CMR INSTITUTE OF TECHNOLOGY

(Affiliated to VTU, Recognized by Govt. of Karnataka, Approved by AICTE, New Delhi)
132, AECS layout, ITPL main road, kundalahalli, Bengaluru – 560037

SELF STUDY REPORT

(Volume – 1)

February 2017

Submitted to

National Assessment and Accreditation Council
(An Autonomous Institution of the University Grants Commission)

Index

PREFACE

CMR Jnanadhara Trust:

The CMR Jnanadhara Trust was established in the year 1990 as a tribute to the late Sri Chikka Muniyappa Reddy, a visionary educationist and philanthropist who believed that every individual deserves a quality education. He dreamt of bringing literacy to the masses. His vision led to the founding of the CMR education Institutes that are driven by a mission to give every student a chance at an outstanding values-based and well rounded education. Today the trust runs 21 Educational Institutions which are known for their excellence.

CMR Institute of Technology (CMRIT):

CMR Institute of Technology (CMRIT), a part of CMR Group of Institutions, is promoted by CMR Jnanadhara Trust. It serves the society regardless of socio-economic levels & offers quality technical education with practical insight in engineering areas such as Information Technology, Electrical, Telecommunication, Mechanical, civil, Computer Application and Management through its interrelated programs of interaction, Research and Professional Service. With its institutional emphasis upon areas related to Science and Technology, the Institution carries out its mission of inculcating creativity, passion for research, technological excellence and ethical and social responsibility.

CMR Institute of Technology was established in the year 2000 for promoting academic and professional excellence in various branches of engineering education. It is with this noble declaration and commitment to impart the highest quality of education that CMRIT continues its mission. The institute provides high quality, pragmatic education with a thrust on developing creative thinking, analytical skills and managerial techniques in the future engineers. The academic programmes are designed to maximize the career prospects of students. All the programmes are affiliated to Visveswaraiah Technological University, approved by All India Council for Technical Education, recognized by the Government of Karnataka and accredited by National Board of Accreditation.

CMRIT is a part of the CMR group of institutions, known for providing world class infrastructure and facilities for students coming from over 40 countries across the globe. The academic standards are the crowning glory that firmly rests over the foundation of our infrastructure. Outstanding performance of our students at university exams is a testimony to the "Rigorous Academics" policy of CMRIT. Our students have carved a niche for themselves in the corporate world and in the top universities across the world.

All India Council of Technical Education (AICTE) in its letter dated 19th July 2008 stated that 'CMRIT enjoys the trust of parents and guardians as an institution standing for high level of discipline and value orientation of its students. As a result it enjoys good patronage of local and nearby residents also.

As a part of this policy, the institute has succeeded in hosting a perfect blend of young and experienced faculty members with in depth knowledge in their subjects. A separate wing is dedicated to host various labs where Research and development is a continuous process. In these fully equipped, ultra modern labs, students look for technological solutions to meet global challenges. The computer labs are backed with Microsoft Campus Agreement and are affiliated to the Association of Computer Science & Engineering. These state of the art labs cater to student needs and help them achieve progressive skills demanded by the ever evolving IT Industry. Top multinational companies like IBM, Sun Microsystems have recognized CMRIT as "center of excellence" and established their R&D centers in the campus. Buzzing with extracurricular activities, this huge campus provides an opportunity to international students to showcase their talents and gain an attitude to emerge as mature professionals with dynamic personalities.

The CMRIT students enjoy unlimited opportunities in the real world with top companies opening the door, for a better tomorrow and thus CMRIT stands as a synonym for high standards of excellence in Science and Technology.

It gives me an immense pleasure to submit the Self Study Report (SSR) of our college to the National Assessment & Accreditation Council (NAAC), Bangalore for Accreditation. This exercise has provided us an opportunity to review and analyze the institutional progress after the accreditation from National Board of Accreditation (NBA) during 2008 & Re-accreditation during 2012 and further strengthened us in our quest for Quality in the times to come. At this point of time, It is my humble duty to express my heartfelt thanks to our beloved chairman Sri K C Ramamurthy for guiding us through this journey. I thank the members of NAAC Steering Committee of the college and the Internal Quality Assurance Cell and all the department Heads for drafting the SSR meticulously. Hope we shall have the pleasure of hearing soon from you on your decision on Peer Team Visit for Inspection.

Dr. Sanjay R Chitnis
Principal
CMR Institute of Technology

Executive Summary

CMR Institute of technology was established in 2000 with a vision to be a leader in Technical education, interdisciplinary research and innovation with a focus on sustainable and inclusive technologies. With its Innovative academic practices, the institution has grown by leaps and bounds in these 15 years.

Teaching-Learning & Evaluation: The Teaching Learning Evaluation process at CMRIT has been standardized in line with the guidelines issued by AICTE, NBA and VTU. Preparing the lesson plan, lesson notes, teaching material and prescribing experiments for the laboratory and project based courses tuned to the requirements of providing experiential learning platforms to the students of both at the Undergraduate and post Graduate level.

The evaluation includes three tests. The best two performances in test combined will be considered for the award of final marks. Assignments, Case Studies and Mini Projects are also given to the students in specific courses or in emerging areas. Continuous Evaluation and End Semester Examination is conducted for the whole syllabus as per the college norms and University regulations.

Research, Consultancy and Extension Activities: CMRIT has a vision to become a centre for excellence in research. A large number of Faculty with a Doctoral degree , Distinguished Scientists and Leaders in Research in several domains are part of the CMRIT Faculty team. Nine departments have been granted research centre status by the Visvesvaraya Technological University.

Research guidance include incentivizing faculty to take up research through policy initiatives. A shift in policy from a lump sum R&D budget grant to exclusive R&D Budget for every department has motivated every center to improve their R&D infrastructure. CMRIT has several completed funded research projects and Ongoing Research projects funded by the State and National funding agencies such as the DST, AICTE, DRDO labs, VGST, private industries and many more organizations. The Departments of the institution have built the trust among the funding agencies in terms of its capacity for conducting research as well as its financial prudence and transparent system of accounting the research funds as well as reporting the results of the research. Library resources are accessible to researchers without constraints. Consultancy is improving gradually. These initiatives have resulted in securing of Indian and US patents by our faculty.

Physical infrastructure & Learning resources: CMRIT has a sprawling well maintained campus with buildings becoming architectural marvels. Well furnished laboratories, research labs, Students hostels, sports stadia, students hangouts, Cafetaria are an inspiration for the students and faculty. A Central Library & Information Centre is located right in the Center of the Campus. This acts as a hub of knowledge, with a collection of Volumes Number of titles and annual subscriptions to several internationally reputed journals including IEEE in all disciplines of Managaement science, engineering and technology. The library has several E- Resources and facilities such as E-Books, Online Portal called D-Space hosting Question papers and other learning resources and are well equipped with access via the internet and the Wi-Fi connectivity to the entire faculty in their faculty rooms and for the students anywhere on the campus. CMRIT is a member of the VTU Consortium of libraries and under this scheme access to knowledge resources have no limitation whatsoever. The use of these resources is evidenced in terms of a large number of publications in peer reviewed and refereed international journal.

Student mentoring and counselling: An effective student mentoring and Support scheme is practiced at CMRIT. Counselors are nominated for every batch of 15 to 20 students and given the responsibility of monitoring the academic performance and advise them on personal matters as well. The progress reports are sent to the parents periodically. The Departments conducts Parents Teachers meet as part of the system to involve the parents who are the key stakeholders in the progress of their respective wards. Issues related to the academics and personality developments are discussed with the parents during this meet. Student's participation in Extra-Curricular activities, sports and other co curricular activities are recorded in the Counseling file. The system of mentoring has resulted in providing timely corrective advice to keep the students on track in the academic and non-academic engagements.

Governance, Leadership and Management: The institution is governed by the Board of Governors, CMR Jnanadhara trust an educational trust known for its commitment to society and espousing the cause of Education with a strong foundation of Values and Ethics in all its decision making process and governance initiatives. The trust runs 21 Educational Institutions which are known for their excellence. The trust is progressive, forward looking and enthusiastic in its contribution to the growth and development of all the institution, with concern for Equity, Expansion, Employability and Excellence.

The distinguished personalities with rich experience in the field of Higher Education, research and in industry are on the Governing body providing guidance

all the activities of the institution. The Leadership of the institution are committed with deep passion and zeal, in enabling all the departments to enhance their contribution towards excellence in engineering education, R &D and Knowledge creation.

Innovation and Best Practices: Innovation is the main attraction for the Top Ranking Students to seek admission into CMRIT. Several student teams participate in Innovative Design competition at the National & International levels. These competitions involve stringent specifications by global professional organizations. Some of these activities include design and development of traffic controller/hybrid vehicles, Advanced Robotics, Hybrid Energy systems and autonomous aerial and under water vehicles. These innovative projects are student led initiatives, with able support from the institution. Innovation is also seen in the areas chosen by the faculty for pursuing their research leading to the Doctoral degree. Entrepreneurship development cell is a catalyst to innovation.

Best Practices that stand out in Comparison with the leading institutions in the country include the following:-

- Course refinement committee implements standard procedures to ensure quality delivery of the concepts prescribed in the curriculum
- Lab refinement committee ensures conduction of laboratory experiments beyond the curriculum involving students. This has resulted in good learning experience and has enabled our students to inculcate research skills contributing to better placement and higher education opportunities.
- Mini projects are conducted by the students throughout the course under the guidance of faculty mentors, alumni and industry experts.
- Focus on sustainability and research with a futuristic vision bringing in the concept of interdisciplinary and experiential learning.
- Established a strong Industry Academic Partnership with a main objective to improving the quality of teaching learning.
- Establishment of a Centres for Excellence

Principal Profile:

Dr. Sanjay R. Chitnis, Ph.D. (IISc)
Principal, CMR Institute of Technology, Bangalore
Professor, Computer Science and Engineering

Dr. Sanjay Chitnis is committed to mentoring students and faculty to pursue their life dreams and is passionate about transforming engineering education. He has over 22 years of vast leadership experience in multinational companies Motorola and LG. His expertise includes Software Product and Process Engineering, Program Management and Platforms and Apps for smart devices.

He has a Ph.D. in Computer Science from IISc, Bangalore, M.Tech. in Electrical Engineering from IIT Kanpur and a B.E. in Instrumentation from University of Pune.

Experience

22 Years of Industry Experience

Areas of Interest in Teaching

Big Data & Analytics, Software Engineering, Computational Intelligence

Publications

National Level Journal Publications

1. Sanjay R. Chitnis and V.V.S. Sarma, A knowledge-based design environment for speech recognition. Journal of IETE, Special issue on speech technology, vol. 34, no. 1, pp. 75-81, 1988.
2. Sanjay R. Chitnis and V.V.S. Sarma, Knowledge-based feature selection for automatic speech recognition, Journal of the Acoustical Society of India, vol. XVI, Nos. 3 & 4, pp. 260-264, Oct. 1988.

International Level Journal Publications

1. Continuous user authentication using touch gesture statistical images for smartphone, international journal of research in computer applications and robotics, ISBN 2320-7345
2. SUPERBLAST: An advanced gene sequencing algorithm for Hadoop platform in Bio-informatics era, International Journal of Advance Research in Computer Science and Management Studies

Conference Publications

1. V.V.S. Sarma and Sanjay R. Chitnis, A knowledge-based design environment for realizing complex pattern recognition systems, Indo-Us workshop on signals and systems, Jan. 88, Bangalore. Pp. 111-118.
2. Sanjay R. Chitnis and V.V.S. Sarma, Knowledge-based design of speech recognition systems, South-East Asia Regional Computer Confereration Conference (SEARCC-88), Nov. 28 to Dec. 1, 1988. Published in "Modern Trends in Information Technology" by P.V.S. Rao and P. Sadanandan (Eds.), Tata McGraw-Hill, New Delhi, pp. 111-118.
3. Sanjay R. Chitnis and V.V.S. Sarma, Knowledge-based evolutionary design of complex pattern recognition systems, International conference on advances in structural testing, analysis and design, July 29-Aug. 3, 1990, Bangalore. Tata McGraw-Hill, NewDelhi, 1990, pp. 899-904.
4. Plan-based distributed multi-sensor situation assessment in Artificial Intellgence and Expert Systems technologies in Indian Context to vol. 2, V.V.S. Sarma, N.Viswaradhan, B. Yegnanarayana, B L Deekshatulu (Eds), Tata McGraw-Hill, New Delhi, 1991.

SECTION B: PREPARATION OF SELF-STUDY REPORT

1. Profile of the Affiliated College

1. Name and Address of the College:

Name :	CMR Institute of Technology	
Address :	#132, ITPL Road, Kundalahalli, Bengaluru	
City : Bengaluru	Pin : 560037	State : Karnataka
Website :	www.cmrit.ac.in	

2. For Communication:

Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Principal	Dr. Sanjay R Chitnis	O : 080 – 28524631 R : (M) 9886379597	988637 9597	28524 630	principal@cmrit .ac.in
Steering Committee Co-ordinator	Dr. B. Narasimhamurthy	O : 080 – 65971348 R : (M) 9916965022	991696 5022	28524 630	viceprincipal@ cmrit.ac.in

3. Status of the Institution :

Affiliated College	✓
Constituent College	
Any other (Specify)	

4. Type of Institution:

    a. By Gender
      i. For Men

      ii. For Women

      iii. Co-education   ✓

    b. By Shift
      i. Regular   ✓

      ii. Day

      iii. Evening

5. Is it a recognized minority institution?

    YES

    NO   ✓

If yes specify the minority status (Religious/linguistic/ any other) and Provide documentary evidence.

