



**KUMARAGURU COLLEGE OF TECHNOLOGY**  
**CHINNAVEDAMPATTI POST**  
**COIMBATORE – 641 049.**

**Annual Quality Assurance Report (AQAR)**  
**of**  
**Internal Quality Assurance Cell**

**Year Report: 2012-2013**

*Submitted to*



**National Assessment and Accreditation Council (NAAC)**  
**Bangalore**

## ANNUAL QUALITY ASSURANCE REPORT (AQAR 2012-2013)

### 1. Kindly provide the details of the institution

Name of Institution:	<b>Kumaraguru College of Technology</b>
Year of Establishment of the Institution:	<b>1984</b>
Address Line 1:	<b>Chinnavedampatti Post</b>
Address Line 2:	<b>Coimbatore</b>
City/Town:	<b>Coimbatore</b>
State:	<b>Tamil Nadu</b>
Postal Code:	<b>641 049</b>
Email Address:	<a href="mailto:info@kct.ac.in">info@kct.ac.in</a> ; <a href="mailto:principal@kct.ac.in">principal@kct.ac.in</a>

### 2. NAAC Accreditation/ Reaccreditation Details

Year of Accreditation/ Reaccreditation:	<b>January, 2009</b>
Current Grade:	<b>B Grade</b>
CGPA:	<b>2.67 / 4 point scale</b>

### 3. Institutional Status

**Autonomous College**

### 4. Contact Person Details

Name of Head of Institution:	<b>Dr.R.S.Kumar, Principal</b>
Contact Phone:	<b>0422-2661122</b>
Email:	<a href="mailto:principal@kct.ac.in">principal@kct.ac.in</a>
Website URL:	<a href="http://www.kct.ac.in">www.kct.ac.in</a>
Name of IQAC Co-ordinator	<b>Prof.M.Prasad Kumar</b>
Email:	<a href="mailto:adminprof@kct.ac.in">adminprof@kct.ac.in</a>

## SECTION I

This section is related to institutional goals, vision and mission, academic programmes and activities, strategies and action plans for institution building.

### 5. Number of academic programmes existing (Enter a number; 0 for nil)

Undergraduate	0
Post Graduate (MCA/MBA)	02
Research Programmes (M.Phil/Ph.D.)	09
Certificate Programmes	0
Professional Programmes (B.E / B.Tech.)	13
Professional Programmes (M.E / M.Tech.)	14
Other value added programmes	0
Any other programme offered (Specify)	0

### 6. Details on Programme Development (Enter a number; 0 for nil)

New programmes added during the year	0
New programmes designed	0
Programmes under revision	0
Interdepartmental collaborative programmes	0
Inter institutional collaborative programmes	2
Number of review committee recommendations implemented (Total)	4
Number of NAAC peer team recommendations implemented	2
Number of UGC/any other expert committee recommendations implemented	3
Number of review committee recommendation under implementation	1
Number of NAAC peer team recommendations under implementation	1
Number of UGC/ any other expert committee recommendations under implementation	2

### 7. Faculty Details (Enter a number; 0 for nil)

Total faculty strength required as per norms for all programmes	350
Total faculty on rolls	330
Faculty added during the year	71
Faculty positions vacant	05
Faculty left during the year	40
Total number of visiting faculty	10
Total number of guest faculty	08

## 8. Qualification of Faculty

Ph.D. and Above	52
M.Phil.	94
Masters	236
Any other (Specify) (B.Tech)	0

## 9. Faculty qualification improvement

Ph.D. awarded to existing faculty	07
M.Phil. awarded to existing faculty	0
Any other degree awarded to existing faculty	0

## 10. Administrative Staff Details (Enter a number; 0 for nil)

Administrative staff (total sanctioned)	152
Administrative staff (Actual strength)	152
Added during the year of reporting	06
Left during the year	06
Number of posts vacant	0

## 11. Technical Support Staff Details (Enter a number; 0 for nil)

Technical Support Staff (Total sanctioned strength)	153
Technical Support Staff (Actual strength)	148
Added during the year	87
Left during the year	55
Number of posts vacant	05

## SECTION II

This section surveys the quality sustenance and development activities during the year taken up by IQAC.

It reflects quality management structure, strategies, and processes which would enhance academic quality of the institution as perceived by faculty, students, alumni, and other stakeholders (social perception of the institution) in line with the vision, mission and goals of the institution.

**12. Establishment details**

	DD	MM	YYYY
Year of establishment of IQAC	<b>09</b>	<b>06</b>	<b>2009</b>

**13. Composition of IQAC (Enter a number; 0 for nil)**

Number of IQAC members	<b>12</b>
Number of Alumni in IQAC	<b>01</b>
Number of Students in IQAC	<b>02</b>
Number of Faculty in IQAC	<b>04</b>
Number of Administrative Staff in IQAC	<b>03</b>
Number of Technical Staff in IQAC	<b>0</b>
Number of Management Representatives	<b>01</b>
Number of External experts in IQAC	<b>01</b>
Number of any other stakeholder and community representatives	<b>0</b>

**14. IQAC Meetings**

Number of IQAC meetings held during the year	<b>03</b>
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**15. Whether Calendar of activities of IQAC formulated for the academic year**

**Yes**

**16. IQAC Plans for Development (Enter a number; 0 for nil)**

Number of academic programmes proposed	<b>05</b>
Number of value added programmes proposed	<b>08</b>
Number of skill oriented programmes proposed	<b>10</b>
Number of faculty competency and development programmes proposed	<b>12</b>
Number of other staff development programmes proposed	<b>04</b>
Number of student mentoring programmes proposed	<b>20</b>
Number of co-curricular activities proposed	<b>35</b>
Number of inter departmental cooperative schemes proposed	<b>17</b>
Number of community extension programmes proposed	<b>12</b>
Any other programmes proposed – Pre Placement Training	<b>07</b>

