of research.
- o Financial assistance for attending workshops and conferences.
- o Financial assistance for presenting paper in national and international conferences.
- o Teaching faculties are encouraged to apply for funded research projects
- o Research publications in referred and indexed journals are rewarded.
- o Taken initiative to become research nodal centre
- o Consultancy work on designing the structural elements for an auditorium, soil testing and cube testing were undertaken
- o Conducted National Conference on Emerging Trends in Engineering & Technology NCETET 2018 on 21st April 2018.



National Conference on Emerging Trends

3.2 Details regarding major projects

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

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	5	-	-
Non-Peer Reviewed Journals	2	-	-
e-Journals	-	-	-
Conference proceedings	4	8	-

3.5 Details on Impact factor of publications:

S.No.	Title of the paper	Author(s)	Impact factor
1.	Modelling a Widely Linear Digitally Controlled Self-Interference Canceller for full-duplex transceiver	R. Sornalatha	9.109
2.	An Experimental study on Effective utilizations of Bottom AHS(ENNORE) As Fine Aggregate in concrete under flexure	R. Vijaya Kumar	2.532
3.	An Experimental study on Effective utilizations of Bottom AHS(ENNORE) as Fine Aggregate in concrete under flexure	KAI. Kannan	2.532

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	--	--	--	--
Interdisciplinary Projects	--	--	--	--
Industry sponsored	--	--	--	--
Projects sponsored by the University/ College	--	--	--	--
Students research projects <i>(other than compulsory by the University)</i>	--	--	--	--
Any other(Specify)	--	--	--	--
Total Rs.				--

3.7 No. of books published

(i) With ISBN NO. Chapters in Edited Books

(ii) Without ISBN NO. |

3.8 No. of University Departments receiving funds from

UGC-SAP CAS DST-FIST

DPE DBT Schemes / Funds

3.9 For Colleges

Autonomy CPE DBT Star Scheme

INSPIRE CE Any other specify

DST-SERB UGC-COP NSQF

3.10 Revenue generated through consultancy

Sl. No.	Details	Consultancy cost (Rs)
1	Soil Test for SSA READYMIX, Pudukkottai	1,000
2	Consultancy work – Soil Test	10,000
3	Consultancy work – Cube Test	1,500
4	Spade works for lying of tiles covering 200sqft at Rangiyam	11,000
5	Designing the structural elements of an auditorium cum Library building covering one lakhs Sqft for Adiparasakthi Educational Institutional at kalavai, Vellore District.	1,50,000
	Total Cost	1,73,500

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

Dr KL. Muthuramu, CIVIL Engineering Department

1

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

-

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
2. Dr K. Krishnaamoorthy , CSE Department
3. Dr T. Kanimozhi, ECE Department

3

and Students registered under them

3

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	10	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	09.09.17	Orientation Programme	50
2	19.09.17	Licence Seva (2 and 4 wheeler)	32
3	21 & 22.09.17	Cleaned Thirumayam fort	--
4	22.01.18 To 28.01.18	One Week Special Camp	60
5	27.10.17	SECFEST	400
6	05.10.17	Future Engineers	150
7	09.11.18	Road Safety and Preventive Measures Towards Road Accidents	150
8	13.12.18	Junior Welfare Programme	72
9	13.02.18	Scope of Electronics	150
10	16.03.18 & 23.03.18	Motivational Lecture	148
11	08.10.18	Job Opportunities in Indian Air Force	85
12	09.11.18	CNC Programming	112

NSS Students engaged in Cleaning Thirumayam Fort



Awareness Program on Road Safety and Accident Prevention



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.	--	3 (Mechanical* lab) 4 (LCD Projector)	Management	7 Nos
Value of the equipment purchased during the year (Rs)	---	4,83,435.00 2,21,328.00	Management	7,04,763.00
Others (Rs)		a) 400 Meters Track		4,19,500.00
a) Ground		b) Steel Shelf	Management	46,586.00
b) Library	--	c) Inverter with battery		17,000.00
c) CCTV				