6. Sources of funding

    Government

    Grant-in-aid

    Self-financing   ✓

    Any other

7. a. Date of establishment of the college: **28/06/2000** (dd/mm/yyyy)

   b. University to which the college is affiliated /or which governs the college

   (If it is a constituent college)

Affiliated to - Visvesvaraya Technological University, Belagavi, - 590018, Karnataka

c. Details of UGC recognition:
   (Enclose the Certificate of recognition u/s 2 (f) and 12 (B) of the UGC Act)

Under Section	Date, Month & Year (dd-mm-yyyy)	Remarks(If any)
i. 2 (f)	22-07-2016	
ii. 12 (B)		

*Scan copy of the 2 (f) certificate is enclosed in Annexure

d. Details of recognition/approval by statutory/regulatory bodies other than UGC (AICTE, NCTE, MCI, DCI, PCI, RCI etc.)

Recognized by All India Council for Technical Education (AICTE)

Under Section/ clause	Recognition/Approval details Institution/Department Programme	Day, Month and Year (dd-mm-yyyy)	Remarks
AICTE act & Regulation under No. 52 of 1987	Computer Science Engineering	28-06-2000	
	Information Science Engineering	28-06-2000	
	Electronics & Communication	28-06-2000	
	Telecommunication Engineering	28-06-2000	
	Electrical & Electronics	08-08-2002	
	Mechanical Engineering	15-07-2009	
	Civil Engineering	01-09-2011	
AICTE act & Regulation under No. 52 of 1987	Masters in Computer Applications(M.C.A)	27-06-2001	
	Masters in Business Administration (M.B.A)	27-05-2002	
	M.Tech - Computer Science Engineering	27-07-2007	

AICTE act & Regulation under No. 52 of 1987	M,Tech - VLSI Design and Embedded systems	15-07-2009	
	M.Tech - Computer Network Engineering	23.08.2010	
	M.Tech - Digital Communication	23.08.2010	
	M.Tech - Machine Design	19-03-2013	

8. Does the affiliating university Act provide for conferment of autonomy (as recognized by the UGC), on its affiliated colleges?

Yes | ✓ | No | |

If yes, has the College applied for availing the autonomous status?

Yes | ✓ | No | |

9. Is the college recognized?

a. by UGC as a College with Potential for Excellence (CPE)?

Yes | | No | ✓ |

If yes, date of recognition: …………………… (dd/mm/yyyy)

b. for its performance by any other governmental agency?

Yes | ✓ | No | |

If yes, Name of the agency: NBA

Date of recognition:

- Accreditation – 19/07/2008 – 16/09/2011
- Re - Accreditation – 28/08/2012 – 01/07/2016

10. Location of the campus and area in sq. mts:

Location	Urban
Campus area in sq. mts.	30877.51 Sq. mts.
Built up area in sq. mts.	75619 Sq. mts.

11. Facilities available on the campus (Tick the available facility and provide numbers or other details at appropriate places) or in case the institute has an agreement with other

agencies in using any of the listed facilities provide information on the facilities covered under the agreement.

- Auditorium/seminar complex with infrastructural facilities - yes
- Sports facilities
  - Playground   - Yes
  - Swimming pool - No
  - Gymnasium   - Yes
- Hostel
  - Boy's Hostel
    - i. Number of Hostels : Two
    - ii. Number of Inmates : 346
    - iii. Facilities
      - Solar water heaters
      - Diesel water heater
      - Water Coolers
      - Mineral water plant
      - Recreation rooms with AV facility
      - Bakery rotary Oven
      - Kitchen and Dining
      - WIFI
      - Private Cupboards
      - Library up to (7.30am to 10.30pm)
      - Gym & Indoor sports facility
      - Round the Clock Security
      - Health Care &

  - Girl's Hostel
    - i. Number of Hostels : Two
    - ii. Number of Inmates : 261
    - iii. Facilities
      - Solar water heaters
      - Diesel water heater
      - Water Coolers
      - Mineral water plant
      - Recreation rooms
      - Bakery rotary Oven
      - Kitchen and Dining
      - Indoor shuttle badminton
      - Library up to 12 Noon
      - Gym & Indoor sports facility
      - Round the Clock Security
      - Health Care &

    - Working women's hostel - NA

• Residential facilities for teaching and non-teaching staff (give numbers available — cadre wise) – Not Available

• Cafeteria — Yes

• Health centre –

- First aid facility available at each block.
- Regular Medical Camps are organizing for students at least once in six months.
- College Vehicle is available in case of any Emergency.

Health centre staff –

Qualified doctor	Full time		Part-time	✓
Qualified Nurse	Full time	✓	Part-time	

• Facilities like banking, post office, book shops –
- The banks like Bank of India, Canara Bank, SBM & SBI are available next to the main Gate.
- The post office is available in reachable proximity of around half a kilometer.
- In house stationary shop is available in the campus.

• Transport facilities to cater to the needs of students and staff.

- The college buses are available for both Students & Staff
- Totally 4 buses with seating capacity of 36 seats and 2 buses with seating capacity of 54 seats are available.

• Animal house – Not applicable

• Biological waste disposal – No

• Generator or other facility for management/regulation of electricity and voltage. ------ Available
- 3 generators are installed with capacity of 125 KVA to 250 KVA
- 8 UPS are running with capacity of 20KVA to 40 KVA

• Solid waste management facility-----Under progress

• Waste water management------Available

• Water harvesting-- Available

12. Details of programmes offered by the college (Give data for current academic year)

Sl. No.	Programme Level	Name of the Programme/ Course	Duration in years	Entry Qualification	Medium of instruction	Sanctioned/ approved Student strength	No. of students admitted (2016-17)
I	UG	Computer Science & Engineering	4	10+2	English	180	182
		Information Science & Engineering	4	10+2	English	120	123
		Electronics & Communication	4	10+2	English	240	202
		Telecommunication Engineering	4	10+2	English	60	46
		Electrical & Electronics	4	10+2	English	120	92
		Mechanical Engineering	4	10+2	English	120	94
		Civil Engineering	4	10+2	English	120	74
II	PG	Computer Science Engineering	2	Degree in Engg.	English	24	07
		Computer Network Engineering	2	Degree in Engg.	English	18	02
		Digital Communication	2	Degree in Engg.	English	18	05
		Machine Design	2	Degree in Engg.	English	18	08
		VLSI Design and Embedded Systems	2	Degree in Engg.	English	24	02
		Masters in Business Administration (M.B.A)	2	Any Degree	English	120	92
		Masters in Computer Applications (M.C.A)	3	Any Degree	English	120	50
II	Ph.D	Computer Science Engineering		PG in Engg.	English		20
		Electronics & Communication Engineering		PG in Engg.	English		19
		Electrical & Electronics	5	PG in Engg.	English	8 / Guide	1
		Mechanical Engineering		PG in Engg.	English		2
		Management Studies		MBA	English		5

| | | Computer Application | | MCA | English | | 1 |
| | | Applied Science and Humanities (P,C,M) | | M.Sc | English | | 13 |

13. Does the college offer self-financed Programmes?

Yes ✓   No ☐

   If yes, how many | All programs are self financed |

14. New programmes introduced in the college during the last five years if any?

| YES | ✓ | No | | Number | 2 |

15. List the departments: (respond if applicable only and do not list facilities like Library, Physical Education as departments, unless they are also offering academic degree awarding programs. Similarly, do not list the departments offering common compulsory subjects for all the programs like English, regional languages etc.)

Faculty	Departments	UG	PG		Research
Engineering	Computer Science Engineering	✓	✓	2 Programmes	✓
	Information Science Engineering	✓		-	-
	Electrical & Electronics Engineering	✓		-	✓
	Electronics & Communication Engineering	✓	✓	1 Programme	✓
	Mechanical Engineering	✓	✓	1 Programme	✓
	Telecommunication Engineering	✓	✓	1 Programme	-
	Civil Engineering	-	-		-
Management and	Masters in Business Administration	-	-		-

Computer Applications	(M.B.A)			
	Masters in Computer Applications(M.C.A)	-	-	-
Applied Science and Humanities	Physics	-	-	-
	Chemistry	-	-	-
	Mathematics	-	-	-

16. Number of Programmes offered under (Programme means a degree course like BA, BSc, MA, M.Com…)

   a. annual system

-

   b. semester system

All programmes (7UG & 7PG)

   c. trimester system

-

17. Number of Programmes with

   a. Choice Based Credit System

(7 UG & 7 PG)

   b. Inter/Multidisciplinary Approach

-

   c. Any other (specify and provide details)

-

18. Does the college offer UG and/or PG Programmes in Teacher Education?

   Yes | | No | ✓ |

   If yes,
   a. Year of Introduction of the programme(s)…………………
   (dd/mm/yyyy)and number of batches that completed the programme

   b. NCTE recognition details (if applicable)
      Notification No.:
      …………………………………… Date:
      …………………………… (dd/mm/yyyy)
      Validity:………………………

   c. Is the institution opting for assessment and accreditation of Teacher Education Programme separately?

   Yes | | No | ✓ |

19. Does the college offer UG or PG programme in Physical Education?

    Yes ☐   No ☑

20. Number of teaching and non-teaching positions in the Institution

Positions	Teaching faculty						Non-teaching staff		Technical staff	
	Professor		Associate Professor		Assistant Professor					
	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F
Sanctioned by the UGC / University / State Government *Recruited*	NA									
Yet to recruit										
Sanctioned by the Management/ society or other authorized bodies *Recruited*	23	4	16	38	91	145	40	31	49	10
Yet to recruit										

21. Qualifications of the teaching staff:

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc./D.Litt.							
Ph.D.	23	4	6	8	4	4	49
M.Phil.	0	0	1	0	2	10	13
PG	0	0	9	30	85	131	255
Temporary teachers							
Ph.D.							
M.Phil.							
PG							
Part-time teachers							
Ph.D.					1	0	1
M.Phil.							
PG					3	3	6

22. Number of Visiting Faculty /Guest Faculty engaged with the College –

   There are 5 visiting faculties.

23. Furnish the number of the students admitted to the college during the last four academic years.

   Total number of students (UG+PG)

Categories	2016-17		2015-16		2014-15		2013-14	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
SC	49	39	58	29	50	38	46	20
ST	08	08	06	11	13	3	9	5
OBC	145	74	135	123	156	95	194	121
GM	542	287	523	317	496	270	474	224
Others	0	0	0	0	0	0	0	0
Total	744	408	722	480	715	406	723	370

24. Details on students enrollment in the college during the current academic year:

Type of students	UG	PG	Ph.D.	Total
Students from the same state where the college is located	2740	429	61	3230
Students from other states of India	896	51	-	947
NRI students	--	--	-	--
Foreign students	33	02	-	35
Total	3669	482	61	4212

25. Dropout rate in UG and PG (average of the last two batches)

   UG : 0.8%

   PG : 1.8%

26. Unit Cost of Education

   (Unit cost = total annual recurring expenditure (actual) divided by total number of students enrolled)

(a) including the salary component.

Rs. 68130.82

(b) excluding the salary component

Rs. 30543.60

27. Does the college offer any programme/s in distance education mode (DEP)?

Yes ☐   No ☑

28. Provide Teacher-student ratio for each of the programme/course offered

Level	Course / Programme	Teacher – Student ratio
UG	Computer Science Engineering	1 : 15
	Information Science Engineering	1 : 15
	Electrical & Electronics Engineering	1 : 15
	Electronics & Communication Engineering	1 : 15
	Mechanical Engineering	1 : 15
	Telecommunication Engineering	1 : 16
	Civil Engineering	1 : 15
PG	Computer Science Engineering	1:12
	Computer Network Engineering	1:12
	Digital Communication Engineering	1:12
	Machine Design	1:12
	VLSI Design and Embedded Systems	1:12
	Masters in Business Administration (M.B.A)	1:14
	Masters in Computer Applications(M.C.A)	1:15

29. Is the college applying for

Accreditation :   Cycle 1 ☑   Cycle 2 ☐   Cycle 3 ☐

☐

Cycle 4

30. Date of accreditation* (applicable for Cycle 2, Cycle 3, Cycle 4 and re-assessment only)

    Cycle 1: ……………… (dd/mm/yyyy)   Accreditation Outcome/Result………...
    Cycle 2: ……………… (dd/mm/yyyy)   Accreditation Outcome/Result………...
    Cycle 3: ……………… (dd/mm/yyyy)   Accreditation Outcome/Result………...
    * Kindly enclose copy of accreditation certificate(s) and peer team report(s) as an annexure.

    Not Applicable

31. Number of working days during the last academic year

244

32. Number of teaching days during the last academic year
    (Teaching days means days on which lectures were engaged excluding the examination days)

176

33. Date of establishment of Internal Quality Assurance Cell (IQAC)
    (dd-mm-yyyy): **01/09/2016**

34. Details regarding submission of Annual Quality Assurance Reports (AQAR)   to NAAC
    AQAR (i) ……………… dd/mm/yyyy)
    AQAR (ii) ……………… (dd/mm/yyyy)
    AQAR (iii) ……………… (dd/mm/yyyy)
    AQAR (iv) ……………… (dd/mm/yyyy)

       Not Applicable

35. Any other relevant data (not covered above) the college would like to include. (Do not include explanatory/descriptive information)

    • All Eligible Programmes are permanently affiliated from Visvesvaraya

Technological University.

- All Eligible Programmes are Accredited by National Board of Accreditation, New Delhi.