**17. IQAC Plans for development & Implementation (Enter a number; 0 for nil)  
IQAC / CAE / CHE**

Number of academic programmes implemented	<b>02</b>
Number of value added programmes implemented	<b>06</b>
Number of skill oriented programmes implemented	<b>08</b>
Number of faculty competency and development programmes implemented	<b>16</b>
Number of other staff development programmes implemented	<b>05</b>
Number of student mentoring programmes implemented	<b>22</b>
Number of co-curricular activities implemented	<b>20</b>
Number of inter departmental cooperative programs implemented	<b>15</b>
Number of community extension programmes implemented	<b>08</b>
Any other programmes suggested that are implemented (Specify)	<b>05</b>

**18. IQAC Seminars and Conferences (Enter a number; 0 for nil)**

Number of seminars/ conferences/ workshops organized by IQAC within the institution	<b>03</b>
Number of participants from the institution	<b>350</b>
Number of participants from outside	<b>120</b>
Number of external experts invited	<b>08</b>
Number of external conferences/seminars/ workshops on institutional quality attended	<b>04</b>
Number of events conducted with IQACs of other institutions as collaborative Programmes	<b>0</b>

SEMINARS, CONFERENCES, WORKSHOP PARTICIPATED / ORGANISED BY  
FACULTY

S. No.	Department	Publications, Journals		Conference, Seminar, Workshop			
				Organised		Attended	
		2010 -11	2011 -12	2010 -11	2011 -12	2010 -11	2011 -12
1	Civil Engineering	--	31	3	7	--	2
2	Mechanical Engineering	8	12	3	--	54	8
3	Electrical & Electronics Engineering	11	63	7	27	25	37
4	Electronics & Communication Engineering	11	30	3	4	76	19
5	Computer Science & Engineering	11	30	1	4	15	18
6	Textile Technology	27	31	3	11	13	5
7	Information Technology	8	1	5	7	28	5
8	Mechatronics Engineering	--	8	3	1	7	16
9	Bio-Technology	14	29	5	3	--	30
10	Fashion Technology	15	101	--	7	67	13
11	Electronics Instrumentation Engineering	--	--	1	3	3	9
12	Aeronautical Engineering	2	1	15	2	--	6
13	MCA	--	16	2	3	--	8
14	MBA	14	28	30	34	--	44
15	Science & Humanities	--	36	--	2	--	9
	Total	221	417	81	115	288	229

**19. Did IQAC receive any funding from UGC during the year?**

**No**

**20. If the response to Qn. 18 is Yes, please provide the amount received from UGC - (Input 0 - if NA/NIL-) any other source including internal financial support from the management (Specify amount)**

Amount Received from UGC	0
Amount Received from any other source including the college management	0

**21. Any significant contribution made by IQAC on quality enhancement during current year (Please provide details in bullet format)**

The following significant contributions were made by IQAC on quality enhancement during the assessment year.

- ★ IQAC Centre for Academic Excellence and the ISO unit work jointly to develop quality oriented measures connected with teaching, learning, evaluation, research and institutional development.
- ★ Development of Performance Assessment and Development system – PADS for teaching and non-teaching staff.
- ★ Identification of training needs for teaching and non-teaching staff.
- ★ Establishing goals and objectives for the institution and the employees.
- ★ A student feedback on curriculum and evaluation methods.
- ★ Participation of IQAC members in national and international programmes.
- ★ Encouraging publications and patent.
- ★ Effective result analysis system.
- ★ Modern ICT based teaching technology.
- ★ The Centre for Academic Excellence along with ISO unit and NAAC organized the following training programmes during the year.

The Center for Academic Excellence was brought into existence during September 2009. The activities of the center can broadly be put as follows.

- To develop systems that will enable standardization of academic activity that is essential for sustained academic growth
- To conduct academic audits to ensure that the departments comply with the established academic standards
- Organize and impart training to the faculty to develop their capabilities for quality academic delivery
- Provide academic orientation and training to students for enhancing their employability
- Develop systems and conduct training programs for meeting NBA requirements

**(a). STANDARDIZATION ACTIVITIES**

Following are the standardization activities that have been institutionalized.

- Preparation of material for handling theory classes by way of a format
- Preparation of laboratory manuals and work books by way of formats
- The work of class advisors and ward counselors
- NBA documentation



**(b). ACADEMIC AUDITS**

In order to ensure that the academic standards are followed by all departments, academic audits are conducted in every semester. The audits are being conducted by the Principal and the Center for Academic Excellence. The academic audits conducted are listed.

Academic Year 2011-12	Even Semester	Audit 1	13.02.2012 to 05.03.2012
Academic Year 2012-13	Odd Semester	Audit 1	03.10.2012 to 19.10.2012

**(c). TRAINING****January 2012 to December 2012**

Sl.No.	Date	Details	Participants
1	09.01.2012 (AN)	Workshop on Introspection and Career Planning	52 III year BT students
2	10.01.2012 (AN)	Workshop on Structuring Strategy for Teaching Mathematics	24 Teaching faculty from Various Colleges
3	22.2.2012	Faculty Development Programme – Session I	133 Teaching faculty of KCT
4	17.03.2012	Faculty Development Programme – Session II	140 Teaching faculty of KCT
5	04.04.2012	Workshop on Placement Readiness	42 PG Students of KCT
6	04.05.2012	Workshop on CAMM and Smart Techniques to Answer Questions	36 I Year MBA Students
7	3 <sup>rd</sup> & 4 <sup>th</sup> July 2012	FDP - Orientation Program for New faculty	35 teaching faculty of KCT
8	09.07.2012	FDP – Training Program on PEOs and Outcomes	153 teaching faculty of KCT
9	3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> September 2012	Faculty Development Program by Academic Staff College, VIT University – Vellore	35 teaching faculty of KCT
10	18.09.2012	Training Program on Engineering Graphics	11 teaching faculty of KCT
11	18.10.2012	Workshop on Evolving PEOs (for B.Tech. Bio Technology)	22 teaching faculty of BT and S&H