*Mechanical Lab

Name of the Lab	Title of Equipment
Dynamics lab	1. Turn table apparatus 2. Dynamic balancing machine
Metrology lab	Surface finish measuring equipment
Thermal Engineering lab – II	1. Heat transfer through composite wall 2. Thermal conductivity of insulating power 3. Fluidized bed cooling tower

*Smart Room

Four LCD projectors purchased and fixed in smart room of Civil, CSE, ECE and EEE departments

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 2016-2017		Added in 2017-2018		Total	
	No.	Value (Rs)	No.	Value	No.	Value (Rs)
Text Books	31066	86,70,489	1029	3,08,700	31095	89,79,189.00
Reference Books	3069	9,20,700	10	9,500	3079	9,30,200.00
e-Books	9993	-	10721	-	20714	
Journals	108	3,17,000	103	2,57,000	211	5,74,000.00
e-Journals	812	-	838	-	1650	-
Digital Database	Online database (DELNET, IESTC)	66,500	-	-	Online database (DELNET, IESTC)	66,500.00
JOURNAL CD	470	-	10	-	480	-
BOOK CD	609	-	73	-	682	-
Others(specify)	-	-	-	-	-	-

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet (MBPS)	Browsing Centres	Computer Centres	Office	Departments PC	Others
Existing	566	11	50	All	-	10	22	8
Added	-	-	-	-	-	-	-	-
Total	566	11	50	All	-	10	22	8

4.5 Computer, Internet access, training to teachers and students and any other programme for technology up gradation (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 (BSNL)	17.7
(ii)	Campus Infrastructure and facilities *	1.82
(iii)	Equipment **	2.32
(iv)	Others ***	0.73
TOTAL in Lakhs		22.55

* Details for (ii) Campus Infrastructure and facilities

S.No.	Properties	Qty	Amount
1.	Aqua Grand 50 L (Mech. Dept.)	2	59,400.00
2.	Aqua Grand 50 L (Ladies Corner)	1	32,500.00
3.	Boys Hostel - maintenance	-	7,179.00
4.	Battery with charger (125 kVA)	1	18,493.00
5.	Electrical maintenance materials	-	29,320.00
6.	Battery 130 Ah (45 KVA)	1	9900.00
7.	Security CC Camera Installed at Entrance	1	7350.00
	TOTAL		1,81,554

** (iii) Equipment

S.No.	Properties	Qty	Amount (Rs)
1.	Jet motor	1	14,822.00
2.	CRI submersible motor	2	36,810.00
3.	EEE - C&I lab Maintenance	-	9,971.00
4.	ECE lab Maintenance	-	55,515.00
5.	Batteries changed for UPS in Lab-I	25	71,200.00
6.	Batteries changed for UPS in Lab-III	15	43,920.00
	TOTAL		2,32,238.00

*** (iv) Others (Sports)

S.No.	Properties	Qty	Amount (Rs)
1.	Brush cutter	1	29,230.00
2.	50 meter Robe	-	950.00
3.	Cricket ball and bat	1box,1	4,500.00
4.	Other sports items	-	38,010.00
	TOTAL		72,690.00

Criterion – V

5. STUDENT SUPPORT AND PROGRESSION

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

- o Basic amenities, transport facilities and hostel facilities provided by the institute
- o Scholarship assistance available from the state government
- o Clarification of the new Regulations 2017 for first B.E./M.E. programme
- o Awareness programme on Anti-Ragging
- o Forming anti-raging squad and Anti ragging committee
- o Tuition fee concession available from AICTE and Management for eligible students
- o Medical facilities/aid provided in the institute campus

5.2 Efforts made by the institution for tracking the progression

- o Class advisers/Mentors are assigned for a group of 15 students to monitor
- o Class committee consisting of class-teachers and students representatives to identify the problems and improve teaching-learning process
- o Identifying slow learners and provide additional guidance/coaching if required
- o Check the attendance and academic progress of the students periodically
- o Analysing the performance of the students after each internal assessment tests
- o Organising Parents-Teachers meet to discuss the student progress