- Various committees have been formed for smooth running of the college
  - Admission Committee
    - To regulate and control admission procedures and monitor admission policies subject to government regulations
    - To set up an admission centre to disseminate information
    - To decide on the cut-of-marks for each category.
    - To appoint counsellors to guide the student
    - To plan and conduct Admission test and interviews
    - To finalize the Selection List
  - Examination Committee
    - To conduct End Semester Exams and Continuous Internal Assessment. To discuss the innovative methods in evaluation. (Comments in the Internal books, Question banks, Transparency etc.)
    - To look after the conduct of examinations in terms of planning of examination schedules, allocation of examination halls, invigilation roster etc.
    - To handle Exam malpractices, if any, and to devise methods to discourage the same.
    - To design more effective methods to be adopted in the evaluation of students

  - Internal Test Committee
    - Theory Internal test exams are centralized, headed by Internal test coordinator. The committee consists of departmental coordinator.
    - The committee will conduct random checks and ensures that tests are conducted smoothly.

  - Recruitment Committee
    - As and when a vacancy is created, the committee takes steps to advertise and call for applications, conduct interviews and select suitable candidates for the post.
    - To identify the vacancies both teaching and non- teaching
    - To advertise the vacancy
    - To scrutinize the applications and shortlist the candidates
    - To constitute the interview committee and finalize the interview dates
    - To select the candidates based on knowledge, Communication Skills, Experience (Academic / Research / Industry) and Performance in demo class.

- o Affiliation Committee
    - To prepare the necessary papers and to pursue the follow-up, when the College Committee resolve to go for new course.

- o Library Committee
    - To discuss various aspects of the functioning of the Library
    - To evolve methods to encourage the students to utilize Library facilities
    - To discuss the allocation of library fund for various departments
    - To maintain and upgrade the infrastructure, equipment, furniture and fittings etc
    - To frame library rules geared to the smooth functioning of the library and the needs of the users
    - To ensure that the library is stocked with the latest books, journals, periodicals etc.
    - To network with other libraries and information centers.

- o Magazine Committee
    - To bring out annual magazine
    - To design and prepare college prospectus / broachers
    - To bring department magazines / news letters
    - To publish books / journals

- o Calendar of events Committee
    - To consolidate the plan of activities from the departments.
    - To provide all the information, both curricular and non curricular, in the college calendar.

- o Scholarship and Students' Aid Fund Committee.
    - To oversee the disbursement of scholarship awarded from various government bodies and other agencies.
    - To constitute various endowment funds and students aid funds
    - To identify deserving students for awarding Means and Merit cum Means scholarships
    - To oversee the process of disbursement of scholarship fund

- o Placement and Career Counseling Committee
    - To place students thorough campus and off campus recruitments
    - To evolve activities for career guidance and mentoring
    - To design value added programmes which aims the personality

- o Cultural Committee
    - To plan and organize functions such as Independence Day Celebrations, Republics Day, College Day, College Fests and other college functions.

- To guide students to participate in intra-collegiate, inter collegiate, state and national level cultural competitions.

o College Hostel Committee
  - To make periodical visits to boys and girls hostels
  - To ensure the hostilities adhere to the rules and regulations of the hostels
  - To look in to the grievenesses of the hostilities.

o Disciplinary Committee
  - To supervise the overall discipline of the students on campus.
  - To ensure that the students strictly adhere to the rules and regulations of the college.
  - To ensure that the required percentage of attendance is maintained as per the University and College requirements
  - To monitor hourly attendance of the students
  - To personally keep in touch with students who fall short of the expected percentage of attendance. If necessary the parents of the same are to be met by the committee
  - To file the leave letters and medical certificates of the students
  - To Recommend disciplinary measures to the principal

o Alumni Association Committee
  - To create a database of Alumni of the various departments and have periodic interaction with them.
  - To conduct an annual CAA meet and bring together the Alumni, faculty and existing students
  - To involve the Alumni members in industry interaction activities such as projects, placements, seminars, workshops and industrial visits.
  - To utilize the potential of the Alumni for the development of the institution and for the betterment of the students on a continual basis.

o Foreign Student Association
  - To make the Foreign National Students feel at home
  - To know each other closely and to promote good harmonious relations among the students and the institution.
  - To help them to come out with their difficulties inside and outside the institution.
  - To assist the students in finding the solution to their problems.
  - To make them feel to interact with the faculties and administrative officials.
  - To provide a platform to present their customs, traditions, art etc. and also have an exposure to our culture.
  - To strengthen International relationship

- o College Research & Industrial Interaction Committee
  - To imbibe scientific inquiry in students to primate research culture

  - To encourage research as a significant activity by focusing on thrust areas in the present day scenario.
  - To develop further association with the external agencies for funding
  - To start research forum for guiding, operating projects, publishing, conducting refresher courses, seminars, conferences, workshops and symposia.

- o NSS Committee
  - To organize various NSS activities within and outside campus
  - To organize awareness programmes and welfare schemes in the remote places.

- o Sports Committee
  - To plan various sports activities of an academic year
  - To plan for the improvement of the physical education facilities available
  - To assign grants for the development of sports and athletics
  - To identify and select talented sport persons from the college
  - To motivate students towards dedicated practice and higher standard of excellence
  - To provide specialized coaching for specially talented sport persons
  - To encourage participation in the University, state, regional, national and international tournament and meets.
  - To set up awards and provide incentives for sports achievers.

- o Students Welfare Committee
  - To discuss and plan various students welfare activities such as scholarship, loans, personal counseling, book bank, medical facilities, mid-day meals etc.
  - To discuss and plan various extra-curricular activities to be organized for the students.

- o Grievance Redressal Committee
  - To scrutinize the grievances submitted by the employees students (Through the suggestion box / by person)
  - To suggest the recommendations to the governing council for suitable action after scrutinizing the grievances. Academic Audit Committee (AICTE/ LIC/ NBA/ VTU/ DTE)
  - Development and supplications of quality benchmarks/parameters in various activities of the institution.

- Dissemination of information on quality aspects.
- Organization of discussions, workshops, seminars and promotion of quality circles.
- Recording and monitoring quality measures of the institution.
- Acting as a nodal agency of the institution for quality related activities.
- Preparation of the annual quality assurance report and such other reports as may be decided from time to time.

o Purchase Committee
- The Procurement policy of CMRIT is to ensure Transparency, fairness, equal opportunity, economy & efficiency.
- To identify the requirement, developing specifications, suppliers, service providers, inviting proposals etc.

o Budget Committee
- To verify previous year's budget, the expenditure incurred etc.
- Prepare the budget for next year with consultation of HODs
- Get the same approved by the Management.

o Time Table Committee
- To comprise of one or two faculty and time table co coordinators from all the dept.
- It decides no of classes required for every subjects & also for ICP/ RC/ Bridge course in consultation with the HODs. After noon session of Day 4 is dedicated for other activities like GL/ Seminars/ workshop/ FDP.

o Website Committee
- To assist the team to update academic activities in to the web sit
- To make sure that web site contains highest quality & most up to date content.

o Transport Committee
- To finalize the roots in most demand by consulting the students and faculty.
- Arrangement of vehicle for Industrial trips, guest lectures, any events students participating in other colleges etc.

o Human Rights Committee
- To make sure that basic human rights are not violated in the campus.
- To monitor very closely if any draw backs, limitation and consequences occurring in the campus.
- Any such violations are dealt and brought to the notice of the Principal & management.

- o CRC (Course Refinement Committee
    - To prescribe standard deadlines standard deadlines for preparing Lesson plan, question bank, assignments before the commencement of semester
    - To prepare pre-requisites, lesson plan, question bank and assignments as per the standard template well in advance for their subjects
    - To upload these documents in their respective web pages before start of semester there by making available to students.

- o LRC (Laboratory Refinement Committee)
    - Reviewing the experiments required to be conducted as per the University stipulations.
    - Reviewing the existing facilities in terms of infrastructure, equipment & components / consumables
    - Ensure preparation of laboratories manuals for all experiment and personnel

- o Overseeing the stock maintenance Research Committee
    - To imbibe scientific inquiry in students to promote research culture.
    - To encourage research as a significant activity by focusing on trust areas in the present day scenario.
    - To develop further association with the external agencies for funding.
    - To start research forum for guiding, operating projects, publishing, conducting refresher courses, seminars, conferences, workshops and symposia.

- o Anti-Ragging Committee
    - This committee is headed by Principal & it consists of few faculty from each dept., Parents & students representatives.
    - The committee will have vigil, over sight & patrolling functions. They will also invigilate the incidents of ragging.
    - To take appropriate decision and suitable punishment to those found guilty.

- Various Clubs for Students Extracurricular Activity
    - o Music Club – AAROHAN
    - o Art Club – TARANG
    - o Dance Club – KINISEIS
    - o Literary Club – MINERVA
    - o Photography Club – IRIS
    - o Tech Club – SWAT
    - o Theatre Club – TAKE A BOW (TAB)
    - o Media Club – MEDIA CREWS

- o Kannada Sangha – SAMSKRUTI
- o Fitness Club – KRATOS
- o Society of Mechanical Engineering (SME)

Annexure: 2 (F) Certificate of recognition

विश्वविद्यालय अनुदान आयोग
University Grants Commission
(मानव संसाधन विकास मंत्रालय, भारत सरकार)
Ministry of Human Resource Development,
Govt. of India)
बहादुर शाह जफर मार्ग, नई दिल्ली – 110 002
Bahadur Shah Zafar Marg, New Delhi – 110 002

UGC Website: www.ugc.ac.in
Ph. 011-23604414 (CPP-I/Colleges)

Speed Post

July, 2016

F. No. 8-203/2011 (CPP-I/C)

No. 15735
Date 25.7.2016

2 2 JUL 2016

The Registrar,
Visvesvaraya Technological University
"Jnana Sangama", Machhe
Belagavi – 590 018
Karnataka

Sub: - Recognition of College under Section 2 (f) of the UGC Act, 1956.

Sir,

I am directed to refer to the letter no. CMRIT/UGC/BE/PO2012-13/444/G628 dated 13.04.2016 received from the Principal, CMR Institute of Technology, No. 132, AECS Layout, I.T. Park Road, Bangalore – 560 037, Karnataka on the above subject and to say that it is noted that the College is **un-aided/self financed** and **permanently** affiliated to **Visvesvaraya Technological University, Belagavi**. I am further to say that the name of the following College has been included in the list of Colleges prepared under Section 2 (f) of the UGC Act, 1956 under the head **Non-Government** Colleges teaching upto **Bachelor's** Degree:-

Name of the College	Year of Establishment	Remarks
CMR Institute of Technology No. 132, AECS Layout I.T. Park Road, Bangalore – 560 037 Karnataka AISHE CODE:- C-1406	2000	The college is not eligible to receive Central assistance under Section 12(B) of the UGC Act, 1956 as the University is not declared fit under Section 12 (B) to receive grants.

The Indemnity Bond and the other supporting documents submitted in respect of the above College have been accepted by the University Grants Commission.

Yours faithfully,

(Charan Dass)
Under Secretary

Copy to:-

1. The Principal, CMR Institute of Technology, No. 132, AECS Layout, I.T. Park Road, Bangalore – 560 037, Karnataka.
2. The Secretary, Government of India, Ministry of Human Resource Development, Department of Higher Education, Shastri Bhavan, New Delhi – 110 001.
3. The Principal Secretary (Higher Education), Government of Karnataka, K.G.S. 6th Floor, M.S. Building, R. No. 645, Dr. B.R. Ambedkar Road, Bangalore – 560 001, (Karnataka).
4. The Deputy Secretary, UGC, South - Western Regional Office (SWRO), Prasana Kumar Block, Palace Road, Bangalore - 560 009, (Karnataka).
5. Section Officer (F.D.-III Section), U.G.C., New Delhi
6. Guard file.

(M.P. Singh)
Section Officer

2. CRITERIA – WISE INPUTS

CRITERION I: CURRICULAR ASPECTS

1.1 Curriculum Planning and Implementation

1.1.1 State the vision, mission and objectives of the institution, and describe how these are communicated to the students, teachers, staff and other stakeholders.

VISION

To be a nationally acclaimed and globally recognized institute of engineering, technology and management producing competent professionals with appropriate attributes to serve the cause of nation and society at large.

MISSION

- Create necessary infrastructure appropriate to the needs of programmes and activities of the institution
- Attract and retain well-qualified faculty and support staff
- Create and facilitate an ambience for interdisciplinary engagement leading to healthy competition among students and staff in pursuit of excellence through life-long learning
- Develop and operate mutually beneficial programs partnering with industries, institutes and individuals of national and international repute
- Create mechanisms to understand societal needs and provide solutions for the betterment of society

QUALITY POLICY

To deliver quality technical education to inculcate – scientific temperament and social commitment in our students, preparing them as inspired engineers partnering collective progress.

OBJECTIVES

- To provide students with excellent academic inputs and adequate exposure to industry.
- To produce graduates equipped with knowledge and skills required to analyse, design and develop solutions for real-world problems.
- Form an ethical and enterprising workforce who add value to their organisations.
- To assume leadership roles in industry or public service through engineering ability, communication skills, teamwork, entrepreneurship, understanding of contemporary global issues, and the use of modern engineering tools and software.
- Be able to demonstrate creativity and innovativeness and be able to contribute to society through the pursuit of life-long learning and remaining abreast of technological progress.
- To develop and sustain state-of-the-art laboratories, which not only support academics but also, support research and development activities.
- To develop the centers for furthering academic excellence, in diverse and progressive programmes that make CMR Institute of Technology, an excellent platform to pursue quality education.

We strive hard to enable our students to imbibe

The Vision, Mission and Objectives are published in the following places:

S.No	Media / Location	Remarks
1	Website	http://www.cmrit.ac.in
2	Calendar of Events	Given to staff and students
3	Administrative cabins, office rooms	Display Posters
4	Lab records, Brochures.	Printed

The Vision and Mission are also disseminated through:

- *Meeting with staff members and email to staff members*
- *Email to students*
- *Email to parents*

- *Email to companies*

- *Quiz for students*

- *Advisory board meetings and email to the Advisory Board*

- *Discussed in Orientation programme conducted during the induction of new academic batch.*

- *Awareness workshops to students and faculty periodically.*

1.1.2 How does the institution develop and deploy action plans for effective implementation of the curriculum? Give details of the process and substantiate through specific example(s).