Sl.No.	Date	Details	Participants
12	19.10.2012	Workshop on Evolving PEOs (for B.Tech. Fashion Technology)	22 teaching faculty of FT and S&H
13	25.10.2012	Workshop on Evolving PEOs (for B.E. ECE)	26 teaching faculty of ECE
14	07.11.2012	Workshop on Evolving PEOs (for B.E. ME)	28 teaching faculty of ECE
15	16.11.2012	Workshop on Evolving PEOs (for B.E. Civil Engineering )	10 teaching faculty of CE
16	10.12.2012 (02.00 p.m. to 03.30 p.m.)	Introductory session on NBA Tier – I Requirements for B.E. Aeronautical Programme	06 teaching faculty of aero
17	11.12.2012 to 15.12.2012	Faculty Development Programme on Engineering Mechanics	16 teaching faculty of KCT
18	11.12.2012 (02.00 p.m. to 03.30 p.m.)	Session on modifications to be made in the programme outcomes – as per the new criteria for NBA Tier – I documentation	All teaching faculty of BT and FT
19	12.12.2012 (02.00 p.m. to 03.30 p.m.)	Introductory session on NBA requirements for MBA Programme	All teaching faculty of MBA
20	13.12.2012	Workshop on Evolving PEOs (for B.Tech. Textile Technology)	12 teaching faculty of TXT
21	26.12.2012	Workshop on Evolving PEOs (for B.Tech. Information Technology)	15 teaching faculty of IT

**(d). STANDARDIZATION FOR NBA ACCREDITATION**

- For getting ready for the NBA process, the program specific documents listed under the NBA criteria have been standardized and the scrutiny of documents was conducted on the dates detailed below by the Principal and Center for Academic Excellence.

NBA-Accreditation Readiness - Scrutiny	13.02.2012 to 05.03.2012 All the UG programs have started to get ready by the way of preparing relevant documents for the NBA process
NBA Academic Audit	16.04.2012 to 02.05.2012 8 Departments of KCT

Standards for putting the institution in line with Tier – 1 NBA requirements are been developed and are in the process of getting the same implemented in stages.

### SECTION III

In this section the events, activities, and outputs in the field of research and academic areas are being surveyed.

#### 22. Academic Programmes

Number of new academic Programmes developed or designed by faculty	<b>04</b>
Number of faculty members involved in curriculum restructuring/revision/syllabus development	<b>260</b>
Number of Programmes in which evaluation process reformation taken up and implemented	<b>28</b>
Number of active teaching days during the current academic year	<b>198</b>
Average percentage of attendance of students	<b>82</b>
Percentage of classes engaged by guest faculty and temporary teachers	<b>62</b>
Number of self financed programmes offered	<b>25</b>
Number of aided programmes offered	<b>0</b>
Number of programmes discontinued during the year	<b>0</b>

#### 23. Whether any systematic student feedback mechanism is in place?

**Yes**

#### 24. Feedback Details (If answer to Question 20 is yes)

Percentage of courses where student feedback is taken	<b>100</b>
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#### 25. Is feedback for improvement provided to the faculty?

**Yes**

#### 26. Faculty Research, Projects, and Publication details for the year

Number of major research projects undertaken during the year	<b>14</b>
Number of minor research projects undertaken during the year	<b>0</b>
Number of major ongoing projects	<b>14</b>
Number of minor ongoing projects	<b>0</b>
Number of major projects completed	<b>06</b>
Number of minor projects completed	<b>0</b>
Number of major project proposals submitted for external funding	<b>25</b>

Number of minor project proposals submitted for external funding	<b>0</b>
Number of research publications in peer reviewed journals	<b>30</b>
Number of research publications in international peer reviewed journals	<b>14</b>
Number of research publications in national peer reviewed journals	<b>18</b>
Number of research papers accepted for publication in international peer reviewed journals	<b>12</b>
Number of research papers accepted for publication in national peer reviewed journals	<b>15</b>
Average of impact factor of publications reported	<b>2.5</b>
Number of books published	<b>06</b>
Number of edited books published	<b>03</b>
Number of books (single authored) published	<b>01</b>
Number of books (coauthored) published	<b>02</b>
Numbers of conferences attended by faculty	<b>229</b>
Number of international conferences attended	<b>40</b>
Number of national conferences attended	<b>189</b>
Number of papers presented in conferences	<b>150</b>
Number of papers presented in international conferences	<b>18</b>
Number of papers presented in national conferences	<b>118</b>
Number of conferences organized by the institution	<b>42</b>
Number of faculty acted as experts resource persons	<b>20</b>
Number of faculty acted as experts resource persons - international	<b>06</b>
Number of faculty acted as experts resource persons- national	<b>63</b>
Number of collaborations with international institutions	<b>11</b>
Number of collaborations with national institutions	<b>15</b>
Number of linkages created during the year	<b>05</b>
Total budget for research for current year as a percentage of total institution budget	<b>12%</b>
Amount of external research funding received in the year	<b>166 lacs</b>
Number of patents received in the year	<b>2</b>
Number of patents applied for in the year	<b>4</b>
Number of research awards/ recognitions received by faculty and research fellows of the institute in the year	<b>20</b>
Number of PhDs awarded during the year	<b>07</b>
Percentage of faculty members invited as external experts/resource persons/reviewers/referees or any other significant research activities	<b>15%</b>

## **R & D ACTIVITIES DURING 2012-13**

R&D activities include academic research in a sustained manner leading to a PhD degree, preparation, review and submission of research proposals to funding agencies and publication of research findings in journals and conference proceedings. Also efforts are made to involve in collaborative research in emerging fields. During the year, an MoU has been entered with University of California for collaborative research in the area of Assistive Technology.

### **Academic Research: (PhD Programme)**

While research pursued by a large number of faculty members are supported with incentives, younger faculty members are encouraged to pursue research with registration for Ph.D. During this year 112 faculties are involved in their PhD programme. Out of them, 11 have registered to pursue PhD during the current year. During this period, PhD degree has been awarded to 5 faculties by Anna University of Technology, Coimbatore. Table-I gives the details of PhD awardees for this year.