Principal Addressing Parents-Teachers Meet

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others	Total
939	31	-	-	970

(b) No. of students outside the state

(c) No. of international students

(d) Men	No	%	Women	No	%
	682	70.3		288	29.7

(e)

2016-2017						2017-2018					
General	SC	ST	OBC	MBC	Total	General	SC	ST	OBC	MBC	Total
28	178	1	617	340	1164	166	152	1	403	248	970

(f) Demand Ratio = 37.14 % Dropout = 7 Students

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

- o Coaching classes for GATE examination in all disciplines
- o Providing training on aptitude and reasoning skills along with M/s FACE Academy, Coimbatore
- o Personality development classes to improve the students communication level
- o Two days motivational programme on GATE 2018 Procedure and Practice
- o Technical training for developing soft skills
- o Activity based training programme by Youth Circle
- o Aptitude training programme by T & P cell

No. of student beneficiaries

5.5 No. of students qualified in these examinations

NET SET/SLET GATE

CAT IAS/IPS etc State PSC

UPSC Tancet

* 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

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

Academic issues

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

69

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
2017-2018	04	206	54	30
2016-2017	07	157	83	NIL



a. No. of students benefited through this programme 206

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 29 National level -- International level --
 (Students are participated in various events like paper presentation, workshop attended, inplant training, circuit debugging quiz)

No. of students participated in cultural events

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

Sports

Sl. No.	State/ National/Zonal	Event	No. of Participants
1.	Zonal	Volley ball	12
		Cricket	16
2.	Zonal (MGR 100)	Kabadi	12
		Valley ball	12
		Basket ball	10
3.	District level tournament	Kabadi	12
		Cricket	16

Others

- R. Ranjith and R. Ramanathan of final year EEE participated and won first prize in Very Low Cost Home Automation System Using IoT with Multiple Control Gadgets in the Skill Development Contest 2017 organized by the Department of Employment and Training, Chennai, held at H.H. Rajah's College of Arts and Science, Pudukkottai on 26th September, 2017.

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

Others:

State/ University level

- M. Jeevitha and S. Megala of final CSE received the best student award-2017 in the 17th ISTE TN Section Annual convention for overall performance at Tagore Engineering College, Chennai on 10th April 2018
- T. Akila and R. Jeyasri third year EEE won second prize in paper presentation on IOT based smart parking system and won cash award in circuit debugging in the 17th ISTE TN Section Annual convention for overall performance at Tagore Engineering College, Chennai on 10th April 2018

- G. Manikandan of third year ECE won the first prize in both Senthamzhil Selvan and Urakka Pesu events in Tamil Valarchi Vizha on 24th January 2018

Best student award-2017 in the 17th ISTE TN



5.10 Scholarships and Financial Support

	Number of students	Amount Rs.
Financial support from institution	118	26,09,800.00
Financial support from government	963	1,38,16,585.00
Financial support from other sources	--	--
Number of students who received International/ National recognitions	--	--

5.11 Student organised / initiatives

Fairs :

State/ University level	7	National level	--	International level	--
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Exhibitions :

State/ University level	1	National level	--	International level	--
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Symposium conducted in all departments

- SPECTRA 17 a one day National Level Technical Symposium organized by the department of ECE on 9th September 2017
- STABILIZE 2K17 a one day National Level Technical Symposium organized by the department of Civil on 23rd September 2017
- CODEFEST 17 a one day National Level Technical Symposium organized by the department of ECE on 28th October 2017
- TECHIEFEST 18 a one day National Level Technical Symposium organized by the department of Science and Humanities on 10th February 2018
- E-SHOCK-18 a one day National Level Technical Symposium organized by the department of ECE on 17th February 2018
- MECHNIVATION 2K18 a one day National Level Technical Symposium organized by the department of Mechanical on 17th March 2018
- ECE Department organized a Mini Project & Poster Presentation for SEC students on 20th March 2018

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?