The institution follows the curriculum and syllabi prescribed by Visvesvaraya Technological University (VTU). The Institution meticulously develops action plans for effective implementation of the curriculum and highest priority is given for academics. At the outset the Principal, heads of the departments along with Course refinement Committee conduct meetings with faculty to develop strategies for effective implementation of the curriculum. Teachers are encouraged to impart the curriculum through innovative teaching methods including power point presentations, assignments, discussions, workshops, seminars, projects, internships, industrial visits, e - learning apart from regular/traditional chalk and talk methods. The detailed process is given below:

Academic Calendar - The academic calendar of the Institution reflects various curricular activities planned during a semester which is based on the University calendar.

Department Calendar - All departments prepare Department calendar containing both curricular and co-curricular activities which will be organized in the semester.

Course Refinement Committee - Course Refinement committee (CRC) chair prescribes standard deadlines for preparing Lesson plan, question bank, assignments before the commencement of semester. All the faculty prepares pre-requisites, lesson plan, question bank and assignments as per the standard template well in advance for their subjects. These are duly checked by respective heads of the departments and Chief Course instructors along with Course refinement committee members. Faculty will upload these documents in their respective web

pages before start of the semester there by making available to students.

Lab Refinement Committee - Laboratory refinement committee (LRC) chair prescribes standard guidelines for the conduction of lab experiments envisaged to provide best learning experience.LRC members from each department ensures smooth conduction and implementation of labs. Lab manuals are prepared for each laboratory. Additional experiments are given to students and they are encouraged to perform lab activities/projects beyond the curriculum.

Class Committee – Every semester will have the class committee comprising student representative, best, average and slow learners. Head of the department along with class committee members and all the teachers handling the class meets twice in a semester to review uniform and full coverage of the syllabus and grievances if any, and suitable remedial measures are taken as and when necessary.

Meeting - The Department meeting, Course Refinement committee (CRC), LRC and principal meetings are organized every month to review the action plans in an effective manner

Process of Implementation:

- Academic calendar will be followed effectively and all the faculty ensures coverage of syllabus as per the lesson plan. Lesson plans and course files will be reviewed by CRC members on continuous basis to ensure effective syllabus coverage.
- Faculty updates day wise lecture activity in ERP to keep track of the progression of the curriculum effectively.
- After every internal test the head of the department along with class teachers assess the results and inform the progress of students to parents.ICP classes will be conducted for slow learners which helps them to improve their performance in university exams.
- Institute encourages faculty and students to organize guest lectures, workshops, industry visits to build industry academia interface among students and faculty on regular basis.

Course Implementation

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┌─────────────────────────────┐
│ Principal, Dean, HOD'smeet   │
│ before the commencement of   │
│ classes and finalize the     │
│ academic calendar            │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│ Principal and Dean conducts  │
│ orientation programme for    │
│ faculty                      │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│ Commencement of classes.     │
│ Orientation programme for    │
│ students.                    │
└─────────────────────────────┘
              │
              ▼
      ┌────────────────┐
      │ Internal tests │
      └────────────────┘
              │
              ▼
┌─────────────────────────────┐
│ Identification of low        │
│ performers in Internal       │
│ tests/ previous exam         │
└─────────────────────────────┘
        ╱           ╲
       ▼             ▼
┌──────────────┐  ┌──────────────┐
│ Intensive    │  │ Remedial     │
│ coaching     │  │ classes      │
│ for low      │  │ for failed   │
└──────────────┘  └──────────────┘
        ╲           ╱
         ▼         ▼
┌─────────────────────────────┐
│ HOD conducts meeting with    │
│ facultyand students to       │
│ review / evaluate the        │
│ progress after each test     │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│ Principal, Dean and HOD's    │
│ meet once a month and        │
│ ensure implementation of     │
│ guidelines                   │
└─────────────────────────────┘
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1.1.3   What type of support (procedural and practical) do the teachers receive (from the University and/or institution) for effectively translating the curriculum and improving teaching practices?

The University provides support in translating the curriculum by conducting various workshops and orientation programs for the faculty whenever a new course is introduced, change in pattern and when there is a change in syllabus.

The Institution supports the faculty members for participating in various Faculty Development Programmes, Workshops, Seminars, Conferences, etc. To enrich their knowledge, the Institution library provides text and reference books and other reference material like Journals, Magazines, Teaching Models and Software to enable the faculty members to ensure effective delivery of curriculum. The faculty are trained in the use of modern teaching aids such as google class rooms and github etc for conducting classes effectively. Digital libraries, E-learning facilities are provided to all the faculty members of the Institution which will help them in effective teaching. Wi-Fi and Internet facility is available in the campus.

In the orientation programme for teachers conducted at the beginning of the semester, teachers are trained by experts on implementing curriculum through innovative practices like using pedagogy tools, e-resources, working models etc.

Up-gradation of Qualification

Institution sponsors staff members to enroll for M.Tech and Ph.D. Programmes.

R & D Initiatives

Institution encourages faculty members by providing incentives to publish papers in reputed journals through research committee. Most of the research projects are funded by the institution.

1.1.4   Specify the initiatives taken up or contribution made by the institution for effective curriculum delivery and transaction on the Curriculum provided by the affiliating University or other statutory agency.

The Institution ensures effective curriculum delivery by

- Conducting Regular reviews on the performance of the faculty
- Collecting Feedback from the students every semester
- Regular meetings are conducted by head of the departments and the faculty for effective curriculum delivery.

The institution ensures transaction on the Curriculum by

- Updating laboratory facilities
- Using ICT based pedagogical tools

- Integrating hands-on work experience in all the practical subjects
- Providing high speed LAN and Wi-Fi network connectivity
- Encouraging faculty to participate in subject related workshops.
- Motivating the students for Implant trainings in companies
- Encouraging the students to do innovative project work of national interest
- Encouraging the students to participate in technical events/ competitions organized in-house and outside the campus.
- Providing special/ remedial classes for slow-learners
- Institute organizes teacher – training programmes by Life skills institutes, professional counseling institutes etc.

1.1.5 How does the institution network and interact with beneficiaries such as industry, research bodies and the university in effective operationalization of the curriculum?

Involvement of industry, research bodies and the university in the effective operationalization of curriculum is done effectively involving all the stakeholders.

We regularly interact with the industry experts by involving them / making members in governing council, department advisory boards, etc. Through these bodies, we collect the feedback and incorporate in our academic calendar in addition to the university syllabus.

- Placement cell interacts with industry representatives regularly.They invite HR managers and industry professionals to the campus to interact with students on career challenges and oppurtunities.
- As part of industry academia regular industry visits are organized to bridge the gap between industry and academic. Encourages Train in Trainer(TTT),faculty and student exchange programmes with industries towards training, research and consultancy etc
- Institute signs MOU's with Industries for creating centers of excellence and incubation cells. Encourages active Identification of potential areas for establishing Centers of Excellence like IBM, INFOSYS CAMPUS CONNECT etc.
- Institute periodically organized meetings with CEO's of reputed industries/organizations for promoting active participation and creating avenues for enhancing industry involvement in academic Programmes. Involves experts

from Industry and research organizations as advisory board members for each department.
- Institute provides strong interaction with alumni holding responsible positions in India and broad.

We do have various collaborations with premier research institutions like IISC, JNCASR NAL, IIA, ISRO etc. Experts from these organizations deliver lectures and participate in collaborative research.

We closely associate with **VTU, CMR University, IIT, IISc, IIMS'**, Research organizations etc. and conduct academic activities contributing to the skill development of students.

- The faculty of various departments are encouraged to attend workshops organized by the university related to revision of syllabus,change of scheme and to provide their inputs regarding the same.
- Many faculty are involved in question paper setting for BE, M.Tech, Ph.D examinations and these faculty are deputed for paper valuation, external examiner, external deputy chief superintendent(DCS) and also as flying squad members.

1.1.6   What are the contributions of the institution and/or its staff members to the development of the curriculum by the University? (number of staff members/departments represented on the Board of Studies, student feedback, teacher feedback, stakeholder feedback provided, specific suggestions etc.

The curriculum design and development process is carried out by the affiliating university from time to time. However many of our faculty members are part of Board of studies of the university. The Institution collects feedback from all its stakeholders, including the students, parents, faculty members and recruiters.

Some of the senior faculty members are representing the Board of Studies of the university. These members consult with their colleagues and the students regarding desired changes in the curriculum and represent the same to the university. Faculty from various Departments of the Institution have worked as members of Board of Studies (BOS), Chairman of BOS for many years. Various curriculum development workshops are conducted at the Institution to discuss the contents of the curriculum. Experts from Industry are invited to participate in these workshops. Faculty members have contributed towards the curriculum development extensively. The suggestions proposed

are analyzed and the recommendations are communicated to the VTU at the Board of Studies meetings. The following faculty members are members of Board of Studies.

Sl.No.	Name of The Faculty	University	Contributed As Member of LIC Committee/BOE member/Syllabus revision committee/etc
1	Dr D P Giridhar	Indus university	Chairman - Academics
2	Dr D P Giridhar	VTU	Member - BOE
3	Dr Gopal	VTU	Member –BOE Member - LIC
4	Dr.Indumathi G	VTU	Member- BOE
5	Dr Asha M Nair	VTU	Member- Question Paper Setting

1.1.7   Does the institution develop curriculum for any of the courses offered (other than those under the purview of the affiliating university) by it? If 'yes', give details on the process ('Needs Assessment', design, development and planning) and the courses for which the curriculum has been developed.

YES. To impart cutting edge technology, the Institution offers additional short term courses apart from courses in the curriculum of the University.

Courses are offered in collaboration with the industry and are designed in-house to meet specific objectives. All these courses are appropriately funded by the Institution.

Programme /Courses in collaboration with industry are as follows

Sl. No.	Title	Type of course	Duration	Department
1	IIT Database Course	Certification programme	1 Year	CSE,ISE
2	Campus Connect Program-Infosys	Certification Programme	1 Year	CSE,ISE
3	Prepare program	Short term	1 month	All Engineering departments
4	CATIA (Computer added 3 dimensional	Short term	20 days	MECH

	Interactive application)			
5	Cloud Infrastructure services-EMC	Certification programme	1month	MCA , ISE, CSE
6	Finance- Marketing and Human resource	Certification programme	2 months	MBA
7	Business English certificate Program	Certification programme	1.5 months	MBA
8	Information storage management-EMC	Short term	5 days	CSE,ISE
9	Web application, Campus connect, Embedded systems, MATLAB	Short term training	1 month	EEE
11	Etabs and total station management	Short term	2 days	CIVIL
12	Bridge Modeling/ Model making Contest	Short term	1 day	CIVIL
13	Machine building and Robotics	Certification course	4 days	ECE

1.1.8 How does institution analyze/ensure that the stated objectives of curriculum are achieved in the course of implementation?

The college has established effective communication with all the stakeholders to ensure that the objectives of the curriculum are achieved in the course of implementation. The institution analyses and ensures that the state objectives are achieved through following yardsticks -

- The best performance of our students in the placement interviews, on job responsibilities, performance in higher education in the world's best universities are a testimony to their ability to work in multidisciplinary problems, strong experimental skills, to develop practical applications and use of theoretical knowledge in the right way to implement the modern technology

- The emphasis on the strong fundamentals in the respective fields and its applications to solutions of problems has created Innovative thinking among the students. It is further strengthened by introducing Projects/Mini Projects/ Internships at various levels. Curriculum has Courses that motivate the students to become Entrepreneurs also.

- The strong thrust on the Innovation & Product Development by the Faculty at the departmental level through interdisciplinary research has increased the research activities & interest among the student community which has yielded in many research publications, products development and innovative ideas.

- Introduction of seminars and workshops in the curriculum has motivated the students to go through the literature in advanced research areas as well.

1.2 Academic Flexibility

1.2.1   Specifying the goals and objectives give details of the certificate/diploma/ skill development courses etc., offered by the institution.

Keeping in mind the changing needs at the regional and international level, the Institution conducts various additional courses and workshops in addition to the curriculum.

The following courses are offered-

Sl. No.	Certificate / Skill Development Course / Diploma / Proficiency Course	Duration	Student Group (Semester)	Branch
1	Auto CAD	3 weeks	5	CIVIL
2	Etabs and total station management	2 days	5	
3	Quad copter training	1 week	6	EEE
4	Infosys Campus connect	6 months	6	CSE,ISE, MCA
5	EMC2 Academic Associate Certificate Training	1 week	6	

6	Android Programming	2 week	6	CSE
7	Programming lab	3 months	4	CSE,ISE
8	Omnipresent Telecom Networks	1 day	4	ECE
9	Mock Interview and Group discussion	1 day	Final semester	
10	MATLAB Simulink	3 days	6	
11	ROBOSAPIENS	4 days		
12	Data Mining	1 day		

1.2.2 Does the institution offer programmes that facilitate twinning /dual degree? If 'yes', give details.

NA

1.2.3 Give details on the various institutional provisions with reference to academic flexibility and how it has been helpful to students in terms of skills development, academic mobility, progression to higher studies and improved potential for employability. Issues may cover the following and beyond:

- Range of Core / Elective options offered by the University and those opted by the college
- Choice Based Credit System and range of subject options
- Courses offered in modular form
- Credit transfer and accumulation facility
- Lateral and vertical mobility within and across programmes and courses
- Enrichment courses

a. Range of Core /Elective options offered by the University and those opted by the Institution.