### **Sponsored Research:**

During this calendar year, 14 projects approved by different funding agencies are being carried out amounting to Rs.165 Lakhs. List of projects are provided in Table-II. Periodic reviews are held to ensure timely and satisfactory completion of these projects.

Different Departments have engaged in preparation, review and submission of research proposals to funding agencies in order to take up research leading to real life applications. The funding agencies to whom the proposals have been submitted include DBT, DST (including its fast track), Ministry of Textiles, Naval Research Board, DRDO, CSIR, Ministry of Earth Sciences, TNSCST and AICTE. A total of 25 proposals amounting to Rs.596 Lakhs have been sent during the year. Table III provides the list of the proposals sent.

### **Rutag Projects:**

The following research projects sponsored by Rural Technology Action Group at IIT, Chennai have been successfully completed during the year:

1. “Development of Rapier Kit to suit the power loom industry” – Dr.K.Thangamani, Textile Technology Department.
2. “Design and Development of an improved version of Nepali type loom” - Dr.K.Thangamani, Textile Technology Department.
3. “Microwavability of Red Clay Pottery” – Prof.K.Ramprakash & Dr.Mohanageetha, Electronics and Communication Engineering.

The project on “Textile crafts from pineapple leaf fibres” by Dr.J.Srinivasan & Dr.R.Shanthi is at an advanced stage, expected to be completed within next few months.

**Management Projects:**

43 projects for investigative research with funds sanctioned by KCT management during 2007-09 have all been completed. They have enabled the faculty members put forward proposals for more substantial research projects sponsored by funding agencies belonging to Government of India and others.

**Research Publications:**

Faculties published their research findings in journals and conference proceedings. These are listed in respective department activity reports.

**Table-II**

**Ongoing Sponsored Research Projects during 2012-13**

S.No	Department/PI	Title of Project	Funding Agency	Amount
1.	Biotech Dr.P.Ramalingam Dr.N.Saraswathy	Specific Growth rate of Azospirillum sp.on various carbon sources and enhancement of shelf-life of liquid biofertilizer	Tungabhadra biofertilizers , Hospet, Bellary	Rs. 4.05 Lakhs
2.	Biotech Dr.Bharathi Dhurai Ms.N.Saraswathy	Development and Evaluation of Chitosan Nanofibre loaded with Curcumin as Bioactive Wound dressing material	DBT	Rs.14.50 lakhs

S.No	Department/PI	Title of Project	Funding Agency	Amount
3.	Fashion Technology Dr. J.Srinivasan Mr.G.Rajkumar	Development of Nonwoven Interlining from silk selvedge waste	AICTE	Rs.8.15 Lakhs
4.	ECE Dr.A.Vasuki	* Iterative Detection-Decoding in OFDMA system for Multimedia transmission	AICTE	Rs.2.50 Lakhs
5.	ECE Prof.S.Govindaraju Dr.A.Vasuki	Hardware Implementation of image enhancement using wavelet/Retinex algorithms	ISRO	Rs.5.25 Lakhs
6.	Mechanical Dr.Mohan Das Gandhi Mr.M.Subramanian	Studies on cutting force and stability in end milling	AICTE	Rs.9.00 Lakhs
7.	ECE Prof S.Govindaraju Dr.A.Vasuki	Wavelet based image compression/Decompression with pipelined architecture on FPGA	ISRO	Rs.4.50 Lakhs
8.	CSE Ms.L.Latha Dr.S.Thangasamy	Multimodal biometric authentication system for secured access control applications	DRDO	Rs. 8.80 Lakhs
9.	ECE Prof. S.Govindarju Ms.K.Kavitha	FPGA based single chip implementation of AES encryption and decryption with error correction.	DRDO	Rs. 6.65 Lakhs
10.	Principal/Biotech Dr.S.Ramachandran Dr.P.Ramalingam	Complete removal of recalcitrant synthetic dyes from textile wash liquor using organic solvents in multistage centrifugal extractors	DST (Water Treatment initiative)	Rs. 24.91 Lakhs
11.	Chemistry Dr.P.S.Syed Shabudeen	Carbon sequestration and cultivating algae for green biofuel production	DST	Rs. 54.90 Lakhs
12.	MCA Dr.A.Muthukumar	Experimental evaluation of pair programming in Indian academic setting	AICTE	Rs. 3.00 Lakhs

<b>S.No</b>	<b>Department/PI</b>	<b>Title of Project</b>	<b>Funding Agency</b>	<b>Amount</b>
13.	Biotech Dr.N.Saraswathy	Preparation and evaluation of in – situ forming alginate hydrogel with curcumin as bioactive wound dressing material.	DBT	Rs.10.40 Lakhs
14.	Biotech Mr.M.Shanmugaprakash	A process development for purification of debittering enzymes based on aqueous two phase extraction	DBT Fast Tract	Rs. 9.02 Lakhs
	<b>Total</b>			Rs.165.63 Lakhs

#### **SECTION IV**

This section deals with Student Mentoring and Support System existing in the institution. This includes student activities, mentoring, and opportunities for development and inclusive practices.

#### **27. Student Details and Support Mechanisms**

The total intake of students for various courses (Sanctioned) UG / PG	<b>1080 + 537</b>
Actual enrollment during the year UG / PG	<b>1087 + 508</b>
Student dropout percentage during the year	<b>10</b>
Success percentage in the final examination across the courses	<b>96</b>
Number of academic distinctions in the final examination	<b>8%</b>
Number of students who got admitted to institutions of national importance	<b>20</b>
Number of students admitted to institutions abroad	<b>15</b>
Number of students qualified in UGC NET/ SET	<b>7</b>
Number of students qualified GATE/ CAT/ other examination (Specify)	<b>3</b>
Students on roll	<b>UG : 4073 PG : 939</b>
Lateral Entry	<b>287</b>



**28. Does student support mechanism exist for coaching for competitive examinations?**

**Yes, an effective support mechanism is in place.**

**29. Student participation, if response is yes to Qn. 27**

Number of students participated	<b>170</b>
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**30. Does student counselling and guidance service exist?**