No. Not in the academic year 2017-2018

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

6.3.1 Curriculum Development

As the institution is an affiliated engineering college, the Institution follows Curriculum developed by Anna University Chennai. For the academic year 2017-18, the regulations 2013 and 2017 were followed.

6.3.2 Teaching and Learning

- o Preparation of Lesson plans for theory and laboratory courses based on outcome based education model
- o Developed Teaching aides (PPT presentation, videos etc.) for better visualization
- o Use of ICT techniques for effective teaching
- o Tutorial classes and assignments for in-depth understanding of concepts
- o Numerical / computational assignments to improve analytical skills

- o Inculcating practical knowledge through case studies and in-plant training
- o Remedial classes are conducted for slow learners to improve the learning level
- o Evaluating the ability of the students to correlate the concepts studied through mini projects
- o Conducting collaborative workshops
- o Encouraging the students to give technical seminars on emerging trends
- o Arranging field visits, industrial visits and educational tours
- o Group discussion to improve communication skill

6.3.3 Examination and Evaluation

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

6.3.4 Research and Development

- o The institute have a separate R & D cell to promote the research activities
- o Motivating faculties to take minor/major research projects from funding agency
- o Motivating teaching faculties to register for research /Ph.D (Two faculty members were registered in the academic year 2017-18)
- o Financial assistance to attend conference, FDP, seminars and workshops.
- o Financial assistance to present papers at state, national and international conferences

- o Encouraging faculty to organize FDP, seminars and workshops
- o Encourage the UG and PG students to do research oriented projects and case studies
- o The faculty members have published 7 research papers in reputed and peer reviewed journals

6.3.5 Library, ICT and physical infrastructure / instrumentation

- o Wi-Fi enabled campus.
- o Wi-Fi facility is provided for the students and faculties

6.3.6 Human Resource Management

- o Organization of in-house faculty development programs.
- o Conducting faculty development programs with Anna university, Chennai

6.3.7 Faculty and Staff recruitment

- o Following well laid-out policy and process
- o Eligible candidates apply for the suitable post throughout the academic year
- o Advertisements in major leadings regional and national newspapers also given whenever needed
- o Online submission of resume
- o Recruitments are made based on performance in written test , technical and personal interview

6.3.8 Industry Interaction / Collaboration

- o Renewal of MOU signed with ICTACT

6.3.9 Admission of Students

- o The institution following the state government norms for admission
- o Strictly adhering the state government reservation policy
- o 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	Nil
Non - teaching	Tuition Fees concession to the Children of staff	Nil
Students	a) Fees Concession b) Tuition fees concession for Sportsmen c) Student Counselling centre	118

6.5 Total corpus fund generated

6.6 Whether annual financial audit has been done

Yes No

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

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	No	-	Yes	HoD
Administrative	Yes	Srinivasan and Srivathsan	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 in each semester regularly by each department. The suggestions made by the parents are forwarded to suitable forum for further course of action.

Department	Parents 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

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

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 2017-18

7.3 Give two Best Practices of the institution

Best Practice - I

(i). Title

Online Feedback System

(ii). Objective

- To enable all the stack holders of the institution to provide feedback online.
- To manage and record the feedback digitally for the better functioning of various departments, transport, canteen, library and placement cell
- To reduce the paper cost and time for analysis.

(iii). Context

Feedback, and acting on feedback, is an essential part of the enhancement process for the Institution. The feedback helps for self-evaluation to improve the overall Quality of the college. Our institution is committed to obtain timely and appropriate feedback from different stake holders to reflect on the progress and development effectively.

Students feed back

Gathering feedback from students is a great way to get a glimpse into their experience in the Institution. Soliciting periodic feedback from students is helpful in several ways and builds a sense of goodwill between them and the Institution.