The university gives a list of electives based on the industry requirement, self employability and exposure to advanced technological developments. Electives are grouped so as to be identified by each student based on their interest and specialization in their branch of study. As per the VTU requirements, the subjects are given as Electives from VI Semester to VIII Semester for UG students. The Institution provides flexibility to the students in making choice of the elective

options depending on their interest from the list of subjects offered by the University.

Branch	Semester	Electives offered by the university
CIVIL	6	Theory of elasticity Alternative building materials and technologies Ground improvement techniques Advanced surveying Ground water hydrology Rural water supply and sanitation Traffic engineering
CIVIL	7	Matrix methods of structural analysis Advanced design of RC structures Design of masonry structures Earth & earth retaining structures Highway geometric design Open channel hydraulics Solid waste management Numerical methods in civil engineering Rock mechanics Pavement materials and construction Photogrammetric and remote sensing Air pollution and control Design and drawing of bridges Structural dynamics
CIVIL	8	Advanced pre stressed concrete structures Advanced foundation design Pavement design Earthquake resistant design of structures Industrial wastewater treatment Quality management system in civil engineering Finite element analysis Reinforced earth structures Urban transport planning Geographic information system Advanced design of steel structures Water resources engineering Environmental impact assessment
CSE	6	Operations research Signals and systems Data compression Pattern recognition Stochastic models and applications Programming languages
CSE	7	Advanced DBMS

		Digital signal processing Java and J2EE Multimedia computing Data warehousing and data mining Neural networks C++ programming and .net Digital image processing Game theory Artificial intelligence Storage area networks Fuzzy logic
CSE	8	Wireless networks and mobile computing Web 2.0 and rich internet applications VLSI design and algorithms Network management systems Information and network security Microcontroller-based systems Adhoc networks Software testing Arm based system design Services oriented architecture Clouds, Grids, Clusters Multi-core architecture and programming
EEE	6	Operation research Advanced power electronics Fuzzy logic Oops using C++ Embedded systems Electrical engineering material
EEE	7	HVDC transmission Programmable logic controller Artificial neural networks Operating system Digital system design with VHDL Technology Testing & commissioning of electrical equipment Power system planning Computer control of electrical drives Data structure VLSI circuits & design Micro & smart system Electromagnetic compatibility
EEE	8	Reactive power management Facts Advanced instrumentation system Ai applications to power systems Data base management systems

		Renewable energy sources Power systems dynamics and stability Energy auditing and demand side management Data communications and networking Electrical distribution systems Insulating engineering Intellectual property rights Electrical power quality
ISE	6	Operations research Compiler design Data compression Pattern recognition Computer graphics and visualization 10is666-programming languages
ISE	7	Advanced dbms Embedded computing systems Java and j2ee Multimedia computing Advanced software engineering Neural networks programming and .net Digital image processing Game theory Artificial intelligence Storage area networks Fuzzy logic
ISE	8	Wireless network and mobile computing Web 2.0 and rich internet applications User interface design Network management systems Information and network security Microcontroller-based systems 10is841 adhoc networks 10is842 information retrieval 10is843 supply chain management 10is844 services oriented architecture 10is845 clouds, grids, and clusters 10is846 decision support systems
TCE	6	Programming in C++ Radio frequency integrated circuits Random processes Adaptive signal processing Modern control theory Digital system design using verilog
TCE	7	Operating systems Digital signal compression Artificial neural networks

		Image processing Video engineering Micro and smart system technology Data structure using C++ Real time systems Pattern recognition Wavelet 17transforms Embedded system design Speech processing
TCE	8	Distributed system Network security internet engineering Mobile computing High performance computer networks Fuzzy logic Multimedia communications Real-time operating systems Modelling and simulation of data networks Wireless sensor networks Adhoc wireless networks Optical computing
ECE	6	Analog and mixed mode VLSI design low power VLSI design satellite communication Data structure using C++ Random process Digital system design using verilog
ECE	7	DSP algorithms & architecture. Programming in C++ Micro and smart systems technology Real time systems Artificial neural network Image processing Cad for VLSI Radio frequency integrated circuits Applied embedded system design* Wavelet transforms Speech processing Modeling and simulation of data networks
ECE	8	Distributed systems Multimedia communication 1 Network security Real time operating systems Optical networks GSM High performance

		Computing networks Ad-hoc wireless networks Internet engineering Optical computing.
MECH	6	Theory of elasticity Mechanics of composite materials Refrigeration & air conditioning Design of heat exchangers Non-traditional machining Knowledge management Project management Statistical quality control
MECH	7	Mechanism design Theory of plasticity Engineering design Non conventional energy sources Gas dynamics Management information system Automation in manufacturing Total quality management Experimental stress analysis Tool design Cryogenics Smart materials Agile manufacturing Robotics Finance management Micro & smart system technology Product life cycle management
MECH	8	Tribology Fracture mechanics Power plant engineering Nanotechnology Organisational behavior and professional communication Computer graphics Rapid prototyping Foundry technology Machine tool design Industrial engineering & ergonomics Bio mass energy systems Automotive engineering Database management system Artificial intelligence Design of experiments Design for manufacture & assembly
MBA	3	Finance, marketing &human resources

MBA	4	Finance, marketing &human resources
MCA	3	Unix system programming Advanced topics in dbms Management information systems operations research principles of uid Systems programming
MCA	4	Advanced computer networks Data warehousing and data mining Mobile computing and wireless communications Software testing and practices Theory of computations (fafl) Cryptography and network security Network management Nosql Software architectures Enterprise resource planning
MCA	5	Mobile and adhoc sensor networks Parallel computing Multimedia systems pattern recognition services oriented architecture Compiler design Cloud computing Web 2.0 & rich internet applications Information retrieval and search engines Fuzzy logic Computer system performance analysis Building enterprise applications

Choice Based Credit System and range of subject options – This scheme has been introduced by VTU from 2015-16.

Courses offered in modular form

Modular courses, Certificate Courses, Guest lectures/workshops are offered by various departments to enrich the knowledge of students in emerging areas.

Credit transfer and accumulation facility – NA

Lateral and vertical mobility within and across program and courses

A student is admitted directly into third semester under lateral entry scheme (for diploma students).Students who doesn't have any backlogs can opt for change of college in third and fifth semesters and change of branch in third semester as per university norms.

Enrichment courses

The existing courses are enriched by preparing the students to design mini and major projects and by making them to apply their knowledge acquired in the curriculum. Skill development or enrichment courses are usually conducted as content beyond syllabi by the departments. Students are encouraged to undergo industry internship. Various program are organized from time to time to update their knowledge.

- Personality and Skill Development program
- Communication skill program.
- Workshops on windows Appethon by Microsoft.
- IBM workshop for app development.
- Career Guidance - Provision for Higher studies

1.2.4   Does the institution offer self-financed programmes? If 'yes', list them and indicate how they differ from other programmes, with reference to admission, curriculum, fee structure, teacher qualification, salary etc.

All the programmes offered by the institute are self financing. The following is the list of programmes offered in the institute:

UG (B.E) Programmes (4 Year Course):

Sl. No.	Programme Name
1	Electronics and Communications Engineering
2	Computer Science and Engineering
3	Information Science and Engineering
4	Telecommunication Engineering
5	Mechanical Engineering
6	Civil Engineering
7	Electrical and Electronics Engineering

PG (M.Tech) Programmes (2 Year Course):

Sl. No.	Programme Name	Department Name
1	Computer Science and Engineering	Department of Computer Science and Engineering
2	Computer Networks	Department of Computer Science and Engineering
3	Digital Communication	Department of Telecommunications
4	VLSI and Embedded Systems	Department of Electronics and Communications
5	Machine Design	Department of Mechanical Engineering
Other PG Programmes		
6	Master of Business	Department of Management Studies
7	Master of Computer Applications(MCA)	Department of Master of Computer Applications

Doctoral Programmes:

Sl. No.	Department
1	Electronics and communication
2	Computer Science
3	Mechanical Engineering
4	Electrical and Electronics
5	Management Studies
6	Computer Applications
7	Physics
8	Chemistry
9	Mathematics

UG Admissions: Admissions are as per the regulations of government of Karnataka. 45% of seats are from CET, 30% from Comed-K and 25% are management quota. The fee structure for the UG programme is as follows:

Sl. No.	Programme	CET/PGCET	Comed-K/Management
1	UG	47,000/-	1,70,000/-

PG Admissions: Admissions are as per the regulations of government of Karnataka.

MBA /MCA: 50% of seats are from PGCET (Government) , 50% is through management quota. The fee structure for this programme is as follows:

Sl. No.	Programme	PGCET/KMAT/CMAT	Management
1	MBA/MCA	50,000/-	50,000/-

M.Tech: 80% of seats are from PGCET (Government), 20% is management quota.

Sl. No.	Programme	PGCET/KMAT/CMAT	Management
1	M.Tech	60,000/-	60,000/-

The qualification of teaching faculty and their salary are as per AICTE norms.

1.2.5   Does the college provide additional skill oriented programmes, relevant to regional and global employment markets? If 'yes' provide details of such programme and the beneficiaries.

YES. The engineering departments of the Institution offer various certificate/skill development courses. The objective and the goals of the additional Programmes are as follows:

- In line with students need and demands from Industries, the Institution offers various certificate courses to UG students. The courses include technical as well as soft skill development Programmes.
- Some courses are designed in house taking in to account future and present needs of the industry and research organizations, and few are designed to the meet the specific needs of industry by collaborating with the industry. Some courses are given to enhance skills of the students so as to be successful in qualifying examinations like GATE, GMAT, GRE, TOEFL etc. The Institution has an Entrepreneur development cell. This cell conducts seminars and workshop for the students to inculcate entrepreneurship at early age of his/her life when cost of opportunity is very less.

Sl. No.	Skilled Programmes / Training Courses	Duration	Student group(semester)	Branch
1	Prepare Program	1 month	6 & 7	All branches
2	Applications and research directions in Big Data	1 Week	6,8,MTech	CSE,ISE,MCA
3	Programming lab	3 months	4	CSE,ISE
4	Android Development	1 week	4	

5	Animated Information visualization	1 day	6	
6	Cadence ORCAD	3 day	6	ECE
7	SDN	2 days	6	
8	Certification course "NCFM"	3 months	2	MBA
9	Certification course on Customer Relationship Management	2 months	3	MBA
10	Certification course on Total Quality management	1 month	2	MBA
11	Life Skill Classes	2 months	All semesters	MCA
12	Mobile App Development	1 month	5	MCA
13	DB2-IBM	3 weeks	5	CSE,ISE,MCA
14	Cloud Infrastructure services EMC-2	2 weeks	6	CSE,ISE,MCA
15	Aptitude training	1 week	5	MCA

1.2.6 Does the University provide for the flexibility of combining the conventional face-to-face and Distance Mode of Education for students to choose the courses/combination of their choice" If 'yes', how does the institution take advantage of such provision for the benefit of students?

No provision for combining the conventional face-to-face and Distance Mode of Education under VTU.

1.3 Curriculum Enrichment

1.3.1 Describe the efforts made by the institution to supplement the University's Curriculum to ensure that the academic programmes and Institution's goals and objectives are integrated?

The students are exposed to the latest developments in the technology and engineering fields through guest lectures, seminars, workshops which are organized in the Institution. They are also encouraged to participate in similar activities like the paper presentations, seminars and workshops organized by other Institutions which give them a platform to present their innovative ideas.

If there are new developments and technological modifications, they are brought to the notice of students through student notice boards, class room discussions etc, Industrial visits are arranged for the students to make them understand and correlate the theoretical aspects they are learning in the class room to actual practices of the Industries. The students are encouraged to undergo industrial training during vacation period and also motivated to take up their projects related to real time practical problems. Additional activities such as conducting new experiments/labs and taking contents beyond syllabus enrich the curriculum. All these activities are organized with a holistic approach to prepare our students to face the challenges of technology changes and work in tune to the vision and mission of the Institution.

1.3.2   What are the efforts made by the institution to enrich and organize the curriculum to enhance the experiences of the students so as to cope with the needs of the dynamic employment market?

The College, being affiliated to the University, does not have the option of formulating its own curriculum. Nevertheless, a sincere effort is made to modify and enrich the curriculum to suit the intellectual requirements of students in the fast paced life through the involvement of faculty, department and other stakeholders.

University level: Faculty Members who are on Board of Studies take initiative to modify, enrich and organize the curriculum. As per UGC guidelines, teachers of our college, who are on Board of Studies have stressed the need to introduce courses relevant to regional and global needs.

At Institution level: The College has taken measures to cater to the global market needs based on the true assessment of strength and services offered in the institute. To develop the required skills, brain storming sessions are held for the faculty to design the tools in the areas of spoken English, use of computers and providing in-depth knowledge in the respective subjects. Under the aegis of Vocational Studies, special training and tailor made orientations in the management, research and development arena are conducted to enable the students to achieve the global standards. The college has designed certificate courses in technical certificate programmes, value added courses beyond the curriculum with the help of Industry experts. Quality English communication and soft-skill programmes to prepare the students for the dynamic employment market. All the departments in the College conduct seminars, workshops, group discussions and field visits to enrich the curriculum.

The institution also has department wise best practices for the upgradation and continuous enhancement in knowledge of the students in the various fields of their departments.

Best Practices of the Departments :

- Identification of academically weak students and conducting remedial classes so as to raise the academic performance.
- Identification of above average students and motivating them towards excellence in their academic performance.
- Organizing guest lectures, workshops to students and faculty to create industry academia interface on regular basis.
- Motivating students to take up innovative projects and mini-projects.

1.3.3 Enumerate the efforts made by the institution to integrate the cross cutting issues such as Gender, Climate Change, Environmental Education, Human Rights, ICT etc., into the curriculum?