**Yes. A separate student counseling and guidance cell is in place with coordinator to provide counseling for students.**

**31. Student participation, if answer to Qn. 29 is yes**

Number of students participated	<b>230</b>
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**32. Career Guidance**

Number of career guidance programmes organized	<b>100</b>
No. of students participated in career guidance programmes	<b>6867</b>

**33. Is there provision for campus placement?**

**Yes. There is a placement department and placement officer who arranges campus placement for the final year students.**

**34. If yes to Qn. 32**

Number of students participated in campus selection programmes	<b>812</b>
Number of students selected for placement during the year	<b>584</b>
Number of companies visited	<b>78</b>

**35. Does gender sensitization program exist?**

**Yes**

**36. If Answer is Yes to Qn 34**

Number of programmes organized	<b>12</b>
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**37. Student activities**

Number of students participated in external cultural events	<b>820</b>
Number of prizes won by students in external cultural events	<b>69</b>
Number of cultural events conducted by the institute for the students	<b>05</b>
Number of students participated in international sports and games events	<b>03</b>
Number of students participated in national level sports and games events	<b>07</b>
Number of students participated in state level sports and games events	<b>08</b>
Number of students participated in university level sports and games events	<b>13</b>
Number of prizes won by students in international sports and games events	<b>02</b>
Number of prizes won by students in national level sports and games events	<b>13</b>
Number of prizes won by students in state level sports and games events	<b>07</b>
Number of prizes won by students in university level sports and games events	<b>48</b>
Number of sports and games events conducted by the institute for the students	<b>22</b>

**38. Composition of students**

Percentage of Scheduled Caste	<b>10</b>
Percentage of Scheduled Tribe	<b>4</b>
Percentage of other backward communities	<b>5</b>
Percentage of women students	<b>44</b>
Percentage of physically challenged	<b>2</b>
Percentage of rural students	<b>43</b>
Percentage of urban students	<b>57</b>

### 39. Scholarships and Financial Support

Number of students availing financial support from the institution	<b>2177</b>
Amount disbursed as financial support from the institution	<b>159.76 lacs</b>
Number of students awarded scholarship from the institution	<b>900</b>
Number of students received notable national/international achievements/recognition	<b>70</b>

### 40. Student initiatives

Number of community upliftment programmes initiated by students	<b>22</b>
Number of literary programmes initiated by students	<b>02</b>
Number of social action initiatives based on science / environment initiated by students	<b>08</b>
Number of student research initiatives	<b>09</b>
Namathu Pangu Community development programmes	<b>12</b>
Mahatma Gandhi Study Centre	<b>10</b>
NCC	<b>12</b>
NSS	<b>13</b>

## SECTION V

This section surveys the Governance and Innovation at the institution related to quality management. The educational management strategies adopted and in practice for achieving the objectives are focused.

### 41. Whether perspective plan for overall developmental activities is created?

Yes, a systematic plan is developed in advance every year for institutional development and action is taken to achieve the preset goals.

### 42. If the answer for Qn. 40 is Yes, is the plan implemented and monitored?

Yes, the plan for departmental actions suggested by the principal and management are implemented by the heads of the departments monitoring the performance of faculty and students.

### 43. Whether benchmarking is created for institutional quality management efforts?

Yes. Refer clause 62.

**44. If the answer to Question 42 is Yes, please list the benchmarking in various areas of development in bullet format**

- ★ Induction Training
- ★ ICT based teaching methods
- ★ Infrastructure Development
- ★ Syllabus restructuring
- ★ Collaborative Programmes
- ★ Industry Institute partnership

**45. Is a Management Information System (MIS) in place ?**

Yes, there is an MIS department in place taking care of faculty, student and non-teaching staff activities.

**46. If answer to question 44 is Yes, please provide details of MIS applied to**

1. Administration
2. Admissions
3. Student information
4. Examination
5. Research
6. Day to day communications
7. Attendance
8. Leave records
9. Salary administration

**(Enter the respective details corresponding to the serial numbers)**

MIS department is developing ERP for KCT of both Academic and Non-Academic. The following modules developed in this software are

- Student Management System software
- Attendance Management System.
- Purchase Management system
- Purchase Tracking System
- Bio-metric System
- Payroll software (Data captured through bio-metric system will be used for Payroll software)
- Student / Staff ID card Generation Software

**Student Management System (SMS)**

- Students Hourly Attendance will be posted in to SMS software every day / hour.
- Students Internal, Model Marks are sent as SMS to parent's mobile number.
- Students Month wise attendance is sent as SMS to Parent's Mobile.
- Internal marks will upload to COE software.
- Students Internal Exam and marks will be posted in to SMS software as per the Schedule given by Controller of exam.

### **Attendance Management system- AMS**

- Bio-metric and Facial reader machine has been fixed at various places in our KCT campus.
- All Staff members were register their thump / Face every day (In / Out Punch). Their Daily Attendance is taken from the biometric machines regularly.
- Staff members can view their daily attendance reports.(with CL,ML,EL Updates)

### **Purchase Management System**

- Purchase Indent (PI) is created for all the Items which were purchased outside.
- After verification Purchase Order (PO) is created for the particular Purchase Indent.
- Staff can track the details by using Purchase Tracking system to check whether the Goods Received or not.

### **Payroll Management System**

- Employee Master Information Like Name, Address, Age, DOJ, Qualification, Experience, Salary Details, Service Details Etc.
- EL/CL/ML/MTL Leave Letter Posting
- Salary Statement / Summary and Consolidation statement.
- Addition / Deletion Report.
- Pay slip Generation
- Statutory Reports ( PF/ ESI Reports)
- General Reports.

### **Faculty Assessment System**

- Teacher Assessment System is developed for MBA Department to analyze the staff performance.
- Analysis Process is done by students of MBA.

### **Student / Staff ID card Generation Software**

- Students and Staff ID Card is generated by this software.

### **Security Management System**

- Visitors Pass is generated in this system.
- Goods Inward is generated for each goods entering inside the Campus. Security Generate the Goods Inward by using Purchase Order Number.