Faculty feedback

Faculty Feedback is an initiative designed to make it easy for the faculty to manage and record the suggestions for the better functioning of the Departments.

Parents Feedback

Parents play a crucial positive role in getting the best in education. Parents have always been emphasized to get involved in their ward's education process. The parents' involvement creates a positive impact on the student's achievement, behaviour and attitude.

Alumni Feedback

Alumni form a special stakeholder for an Institution and create the Institution's reputation through their success in their career path. Alumni network forms a bridge between the current students and the alumni. They make the institution proud by achieving laurels in their work – be an employee or an entrepreneur.

This Institution works constantly for the improvement of teaching and learning process to maximize the benefit of the resources to the students. The Feedbacks are carefully evaluated and taken in right spirit and uses the same to improve different areas of service.

(iv). Execution of the Practice

- The online feedback system is provided by the various stakeholders through the feedback link available in our college website (www.shanmuganathanengg.in/feedback).
- Every semester the feedback from the students for the class room teaching is obtained and analysed.
- The parents and the alumni can give their feedback throughout the year using the link provided in the college website.

(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

- Different set of feedback pages has to be created for different stakeholders
- Some parents may not be well versed in using online feedback system through a computer.

(vii). Outcome

- Paper less feedback has made a positive impact on all the stakeholders as it is very simple to use and manage.
- Considerable time has been saved for getting feedbacks from the stakeholders when compared with the traditional paper feedback system
- Usage of paper and printer has been reduced significantly

Best Practice – II

(i). **Title**

Management Scholarship

(ii). **Objective**

- To help the economically weaker students
- To fulfil the Mission of the institution 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 institution in uplifting the poor and the needy students, the Management Scholarship is an innovative one to support the cause of the economically weaker students.

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

The Management Scholarship, 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 higher secondary school, final year Diploma or university results (last updated) of under-graduate programme, and attendance in the classes.

(v). **Evidence of Success**

(vi).

Year	No. of Students benefited	Management Scholarship (Rs)
1 st year	11	1,55,000.00
2 nd year	35	7,61,800.00
3 rd year	34	7,13,500.00
4 th year	38	9,39,500.00
Total		26,09,800.00

Problems Encountered and Resources Required

- Some of the needy students have failed to apply for the Management Scholarship 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 Scholarship 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

Road safety and preventive measures towards road accidents

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 by each department for their internal auditing

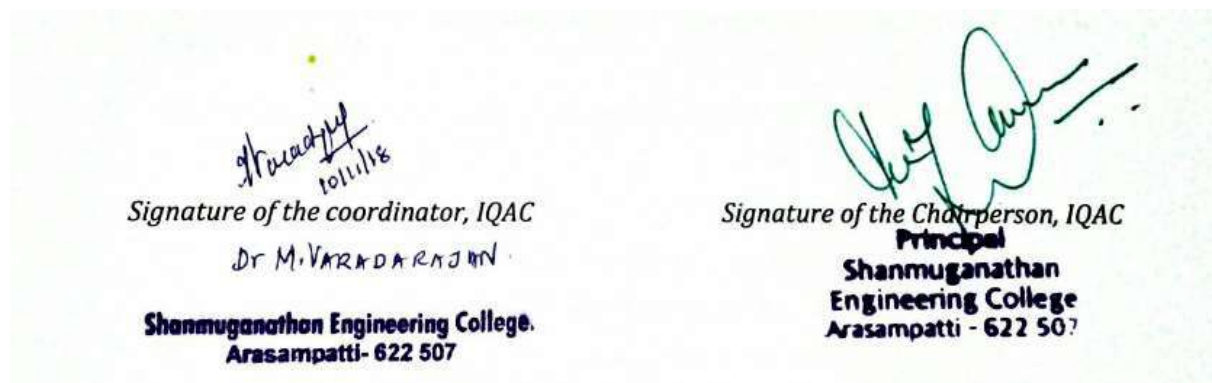
Strength : Well qualified and experienced faculties
 Young and dynamic faculty team
 Good lab infrastructure facilities
 Excellent academic plan based on OBE
 Students-Teachers ratio as per norms
 Coaching classes for below average students