To integrate the crosscutting issues like gender, climate change, environment education, human rights, ICT etc. positively into the curriculum, the Institution has established various activities/committees

Gender Sensitization: Panel Discussion on Women's Rights, Seminars on Gender Equity are organized to create awareness about Gender issues and promote gender equity. Students Welfare Committee and Redressal Grievance Cell to handle the sensitive issues regarding women's right and security. Women Empowerment Cell addresses the issues related to women and makes the Institution campus a safe place for the women students. To boost the morale of the women students, great women and their achievements are enlightened during the Women's Day.

Climate change: Expert lectures on Global warming, Ozone layer depletion, and Carbon emission organized to spread the message across all sections of society.

Environmental Education: Environmental studies subject is taught in the university syllabus. The College celebrates World Environment Day, Earth Day, Ozone Day and other important days to drive home the significance of environment. Banners prohibiting the use of polythene bags are put up at various locations in and around the campus. Environment awareness campaigns organized in local schools. SWACHAA

BHARAT andolan is being actively carried. Field trips to e-waste management organizations are conducted.

Human rights: Legal Cell, Anti-Ragging cell, Grievance Redressal Cell are active in the college campus. Talks on Consumer Rights, women's rights are organized and Human Rights Day is observed.

ICT: The College has state-of-the-art infrastructure for imparting computer training. ICT is included in the curriculum of PG as well as UG classes of all computer courses and classes of some interdisciplinary courses. This foundational knowledge of computers and technology training makes the students a part of global information system and enhances their employability.

1.3.4   What are the various value-added courses/enrichment programmes offered to ensure holistic development of students?

- moral and ethical values
- employable and life skills
- better career options
- community orientation

Certain specially designed programmes enrich the curriculum by catering to the need for the development of various skills of the students. Our mission being to ensure holistic development of students, the college offers the following value added programmes:

Inculcation of Moral and Ethical values:

- The Students are motivated by way of special lectures so as to instill moral and ethical values in them.
- Yoga and meditation programmers are arranged.
- Self-realization Programmes in collaboration with the Art of Living are organized.
- Spiritual discourses at regular intervals.
- Community orientation programmes such as Blood Donation camps, Visits to Old Age Homes, School for Blind are organized.

Employable and Life Skills: The Placement Cell consist of Soft skill Trainers and Language Trainers. The Placement executive understands that the need of communication skills is vital for the students for better career options. Therefore, the

college organizes Communication Skills workshops under the aegis of School of Communications. Group Discussions, Power Point Presentations, Resume writing and Declamation Contests are held at regular intervals both in regional and English language in the institution. Career Counseling workshops are organized to orient the students. It is a regular practice of the institution to invite expert resource persons to conduct workshops on the development of interview competence among the students. Students are also allotted different responsibilities in organizing various events and activities such as cultural programmes, competitions, seminars, workshops etc. In this way, they improve their team building and organizational skills.

Better Career Options: The orientation programmes are conducted to enlighten students on career options. Experts from Industry, Alumni interact with students and provide details on competitive exams (GRE/GATE etc..). Students are provided training on the R & D labs enabling them to explore research.

Community Orientation: Institution regularly organizes Blood Donation Camp, AIDS awareness, Drug abuse, Environmental awareness Programmes, and observes World Water day, Global warming in collaboration with NSS, Rotary Club, Lions Club and Jaycees to instill social consciousness among students. Environment friendly initiatives, drive against female feticide and other social outreach activities like visits to old age homes, leper colony, School for the blind are organized to give the students a taste of real life situations and become socially responsible citizens. The innovative certificate courses and the extension activities instill social consciousness and ensure holistic development of student.

1.3.5   Citing a few examples enumerate on the extent of use of the feedback from stakeholders in enriching the curriculum?

The college has a formal mechanism to obtain feedback from students regarding the curriculum. Course exit survey questionnaire is prepared for every course and distributed to the students at the end of the semester. The feedback is assessed by the faculty and the inputs are discussed in the academic council committee.

Questionnaires for different stake holders viz. parents, alumni, industry, are prepared, approved by the department committee and circulated to the stakeholders.

The advisory body of the college comprises of experts from internationally reputed industries, and reputed institutes like IISc and IIT's. We solicit their feedback to improve curriculum. Opinions gathered are recommended to the University through the

Syllabus committee members. This helps in enriching the curriculum to a significant extent.

1.3.6 How does the institution monitor and evaluate the quality of its enrichment programmes?

The institution is keenly interested in enhancing student's employability through high quality enrichment programmes. Students feedback is periodically obtained and modifications are incorporated. The academic council regularly monitors enrichment activities, and in turn suggests the principal regarding outcomes and feedback of Programmes. The Institution also makes sure that the Programmes offered include contribution to nation building, fostering global competencies among students, inculcating a value system among students, promoting the use of technology and quest for excellence. Based on the performance in the Internal tests and university exams, it may be mentioned that the enrichment courses, remedial and ICP programmes have contributed to better performance.

1.4 Feedback System

1.4.1 What are the contributions of the institution in the design and development of the curriculum prepared by the University?

The Institution is affiliated to VTU, Belgaum and therefore there is no scope for framing the curriculum. However, a systematic mechanism is followed in the Institution to look after the affairs of the feedback process and analysis through the Syllabus committee member/Board of Studies. HOD's consult faculty members and students and collect their opinion on the syllabi. They analyze the facts and discuss the changes required to bring them into contemporary system. Faculty members keep themselves abreast of the changing and global trends by attending refresher courses and participating in seminars. In addition to this, the university expert (LIC/DTE) teams visit the Institution when there is a purpose of extension of affiliation and affiliation of new courses. During the inspection process the university expert team interacts with students and the faculty on several aspects of availability of facilities and teaching learning process. Feed back is obtained by the committee and the same is conveyed to the university.

1.4.2 Is there a formal mechanism to obtain feedback from students and stakeholders on Curriculum? If 'yes', how is it communicated to the University and made use internally for curriculum enrichment and introducing changes/new programmes?

The Institution encourages various stakeholders such as students, parents, alumni and industry people to give their feedback and communicates them to the university. The Institution collects all feedbacks and communication in the form of questionnaires and forms, analyze and develop areas of improvement on it.

Parents

Regular parent – Teacher meetings are organized to solicit parents concerns and views on the curriculum.

Students

The class committee meetings which will be held periodically provide a platform for the students to discuss academic and non-academic issues. Difficulties experienced by the students are noted and the bridge courses and remedial classes are conducted for effectively helping the students understand the curriculum.

Alumni

The alumni who visit Institution and also through E-Mail/Social Network give constructive suggestions on helping the students achieve greater focus and improving themselves.

Employers/ Industries

Each department has departmental advisory body which invariably has experienced personnel from industry as members along with academicians. Their valuable suggestions during meetings in improving the curriculum helps to bridge the gap between industry institute. The Institution also collects feedback from the recruiters on the performance of students. This enables the Institution to understand what industry expects from the students and act accordingly.

Academia

Academicians visit the institution from all over India and also from abroad. Their views on the curriculum are obtained and efforts are made to incorporate the same. The Institution takes part in the curriculum development process through appropriate analysis of feedback given by the various stake holders from time to time and makes suggestions for modifying curriculum.

1.4.3   How many new programmes/courses were introduced by the institution during the last four years? What was the rationale for introducing new courses/Programmes? Any other relevant information regarding curricular aspects which the college would like to include.

In consultation with the Industry experts, academicians, taking cognizance of global employability, the governing council of the Institution decided to commence following Programmes. The new Programmes introduced in the last 4 years by the Institution are

Sl. No.	Name of the Programme	Department	Year of Introducing
1	Civil Engineering (B.E)	Civil	2011-12
2	Machine Design (M.Tech)	Mechanical	2013-14
3	Doctoral Programme in Physics	Physics	2013-14
4	Doctoral Programme in Management Studies	MBA	2010-11
5	Doctoral Programme in Computer application	MCA	2013-14
6	Doctoral Programme in Mechanical Engineering	Mechanical	2015-16
7	Doctoral Programme in Electrical and Electronics	Electrical and Electronics	2012-13
8	Doctoral Programme in Computer Science	Computer Science and Engineering	2012-13

The rationale for introducing new courses in the institute is

- To develop skills of manpower in specialized fields.
- To encourage research and development among the students.
- To develop center of excellence in various streams of engineering.

CRITERION II: TEACHING - LEARNING AND EVALUATION

2.1 Student Enrollment and Profile

2.1.1 How does the college ensure publicity and transparency in the admission process?

Publicity in media: From time to time its achievements and activities have been published in the college website, national and International social network, print and electronic media. Thus there is sufficient scope for awareness about the institute and its activities to the public at National and International level.

Alumni: The Institute has a strong Alumni network working in all facets of engineering, business, and government organizations across the country and in abroad. The alumni are one of the major ambassadors for CMRIT in promoting admissions and placements.

Website: The institute's website **http://www.cmrit.ac.in** presents plethora of information on institute, its infrastructure, faculty, student activities and admission details.

Information Brochure: The Institute's Brochure containing information on departments, faculty, infrastructure, placements, and achievements etc which also provides guidelines for admission seeking candidates and their parents.

Advertisements in bulletins of CET, COMEDK, AIMA etc.

Corporate CD gives the complete and details of the institution

Participation in education fairs

Sponsorship of events such as college fests, seminars / symposia / workshops

The Institute strictly adheres to the norms of AICTE/ State Government and its affiliating University, VTU for admitting students. Undergraduate Candidate's admission to the Institute is through Common Entrance Test (CET) of Karnataka Examination Authority (KEA), Consortium of Medical, Engineering, and Dental colleges of Karnataka (COMED-K) and Management Quota. Postgraduate students and research students are admitted through PGCET, KMAT, GATEetc. Seats allotted through counseling of KEA, COMED-K are admitted to the institute as per the norms of VTU. Complete transparency is maintained in the admission process.

2.1.2   Explain in detail the criteria adopted and process of admission (Ex. (i) merit (ii) common admission test conducted by state agencies and national agencies (iii) combination of merit and entrance test or merit, entrance test and interview (iv) any other)to various programmes of the Institution.

Admission to Bachelor of Engineering

MGMT 25 %
Any entrance test in India. Indian and NRI students

CET 45 %
Admission through entrance test conducted by Govt. of Karnataka. (Karnataka students)

COMEDK 30 %
Admission through entrance test conducted by association of private colleges. Both Karnataka & Non Karnataka students.
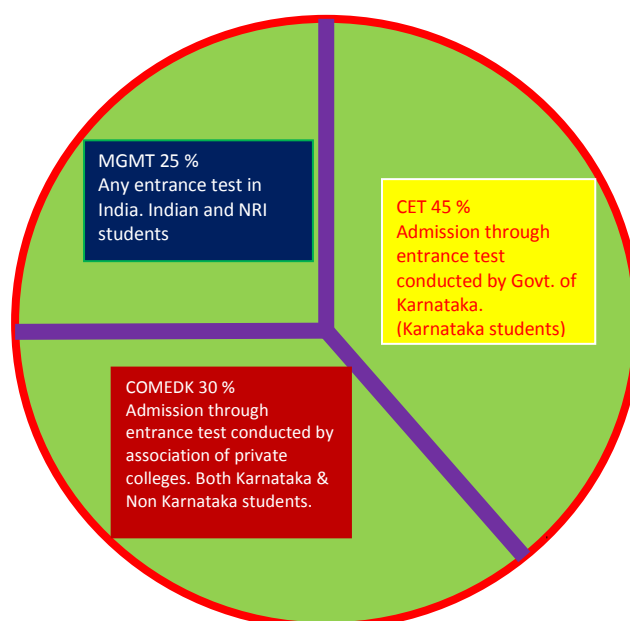
Up and above the allotted intake, Supernumerary quota (SNQ) – 5% and Persons of Indian Origin (PIO) -15% is admitted

Admission to Undergraduate Programme: 45% of the students are admitted through Common Entrance Test (CET) of Karnataka Examination Authority conducted by Government of Karnataka. 30% of the admissions are through the entrance conducted by Consortium of Medical, Engineering, and Dental colleges of Karnataka (COMED-K). The rest of the 25% admissions are through the Management Quota.

Admission through KEA: It is for candidates of Karnataka domicile only. A candidate who has passed the Qualifying Exam (12thStd. /PUC) with Physics and Mathematics as compulsory subjects along with Chemistry / Bio- Technology / Biology / Electronics / Computer Science as optional subjects with English as one of the languages of study and obtained an aggregate minimum of 45% marks in the

optional subjects is eligible for Engineering / Technology courses. 40% of marks in case of SC, ST, Category-I and OBC Category candidates is considered. Physics and Mathematics are compulsory subjects along with Chemistry or Biotechnology or Biology. Based on the performance of the candidates in Physics, Chemistry and Mathematics subjects in both Common Entrance Test and the Qualifying Examination by taking the marks in equal proportions, the Engineering rank list will be prepared and published. Based on their rank, students are selected for admission.

Admission through COMED-K: Both Karnataka and non-Karnataka candidates can write COMED-K exam. The qualifying examination prescribed for admission to Bachelor of Engineering is PUC or 10+2 higher secondary or equivalent Examination recognized by State / Central Government. The last two years of study shall comprise of Physics, Chemistry and Mathematics (PCM) with English as a compulsory subject. The General Merit Candidates should have passed with a minimum aggregate of 45% marks (40% in respect of SC, ST and OBC Candidates of Karnataka state) in Physics, Chemistry and Mathematics (PCM) and should have passed these subjects individually. Physics and Mathematics are compulsory subjects along with Chemistry or Biotechnology or Biology or any other Technical vocational courses as one of the optional subjects.