#### 47. Existence of learning resource management ✓

	Yes	No
e-database in library	✓	
ICT and smart classroom	✓	
e-learning sources (e-Books, e-Journals)	✓	
Production of teaching modules	✓	
Interactive learning facilities	✓	

Extensive learning resources are in place (list enclosed).

Please see below.

#### **MAHATMA GANDHI CENTRAL LIBRARY**

The Mahatma Gandhi Central Library is functioning with an area of 16945 square feet. 8508 Volumes of books have been added since the 1<sup>st</sup> January 2012 bringing the total to 89000 books. 376 Print Journals (339 National + 37 International) and 7416 Online International Journals are subscribed. The Central library has books for an aggregate value of Rs. 3.80 crores. The Digital library section with 50 internet connected system has a collection of 6020 recorded CDs, floppies, Audio and Video Cassettes.

The central library is functioning between 8 am to 11 pm from Monday to Saturday and 8.30 am to 4.30 pm on Sundays. The functioning of library is computerised and barcode technology is used for circulation services.

Our library is an “Institutional Member” of the following organisations:

British Council Library, Chennai

Developing Library Network (DELNET), New Delhi.

We have also renewed the EBSCO database to access 1879 international journals related to management at the cost of Rs. 8.8 lakhs.

NPTEL (National Programme on Technology Enhanced Learning) web and video courses (240 nos.) prepared by IITs and IISc at the cost of Rs. 1.15 lakh to provide intranet based access have been purchased.

15 department libraries are functioning in all the departments and are provided with 13680 books, 317 CDs and 572 Project Reports for the reference and use by the faculty.

Online Public Access Catalogue (OPAC) facility is being provided to entire campus through Intranet. This connection facilitates searching of books and journals available in the central library directly from the remote location.

#### A. Number of Volumes added

Department / Centre	Books Added in 2010	Books Added in 2011	Books Added in 2012	As on 31st Dec 2012
Civil Engineering	711	696	387	6472
Aeronautical Engineering	237	220	689	2448
Mechanical Engineering	192	778	786	8141
Mechatronics Engineering	151	363	106	2954
Electrical & Electronics Engineering	181	739	593	6366
Electronics & Instrumentation Engineering	149	237	188	1727
Electronics & Communication Engineering	445	961	882	8637
Computer Science & Engineering	196	732	695	8119
Information Technology	10	540	238	4195
Automobile Engineering	--	404	111	515
Computer Applications	7	1179	269	5750
Textile Technology	104	218	355	3075
Fashion Technology	72	51	355	1793
Biotechnology	154	259	634	2675
Business Administration	543	1060	1305	7990
Science & Humanities	133	118	674	5362
General	575	994	398	12781
<b>Total</b>	<b>3860</b>	<b>9549</b>	<b>8508</b>	<b>89000</b>

## B. Online Journals package Subscribed

The following online journals packages are subscribed at the cost of Rs.18.58 lakhs for the year 2013.

1. IEEE ASPP Online
2. Springer (Electrical, Electronics & Computer Science Engg Collection)
3. ASME eJournals package
4. ASCE eJournals package
5. McGraw Hill' Access Engineering
6. J-Gate Engineering & Technology
7. J-Gate Social & Management Sciences
8. Elsevier Biotechnology & Engg+Comp. Sci Package
9. ASTM Digital Library
10. Nature Publishing Group (Biotechnology – Nature, Scientific American)

## C. Total No. of Resources (Other than books)

Department / Centre	Back Volume s	Project Reports	Non Books (CD, Floppy )
Civil Engineering	814	162	167
Aeronautical Engineering	1287	347	75
Mechanical Engineering	445	429	377
Mechatronics Engineering	907	214	93
Electrical & Electronics Engineering	796	739	287
Electronics & Instrumentation Engineering	440	127	56
Electronics & Communication Engineering	413	210	666
Computer Science & Engineering	308	24	822
Information Technology	302	66	506
Automobile Engineering	-	-	22
Computer Applications	383	149	1707
Textile Technology	64	-	41
Fashion Technology	23	-	49



Biotechnology	425	486	103
Business Administration	761	691	419
Science & Humanities	979	56	247
General	1219	-	363
<b>Total</b>	<b>9566</b>	<b>3379</b>	<b>6000</b>

**48. Internal resource mobilization : Kindly provide the amount contributed**

**Rs. Lacs**

Research	<b>58</b>
Consultancy and training	<b>12</b>
Student contribution	<b>5</b>
Alumni contribution	<b>10</b>
Well wishers	<b>5</b>

Substantial resources generated through consultancy and training by each department (list enclosed).

**49. Infrastructure and welfare spending: Please specify the amount**

Amount spent for infrastructure development	Listed below
Amount spent for student welfare	Listed below
Amount spent for staff welfare	Listed below

The management spends substantially for infrastructure development, student welfare and staff welfare (list attached).

**COMPLETED / ONGOING AND PROPOSED RENOVATIONS**

**‘C’ Block Renovation (ECE Department) :**

Renovation work was started in September, 2011 and the work is completed. The approximate value of the project is Rs.1 Crore.

**‘C’ Block Renovation (Civil Department) :**

Renovation work is completed the value of the project will be 2.5 crores.

**Toilet block work in Boys Hostel I and II : Each block consists of 40 toilets :**

Work was started in December, 2011 and the work is under progress. The approximate value of the project is Rs.70,00,000/-. The work will be completed in June, 2013.

**New Hostel Block :**

We are constructing 2 hostel blocks for boys and one for girls. The work is completed and the approximate value of the project Rs.15 crores.

**Thiruvalluvar Hall :**

Renovation work has been done in the language lab (false ceiling, aluminium partition cabin, vinyl flooring, air-conditioning and painting).

**Academic block (opp. to B block)**

Additional academic block is to start during 2013. The estimation of the project is Rs.5 Crores.

**Coffee Shop and Recreation Halls in the Hostels :**

Work is in progress for one coffee shop, visitors hall and recreation hall in the boys hostel.