Weakness : Students from rural background
 Not all departments have PG Program
 Only CIVIL Engineering department is a recognized research centre

- Opportunities : Can concentrate on quality teaching
Conduct more Faculty Development Programmes
Workshop – Hands on training can be provide
Value added courses can be introduced to increase
the employability
- Threats : Declining academic quality of the students
Preference of science course rather than engineering
Competition from number of engineering colleges

8. Plan of Institution for next year

1. Strengthening the placement activities for the students.
2. To initiate community projects in collaboration with local authorities.
3. Strengthening the research infrastructure.
4. Increasing the number of students in co and extracurricular activities
5. Publishing research articles in peer reviewed journals with high impact factor.
6. Preparing and summiting project proposals to various funding agencies
7. Carryout consultancy work for industries
8. Strengthening the Alumni Network and Alumni Funded Projects.
9. Development of sports infrastructure facility of institution.
10. To increase MoU's with leading organization to promote consultancy and research work
11. Develop the institution as a Centre of Excellence



Annexure-I

Details of Peer Reviewed Journals:

1.	Modelling a Widely Linear Digitally Controlled Self-Interference Canceller for full-duplex transceiver	R. Sornalatha	9.109
2.	An Experimental study on Effective utilizations of Bottom AHS(ENNORE) As Fine Aggregate in concrete under flexure	R. Vijaya Kumar	2.532
3.	An Experimental study on Effective utilizations of Bottom AHS(ENNORE) As Fine Aggregate in concrete under flexure	KAI. Kannan	2.532

1.	An Improved Query Ranking and Hardness prediction Algorithm for Query Interfaces on Databases	S. Jayasundar, V. N. Rajavarman and V. Saishanmuga Raja	--
2.	Intelligent Prediction of Lung Cancer via MRI/CT Images Using Morphological Neural Network Analysis	N. Vijayalakshmi V. Ilayaraja	--
3.	Exploration Risk Factors and Prediction of Heart Disease Using Mining Techniques	T. Sowmiya and V. SaiShanmuga Raja	--
4.	A very low cost home automation system using internet of things(IoT) with multiple control gadgets	R. Ranjith and R. Thaila	--

Details of Conference

S.NO	NAME	DESIGNATION	TITLE
1.	A. Muthumanickam	AP	Time Correlated MIMO Channels Using Decision Feed Back Receiver
2.	R. Sornalatha	AP	multiuser Visible light Communication System for reliable wireless Communication
3.	SP. Senthil Kumar	AP	DSP Implementation of Highly Efficient Multirate Filter Using TMS320C50

			Processor
4.	SP.Senthil Kumar	AP	Optimal Design of Highly Efficient Multirate Polyphase FIR Decimation and Interpolation filter for Multi-standard wireless transceivers
5.	S.Elakkia	Student	Behaviour and Analysis of Basalt Fibber reinforced concrete Beam by using ANSYS
6.	B.Revathy	Student	Performance Of Conventional and Basalt Fiber Reinforced Concrete Beam with Shear
7.	C.Palaniappan	Student	A Report On Basalt Fiber Reinforced Concrete Beam
8.	J.Mariya Jenita	Student	Investigation of Basalt Fiber Reinforced Concrete Beam Without Shear Reinforcement
9.	C.Kanagaraja	Student	Effect of Basalt Fibber Reinforced Concrete Beam
10.	V.Jayalakshmi	Student	Characteristics Of Basalt Fiber Reinforced Concrete Beam Without Shear.
11.	R.Fathima	Student	Performance Of Basalt Fiber Reinforced Concrete Beam by using ANSYS.
12.	V.Revathi	Student	Determine the strength of basalt fiber Reinforced concrete beam with shear