Admission through Management Quota: Candidates should have passed with a minimum aggregate of 50% marks in Physics, Chemistry and Mathematics (PCM) and should have passed these subjects individually. Physics and Mathematics are compulsory subjects along with Chemistry or Biotechnology or Biology or any other Technical vocational courses as one of the optional subjects.

Admission under PIO Quota : Persons of Indian origin are offered 15% seats over and above regular intake.

Admission under SNQ Quota: 5% seats are offered through CET for poor and meritorious students over and above regular intake.

Admission to Post-Graduate Courses: For admission to M. Tech, candidates need to qualify PGCET examination conducted by KEA or GATE. Candidates with a B.E/ B. Tech. degree in the relevant discipline with at least 50% marks in aggregate are eligible.

Admission to MBA/MCA: Admission is through competitive entrance tests KMAT/CMAT. It is open to candidates who have a 3-year bachelor's degree from a recognized university with not less than 50% of the marks in aggregate of all the years of the degree examination. In case of candidates from Karnataka belonging to

SC/ST and Category-1, the aggregate percent of the marks of all the years of the qualifying examination shall not be less than 45%. For MCA, candidates who have passed a 3 year bachelor's degree from a recognized university with not less than 50% of the marks in aggregate of all the years of the degree examination with Mathematics/ Statistics/ Computer Science/Computer programming/ Computer Applications/ Business Mathematics/ Business Statistics as one of the optional subjects/ electives at degree level are eligible. In case of candidates from Karnataka belonging to SC/ST and Category-1, 45% of the marks in that subject are eligible for admission.

M.Sc. (Engg.) by Research and Ph. D.: Candidates are required to qualify ULRAT examination conducted by Visvesvaraya Technological University.

2.1.3   Give the minimum and maximum percentage of marks for admission at entry level for each of the programmes offered by the college and provide a comparison with other colleges of the affiliating university within the city/district.

Department	Admission through government quota (CET)		Admission through COMEDK quota		Admission through management quota	
UG	**Minimum % of marks**	**Maximum % of marks**	**Minimum % of marks**	**Maximum % of marks**	**Minimum % of marks**	**Maximum % of marks**
Electronics and communication	62	97	54	97	47	93
Computer Science	61	99	60	98	46	93
Information science	66	97	55	93	45	90
Telecommunication	45	97	45	84	52	58
Electrical and Electronics	63	93	58	84	56	82
Mechanical	65	97	46	89	50	78
Civil	55	96	46	96	45	66
PG						
MBA	47	85	-	-	50.51	84.98
MCA	50	82	-	-	52	78.45
MTECH VLSI & Embedded systems	61	62	-	-	--	--
MTECH Digital Electronics	--	--	-	-	--	--
MTECH Digital communication	66.9	80	-	-	--	--

MTECH Computer science	58.59	71.74	-	-	64.04	71.25
MTECH Computer Networks	72.53	72.53	-	-	77.7	77.7
MTECH Machine design	56.91	72.98	-	-	65.24	65.24

As per the online statistics available on the internet, our college is rated one of the top colleges in the region.

2.1.4 **Is there a mechanism in the institution to review the admission process and student profiles annually? If 'yes' what is the outcome of such an effort and how has it contributed to the improvement of the process?**

Yes, the institute reviews its admission to all programmes annually. The highest and the lowest ranks in all categories (CET -GM, SC, ST, CAT-1, CAT-IIA, CAT-IIB, CAT-IIIA, CAT-IIIB and COMED-K) for all Programmes are reviewed to analyze the variation in the quality of students joining the institute. It is an indicator of the student's preference to the institute over others in the region, and the steps that need to be taken to further improve our position. The trend in the last 5 years shows improvement in quality of admissions where in better rank students are joining our institution.

2.1.5 **Reflecting on the strategies adopted to increase/improve access for following categories of students, enumerate on how the admission policy of the institution and its student profiles demonstrate/reflect the National commitment to diversity and inclusion**

∗ SC/ST

∗ OBC

∗ Women

∗ Differently abled

∗ Economically weaker sections

∗ Minority community

∗ Any other

SC/ST and OBC: Benefit to the weaker sections of society is provided as per the policies of the State government and students belonging to the SC/ST or OBC

categories are admitted as per the norms of the State government. SC/ST students are provided with Scholarship or Fee reimbursement (Post Metric Scholarship). Candidates of SC, ST & CAT-I (Parents annual income less than or equal to 2.5 Lakhs) and for CAT-IIA, IIB, IIIA, IIIB (Parents annual income less than or equal to Rs. 1lakh) are provided fee concession and reduction in boarding and lodging charges.

There is a large women student population in the campus and the institute is gender unbiased.

Differently abled: 3%. Seats are reserved as per state government rules.Persons with disabilities are provided special attention and care in the institute as per the state government guidelines.

Economically weaker sections: Financially weaker students are supported with Merit and means scholarship of CMR Jnanadhara Trust. Deserving students have been awarded scholarships worth 7 lakhs.

Outstanding achievers in sports and extracurricular activities: Institute offers excellent facilities and opportunity for excelling in sports and extracurricular activities. Many of our students are representing VTU teams. Well established Indoor and Outdoor sports facilities enable us to organize university sports tournament. Our national level technical and cultural extravaganza CULTURA is known across the state as a platform to showcase skills and talents.

2.1.6   Provide the following details for various programmes offered by the institution during the last four years and comment on the trends. i.e. reasons for increase / decrease and actions initiated for improvement.

Branch	2016-17			2015-16			2014-15			2013-14			2012-13		
	No. of applications	No admitted	Demand ratio	No. of applications	No admitted	Demand ratio	No. of applications	No admitted	Demand ratio	No. of applications	No admitted	Demand ratio	No. of applications	No admitted	Demand ratio
UG															
ECE	240	202	1.18:1	241	219	1.1:1	225	211	1.06:1	180	175	1.01:1	120	117	1.02:1
TCE	60	46	1.30:1	89	82	1.08:1	98	91	1.07:1	120	117	1.01:1	110	100	1.05:1
CSE	235	182	1.29:1	221	194	1.13;1	180	167	1.07:1	130	122	1.03:1	120	115	1.04:1
ISE	145	123	1.17:1	135	122	1.1;1	102	94	1.08:1	105	97	1.08:1	60	58	1.01:1
EEE	98	92	1.06:1	98	92	1.06:1	125	118	1.05:1	120	115	1.03:1	120	116	1.02:1
CIVIL	85	74	1.14:1	115	11	1.03:1	120	108	1.1:1	125	122	1.01:1	120	113	1.06:1

MECH	98	94	1.04:1	131	111	1.18:1	115	104	1.10	120	117	1.02:1	120	115	1.04:1
PG															
MBA	115	92	1.25:1	101	89	1.13:1	75	73	1.01:1	70	61	1.07:1	120	107	1.12:1
MCA	85	50+24	1.14:1	87	70	1.24:1	70	66	1.03:1	85	79	1.06:1	120	112	1.08:1
MTech-DE	--	--	--	17	15	1.13:1	15	12	1.02:1	15	12	1.02:1	18	17	1.01:1
MTech-DC	8	5	1.6:1	11	9	1.2:1	24	18	1.04:1	24	19	1.04:1	24	22	1.01:1
MTech-VLSI	4	2	2:1	23	21	1.09:1	18	15	1.02:1	15	13	1.01:1	18	16	1.01:1
MTech-CNE	4	2	2:1	15	12	1.2:1	15	13	1.01;1	18	14	1.01:1	15	13	1.01:1
MTech-CSE	10	7	1.42:1	21	19	1.1:1	18	17	1.01;1	24	23	1.01:1	24	24	1:1
MTech-MD	12	8	1.5:1	16	13	1.2:1	18	14	1.01:1	18	14	1.02:1			

Actions initiated for improvement:

- Establishing regional centers in various states for admissions.
- Advertising our performance through social media and newspapers.

The institute is a premier institution in the state and is well sought after by the students during CET and COMED-K counseling. All the seats are filled within the first few days of counseling.

2.2 Catering to Student Diversity

2.2.1 How does the institution cater to the needs of differently- abled students and ensure adherence to government policies in this regard?

Students belonging to differently abled categories need special care and attention. The academic progress of all students is monitored through the Proctorial system. The institute has a strong Proctorial system, where a group of students are assigned to a faculty, called their proctor - is a parent away from home. The proctor monitors their performance, counsel the students, advices them, inform them about the guidelines of the institute and informs parents about their ward's progress. The socially and economically disadvantaged students are supported with scholarship and fee reimbursement, concession facilities to enable them to perform well in their course work. Book bank facility and study materials are also provided to improve their performance. Special classes are conducted for slow learners and weak students after the class hours. Students failing in a subject are encouraged to attend special classes during the week ends. All these measures have improved the result

of the students substantially. Disable friendly Ramp ways at appropriate places, facilities in toilets are made available for such students for easy movement. Preferential treatment is given in the central library. Special arrangements are made at the time of examination.

2.2.2 Does the institution assess the students' needs in terms of knowledge and skills before the commencement of the programme? If 'yes', give details on the process.

YES. Before the commencement of First Year classes, objective type test for the students is conducted to check their proficiency in English and Basic Sciences. The Institution organizes language classes which benefits rural students. At the beginning of the semester, the first lecture of each course is devoted to motivate the students to develop the proactive attitude towards the subject. During the warm-up period, the students needs, the knowledge and skills are improved by conducting various bridge courses. In addition to this, special classes are organized for the lateral entry students who are admitted in II Year after their diploma course.

2.2.3 What are the strategies adopted by the institution to bridge the knowledge gap of the enrolled students (Bridge/Remedial/ Add-on/Enrichment Courses, etc.) to enable them to cope with the programme of their choice?

Low performers are identified through their internal test performance and also through periodic counseling. Intensive coaching programme is conducted for them to improve their performance. In this programme, teachers interact with low performers on a one to one basis and provide all help through additional teaching, assignments and tests. Failed students in a course are enrolled for remedial programme. The remedial classes are conducted adjusting with student's timetable. Teachers will personally interact with them on a one to one basis and help them to perform better. The diploma students who join as lateral entry in third semester need to complete bridge courses in mathematics. These classes are usually planned after college hours, on weekdays, Saturday afternoons and on Sundays. Some Departments offer add-on courses for the students during the summer break to enhance their technical skill sets.

Sl. No.	Course Name	Department
1	Bridge Mathematics I (For Diploma Students)	Mathematics
2	Bridge Mathematics II (For Diploma Students)	Mathematics

3	**Remedial Classes :** Engineering Physics Mathematics I/II/III/IV Electronic Circuits Micro Processor Basics of Electrical Engineering Network Analysis E & V MSM BTD	Physics Mathematics CSE & ISE EEE ECE & TCE CIVIL Mechanical
4	**Add-on Courses:** Programming with C/C++/JAVA Python Programming	CSE/ISE CSE/ECE

2.2.4   How does the college sensitize its staff and students on issues such as gender inclusion, environment etc.?

The Institution holds the tradition of imparting holistic education with the emphasis on ethical and moral principles. The Institution is a coeducational Institution which sensitizes its staff and students on issues such as gender inclusion, environment etc., through workshops on Gender Issues, celebrations of International women's day, World Environment day,Swachh Bharath Abhiyan etc. The Management is supporting the women education by offering additional books to the girl students, waiving the fees for girl toppers etc. Girl students are provided separate hostels, waiting halls and playgrounds. 24x7 security is provided in the campus. Lady faculty members acting as counselors for girl students are available round the clock for guidance and immediate help. The Institution organizes various health awareness camps and blood donations camps through Red Cross Society. Rotary club. Activities like tree plantation drives, maintenance of green belts, and drive against the use of polythene bags are undertaken regularly. Apart from this, Environmental studies is included in the curriculum. Course on Constitution of India enlightens women about their rights.

2.2.5 How does the institution identify and respond to special educational/ learning needs of advanced learners?

Advanced learners are identified through their performance in internal tests, interaction in class room and laboratory, their fundamental knowledge, concept understanding and articulation abilities etc. The Institute fosters independent learning that contributes to their academic and personal growth.

Students with research interest are provided opportunity to work with faculty on their research work. Students are also given an opportunity to work on live projects in both government and non government firms.

For interdisciplinary student research, management provides funding for their project.

SAP –Under Student Assistantship program, bright students are identified based on their performance and provided financial assistance.

Internship opportunities have been provided to the students by various multinational companies like Texas instruments, Infosys, TCS etc.

- Students are encouraged to publish their work and also to present it in conferences. They are encouraged to refer reputed journals such as IEEE available in the institute.

- The leadership and team building skills are nurtured and groomed through organization of programmes, conferences, symposia etc, which are

- Conducted regularly by all departments. Institute organizes competitions/symposia at inter-departmental, state and national levels for students.

- Students are encouraged to work on industry defined problems and participate in competitions at national and international levels.

- Students are encouraged to take up competitive exams. Reference books for GRE, GATE, CAT, MAT, GMAT, TOFEL, UPSC civil services Examinations etc., are maintained in Library.

- Student activity clubs such as Technical Club, professional student branches such as IEEE student branch in the institute provides a platform for these students to augment their proficiency in their area of interest.

- Technology Incubation Centre is established in the Institute. Through this centre, students are given entrepreneurship training.

- Technical activities are organized by the departmental student clubs.

2.2.6   How does the institute collect, analyze and use the data and information on the academic performance (through the programme duration) of the students at risk of drop out (students from the disadvantaged sections of society, physically challenged, slow learners, economically weaker sections etc. who may discontinue their studies if some sort of support is not provided)?

- Internal evaluation tests of Institution, University result analysis and regular interaction between teacher mentor and student help to get the information about students from the disadvantaged sections of society, physically challenged, slow learners, economically weaker students.