**50. Is delegation of authority practiced**

Yes

**51. Does grievance redressal cell exist?**

	Yes	No
Faculty	✓	
Students	✓	
Staff	✓	

**52. Grievances received from faculty and resolved ( Enter a number; 0 for nil)**

Number of grievances received	<b>05</b>
Number of grievances resolved	<b>05</b>

**53. Number of grievances received from students and resolved (Enter a number; 0 for nil)**

Number of grievances received	<b>10</b>
Number of grievances resolved	<b>10</b>

**54. Number of grievances received from other staff members and resolved (Enter a number; 0 for nil)**

Number of grievances received	<b>0</b>
Number of grievances resolved	<b>0</b>

**55. Has the institution conducted any SWOT analysis during the year**

Yes, SWOT analysis conducted from time to time by the institution to identify the different component of SWOT applicable to the institution. Each department is encouraged to conduct the SWOT analysis for self evaluation and consequent corrective measures in order to upgrade quality.

**56. . The SWOT analysis was done by internal or by external agency**

- Internally by the faculty.
- Externally by leading HR consultants.

**57. Kindly provide three identified strengths from SWOT Analysis (in bullet format)**

- Preferred institution by students and parents due to state of the art infrastructure and excellent faculty
- Employer friendly curriculum
- Institutional acceptance among employers.

**58. Kindly provide three identified weaknesses from the SWOT analysis (in bullet format)**

- Nation wide selection of students and faculty as suggested by peer teams.
- Need to encourage research articles and application for funded projects.
- Need to encourage research and patent development.

**59. Kindly provide two opportunities identified from the SWOT analysis (in bullet format)**

- Need to attract overseas students
- Attracting alumni to support institutional development

**60. Kindly provide two identified challenges/threats from SWOT analysis (in bullet format)**

- Need to strengthen MoU with corporates
- More involvement of students in outreach programmes.

**61. Identify any significant progress made by the institution towards achieving the goals and objectives during the year (list below in bullet format)**

- Technology upgradation in teaching, learning, evaluation and research.
- Pre-placement training programmes
- More investment in building, equipment, faculty and library resources.

**62. How do you perceive the role of NAAC in the quality development of your institution (Suggestions in bullet format to be given below)**

The NAAC helps in quality development

- Reduction of attrition rates and turnover
- Curriculum upgradation
- On the job training for faculty
- Transparent evaluation methods
- Student evaluation of teaching effectiveness
- Modern teaching methodology
- Student support programmes
- Adopting healthy practices
- Adopting policies from benchmarked institutions
- Upgrading research and development
- Strengthening the infrastructure
- Faculty motivation
- Scientific compensation system by HR based on PADs
- Development of new teaching tools
- Centre Academic Excellence
- ISO based quality studies and follow up measures
- Campus wide systems upgradation
- Effective financial planning and management
- Fine tuning management process for result oriented institutional governance
- Industry based projects for students
- Tutor ward interactions to support students in learning activities
- Alumni interaction and suggestions
- Regular academic audits
- Faculty and staff self assessment
- Preparation of lesson plans for each subject and maintenance of course file
- Developing employer interactions
- Value based education through Vivekananda Study Centre and Mahatma Gandhi Study Centre
- Student participation in Board of Studies meeting

## LOOKING AHEAD

The vision of the management of KCT is to impart a world class education to produce quality professionals, scholars, business leaders and academicians in the fields of Science and Technology, Management and other disciplines. Based on the six priorities identified in the three year vision document, a team comprising of senior faculty from various departments, the Principal of the college and administrative staff visited several premier institutions to study their growth strategies. They suggested adoptable measures for upgraded academic and research facilities that will take the institution to greater heights. With the team's input and with management's pragmatic guidance, a fast track development strategy has been identified. This strategy covers many areas like research, academics, process and systems, student friendly growth areas through technology based instructional methods, effective library support and upgraded hostel, mess facilities and sports infrastructures in the coming years.

### **Salient features of the proposed track ahead**

- Fine tuning and re-crafting the syllabus and curriculum in keeping with industry and employer requirements.
- Inculcating a value system and fostering global competencies among students with quest for excellence.
- Create a simulating academic environment that promotes quality in teaching, learning and research by providing better infrastructure, learning resources and evaluation methodologies.
- Collaborating with likeminded stake holders of higher education in India and abroad for research, consultancy and training.
- Encourage innovations, self evaluation, accountability and involvement among the faculty.
- Forwarding a proposal for establishment of a TBI technology grant from DST for an amount of 500 lakhs.

- Upgrading the faculty facilities and accommodation and facilities for research and international presentations.
- Establishing a Centre for Engineering and Advanced Design as a common facility.
- Upgrading the Centre for Academic Excellence collaborating with ISO and NAAC for syllabus improvements, faculty induction programmes and introduction of efficiency measurements for faculty and staff.
- Organizing more alumni chapters and alumni meets in India and abroad for creating a alumni institute network for constant interactions.
- Introducing transparency in academic administration with frequent meetings of faculty, students and management.
- Planning the academic programmes one year ahead for smart execution.
- Redefining the role of heads of the departments and supporting executives in administration to ensure effective results.
- Total revamp of teaching, learning, research, evaluation, placement and industry academic collaborations.
- Introducing broad based budgeting process that includes new systems and processes that ensures quality in the allocation and usage of budgets.
- Introducing a new performance based HR appraisal system for all teaching and non-teaching staff to reward outstanding performance and to ensure reasonable compensation increases from time to time.
- Introduce a new recruitment system and process that emphasizes quality in the selection process of new candidates.
- Introducing effective quality management system considering all inputs from the Centre for Academic Excellence, ISO, NAAC, AICTE, UGC and University tracking results.
- Construction of new hostel blocks to augment student facilities.
- Construction of canteens with modern facilities and providing other student support systems.
- Planning a new guest house to accommodate guests and students during conferences as well as for parents and visitors on a payment basis.
- Upgrading parking facilities for students, faculty and visitors.

- Upgrading the library using the additional space now available and providing new gadgets like Kindle to encourage the habit of reading using internet connectivity and vast resources of e-books.
- Student oriented programmes envisaged for the coming years
  - a. Traffic awareness campaigns.
  - b. Induction programme for faculty and students.
  - c. Upgrading student support system.
  - d. Pre placement training.
  - e. BEC course with the British Council Support.
  - f. Integrating human excellence, Gandhian studies and Vivekananda studies departments.
  - g. Student training programmes for the GATE courses and defense recruitment training.
  - h. Including student members in library advisory committee.
  - i. Steps for ensuring better student discipline in the campus.
  - j. Continuous evaluation by Management and Principal on the different aspects of teaching, learning, curriculum, evaluation, infrastructure, R & D and academic audit.
  - k. Developing language centre for teaching Hindi, Sanskrit and foreign languages like Korean, Japanese and French collaborating with a university or agency.

Submission of prompt Action Taken Reports ATR to be placed before the Governing Council on all the above areas every six months to ensure prompt implementation and evaluation.

### **NAAC QUALITY INITIATIVES**

The core values of KCT focus with a commitment to be excellence driven. The policy to provide quality education is expressed in our mission and vision statement. The college has become a dependable nurturing ground for the individual's holistic development to make effective contribution to society in a dynamic environment. The University Grants Commission recognized the fine academic standards of the college in the areas of curriculum, instructional methods, evaluation systems, research and development by awarding the NAAC accreditation in 2009 for a period of five years. Following the guidelines of NAAC, the Internal Quality Assurance Cell was established in 2009 to initiate, monitor, evaluate and report on relevant measures to

upgrade the quality of teaching, learning, evaluation and research initiatives in the campus. The ISO cell takes care of the periodical quality audit on systems and procedures and suggests remedial measures wherever necessary. The Centre for Academic Excellence has been created to conduct faculty development programmes. The internal quality assurance cell, the centre for academic excellence and the ISO collectively take care of continually upgrading the texture of quality in the campus, in keeping with the vision and mission of the management crafted on the basis of inputs from stakeholders. Under the guidance of our Co-Chairman Dr.B.K.Krishnaraj Vanavarayar the institution has evolved six priorities for action based futuristic development of the institution. The six priorities are :

1. Academic Leadership
2. Faculty Development
3. Research and Development
4. Enhancing Employability
5. Value Systems and Social Responsibility
6. Institutional Growth and Development

Teams of teachers were sent to 14 benchmarked institutions. A three year vision document for all the six parameters were evolved after fine tuning the mission document and this has been put in operation.

The composition of IQAC - NAAC unit of the college reconstituted according to guidelines of the National Assessment and Accreditation Council, Bangalore on 25.2.2010 is given below. The present NAAC unit of KCT consists of the following members.

1. Dr.B.K.Krishnaraj Vanavarayar, Chairman (Management)
2. Shri.Shankar Vanavarayar, Joint Correspondent (Management)
3. Dr.R.S.Kumar, Principal (Administration)
4. Sri.N.Srinivasan, Executive Officer (Finance)
5. Shri.Balasubramanian (Engineer)
6. Dr.S.Bhaskar (Academics)
7. Dr.S.Gopal (Academics)
8. Dr.Muthukumaran (Academics - ISO)
9. Dr.A.Vasuki (Academics)
10. Prof.M.Prasad Kumar (Secretary, NAAC-IQAC)



The IQAC evaluates the campus activities against the specified parameters and constantly makes comparison of KCT best practices with those of the prominent institutions in the country. The management conducts frequent core committee meetings with the members of the managing committee and the Principal to take care of development requirements of the campus in keeping with the vision and mission of the college. On the basis of the accreditation reports of NAAC, NBA, AICTE and Anna University, several quality improvement measures and infrastructure upgradation programmes have been initiated on a campus wide development programme.

### **Visit to VIT University, Vellore**

Under direction from our Co-Chairman and invitation from Dr.G.Viswanathan, Vice Chancellor of VIT two visits were arranged. The team consisted the following :

1. Dr.R.S.Kumar, Principal
2. Shri.N.Srinivasan, Executive Officer
3. Prof.S.Baskaran, Associate Professor of Mechanical Engg.
4. Prof.M.Prasad Kumar, Professor Administration

The purpose of the visit

1. To study the initiatives taken by VIT in areas of faculty development through its academic staff college.
2. To collect information on creative initiatives of VIT University in examination systems and examination reforms.
3. To study the hostel facilities and the hostel, mess charges.
4. Innovative teacher awards and student awards.
5. Methods of upgrading instructional methods and evaluation systems.

The team had detailed discussions with Dr.V.Raju, Vice Chancellor and Dr.P.Ramesh Babu, Deputy Controller of Examinations. A detailed report and action plan were submitted by the Principal to the Management.

Under the guidance of our Joint Correspondent Dr.Shankar Vanavarayar several student friendly innovative measures have been undertaken during 2012-13 for upgradation of the teaching, learning, research and evaluation systems in the campus and the academic facilities and infrastructure. The important among them are the following :

1. Upgradation of hostel and mess facilities
2. Networking and wifi systems in the campus and the hostel
3. New campus cafeteria for students managed by students
4. Upgradation of curricula based on industry requirements
5. Modification of examination and evaluation systems
6. New thrust to R &D and funded projects
7. Commissioning of additional blocks in girls hostel and boys hostel with modern facilities
8. New RO water purification plant for hostel
9. Cultural programmes under student initiatives
10. Farewell programme for the outgoing students by the management
11. Upgradation of library facilities
12. Special recognition and awards for best teachers, best students and sportsmen with national and international achievement records.

Several quality assurance initiatives have been taken on the above lines to make teaching learning activity highly user friendly in our campus adopting high tech ICT methodologies.

Quality assurance improvements have become a continuous process in the campus taking ideas from the benchmarked institutions and universities with the ultimate mission to reach our cherish goal of making KCT a University of world repute.

**Dr. R.S.Kumar**  
Name of the Chairperson, IQAC