- Teacher mentor interacts regularly with the students assigned to them and find out the academic performance of student and probable reasons for the same. He/she co-relates the result with the categories of the student viz. section of society, physically challenged, slow learners and economically weaker students.

The Institution uses the data as follows-

Physically Challenged

- Teacher makes special arrangements to teach the syllabus contents as per the convenience of the respective students.

Slow learners

- The Institution arranges remedial lectures for slow learners in all the subjects.

- Subjects are taught as per requirement of slow learners (repetitive Exercises/ assignments / tests).

- Teacher informs the parents regarding improvement in the performance of their ward on regular basis.

- Attempts are made by the teachers to give personal attention to these students.

- Specially developed question banks and scheme of solutions are given.

- Library maintains solved question papers (prepared by faculty) of previous years.

- Participative and progressive slow learners are given chance to improve team work to motivate and appreciate their efforts.

- ICP is organized for low performers.

Economically Weaker Section

- Tuition Fee Weavers Scheme is provided.

- Deferred fee payments are permitted for needy students.

- Institution provides information about government and NGO aids, scholarship etc.

- Institution offers book – bank facility.

- Scholarships through CMR Jnanadhara Trust.

Disadvantaged sections of society

- SC/ST/OBC/minority students are given benefits of reservations in admission and scholarship as per government norms.

- Institution provides information about freeships, BCM scholarship, different government schemes and education loan facilities to the students and their parents.

- Free book bank facility is provided to SC/ST students.

Counseling /Mentoring

Senior faculty and professional counselors counsel the students in distress and give them moral support to boost the morale of students in distress. Joint Interaction with parent and student enables us to realize the student's situation. Personalized counseling induces a sense of well being and enhances student's confidence level.

2.3 Teaching-Learning Process

2.3.1 How does the college plan and organize the teaching, learning and evaluation schedules? (Academic calendar, teaching plan, evaluation blue print, etc.)

The Teaching Learning process is the back bone of the academic system of any Institution. CMRIT gives utmost importance to teaching learning process so that the communication reaches to all the students of different groups.

Academic Calendar:

- The Institution prepares academic calendar with respect to the university academic schedule before starting of the semester.
- The calendar gives the information of the institution academic schedules and specifies holidays and various events.
- Apart from the Institution academic calendar, the individual departments organize their teaching plans, various co-curricular and extracurricular activities in the department calendar. The class time table is prepared, displayed at the departmental notice board, and circulated to the students.

Teaching Plan:

Subject allotment:

- Before starting of semester head of the department takes subject preferences from the faculty and based on this preference dean for academic along with HOD and CRC members makes the subject allotment for the ensuring semester.
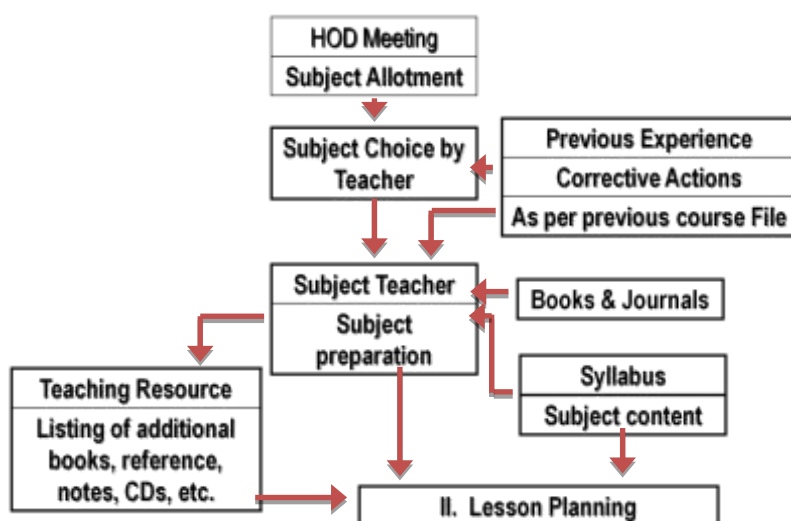
- After the subject allocation each faculty follows a lesson plan, which contains the details regarding the objectives to be achieved, details of the contents to be covered, the kinds of teaching aids to be used in the class room.
- Faculty also prepares a detailed course file which contains lesson plan, question bank, assignments, scheme and solutions etc. and this course file is monitored by head of the departments along with CRC members.
- Faculties are maintaining work dairies which contains day to day class activity.
- Apart from regular lectures and assignments guest lectures will be provided to students on timely basis.
- All the faculty will upload their course materials onto their web pages before commencement of the semester there by making available to students.

CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Telecommunication

SEMESTER	:VIII		NAME OF THE FACULTY	: Mr.Umesh
BRANCH	: TCE		DATE OF COMMENCEMENT	: 2.02.2014
SUBJECT	: OFCN		DATE OF CLOSING	: 15.5.2014
SUBJECT CODE	:		CLASS STRENGTH	: 69
NO OF HRS/WK	: 4		TOTAL HRS	: 60

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1	1/1	1.02.12	Unit-1–INTRODUCTION TO OPTICAL NETWORKS:	Board, chalk, duster		
2	2/1	2.02.12	Telecommunication networks,	presentation		
3	3/1	4.02.12	First generation optical networks,			
4	4/1	6.02.12	Multiplexing techniques, Second-generation optical networks,			
5	5/1	8.02.12	System and network evolution. Non-linear effects SPM	Articles		
6	6/1	9.02.12	CPM, four wave mixing, Solutions.			
7	1/2	11.02.12	Unit -2COMPONENTS:		Assignment- I	
8	2/2	13.02.12	Working of Couplers 3 and 4 port couplers	Board, chalk, duster		
9	3/2	15.02.12	isolators and Circulators			
10	4/2	16.02.12	Working of an isolators and Circulators			

Sample lesson plan format

- All faculty members use attendance register for the theory as well as laboratory courses handled by them. The attendance register contains details of students register number, name, attendance details, period wise syllabus coverage, periodical test marks, attendance percentage.
- Internal marks are calculated based on their performances in tests and assignments. Portion coverage is monitored by HODs and in case of any deviation, special classes are planned.
- The evaluation of students is done based on the periodical tests and is brought to the knowledge of the students by issuing the answer sheets with their comments and their parents are informed through ERP system. When a student feels dissatisfied with marks allotted, he/she may seek the intervention of the HOD. If the problem still remains unaddressed, then the student may bring it to the attention of the principal.
- With respect to laboratories regular assessment is conducted in each lab class. It will help to have a thorough knowledge about the experiments which is conducted in the lab. Continuous assessment sheets for the labs are maintained by the faculties.
- Faculty should update **"Continuous Laboratory Assessment Sheets"** for every laboratory session, which is accountable for 12 Marks in Laboratory internal marks. Breakup is as follows;

o **Record- 02 Marks**

o **Viva voce - 7 Marks**

o **Performance - 03 Marks**

2.3.2 How does IQAC contribute to improve the teaching –learning process?

IQAC improves the teaching-learning process by

- Motivating faculty members periodically to attend Programmes on new and emerging technologies

- Ensuring access to computers, internet and computer-aided packages are available at the department and college level

- Introducing new age programmes relevant to the contemporary times in view of the feedback on curriculum obtained from students and other stakeholders like peers, research bodies, industry and parents

- Organizing Workshops on ICT based pedagogical skills to make the staff proficient in the use of ICT based tools and enhance teaching-learning process

- Feedback on Teachers is also obtained to assure the quality of teaching-learning.

- Video-conferencing with national and international experts organized to give a boost to the capacity of learning

- Visual aids used to enhance teaching-learning by making teaching-learning more student-centric

- To boost Industry – Institute Interaction, MOU's, Internships and placement opportunities through innovative training programmes.

- Nurturing research skills of faculty by offering incentives for publications, funding etc.

- The college helps in continuous improvement in teaching-learning by getting feedback from student regarding faculty performance. This in turn helps faculty to focus on their weak areas and improve on the same.

2.3.3   How is learning made more student-centric? Give details on the support structures and systems available for teachers to develop skills like interactive learning, collaborative learning and independent learning among the students?

All courses are made student - centric by laying stress on learning outcomes and making it more participatory and interactive. Various departmental societies have been established with an objective of tapping, nurturing and channelizing the energies of every individual student. The academic clubs of the departments organize activities to facilitate the creative academic quests of the students individually and collectively. All the departments organize various curricular and cultural events like quiz, poster-making, technical symposia, debates, etc., that help students in carving their personality. The Inter-college and interdepartmental academic programmes besides enhancing creativity bring a competitive edge to the academic endeavor of the students. The institute has Computer labs with internet facility, wi-fi, LCD projectors, smart boards, video- conferencing facility, web based Interactive tools (WACOM), EDUSAT, language lab and conference halls to develop interactive skills.
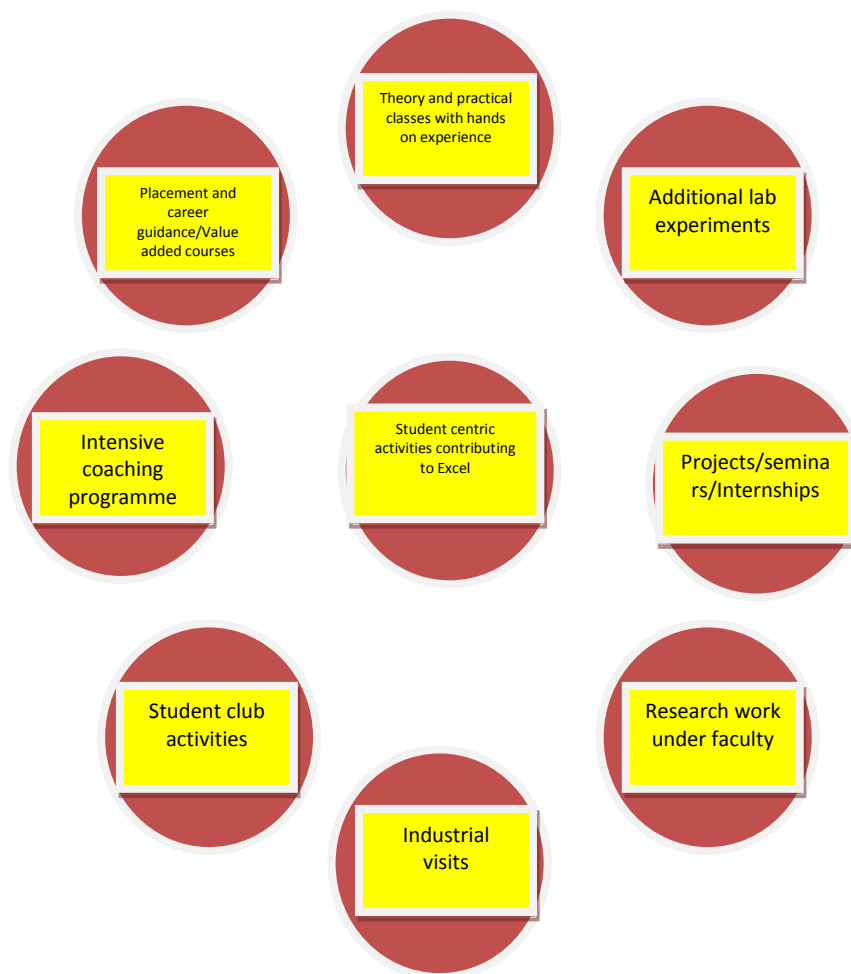
Student Centric Activities

During the period of study in the final year, real time projects are given to the students and both faculty and Industry/Research personnel guide them. Students perform a minimum of two laboratory courses per semester from 1st to7th semesters. All the laboratories have excellent facilities. For the experiments, detailed instruction manuals are provided. Faculty verifies the observation/record books which are maintained systematically. Two faculty members and one instructor are generally assigned for each practical class. CDs/ DVDs for specialized topics are also made available in the departments as well as in the library.

Laboratory refinement Committee emphasizes on application and experimentation of theoretical knowledge beyond the syllabus.

Technical Societies and Student chapters of National/International Associations are active and students are encouraged to present technical papers at National/ International Conferences. Peer interaction is done through inter collegiate student technical symposia which are organized and conducted by students and funded by the College. Every department arranges many Industrial visits providing an exposure to current trends and challenges.

Soft skill development programmes are conducted by career guidance and placement cell to promote interactive and independent learning.

2.3.4   How does the institution nurture critical thinking, creativity and scientific temper among the students to transform them into life-long learners and innovators?

The college promotes creativity amongst students by encouraging them to

- Work on mini and research projects

- Publish articles in the college magazine

- Participation in state level and national level project competitions.

- Assessment of Higher level Cognitive ability through MCQs and Quiz

- Participating in Academic activities at Regional and National level

- Organizing academic activities at Departmental and Intercollegiate Level

- Research paper presentation at the conferences

- Brainstorming sessions, Panel Discussions, Group discussions

- Entrepreneur programmes through Business plan activity

- Industrial visits

A major publication of the college is JNANADHARA the annual college magazine comprising technical and literary articles. This magazine is a platform for the budding engineers to unleash their prowess. Creative endeavors like articles, stories, poems by students find a place of prominence in the magazine. Apart from this, Various clubs function in the college and keep the college brimming with numerous activities that extend beyond syllabus and text books. Student-centric in nature, these clubs aim at tapping, nurturing and promoting the creative energy that bubbles out of every individual student. These activities enable students to identify their strengths and are exposed to latest R & D technologies and products. Students

are provided with opportunities to overcome their weakness if any. Almost all the departments actively engage themselves in arranging various types of co-curricular and cultural events like quiz, symposia, poster-making, article-reading, model making, debates, skits, choreographies etc., that help the students in their personality development.

2.3.5   What are the technologies and facilities available and used by the faculty for effective teaching? Eg.: Virtual laboratories, e-learning - resources from National Programme on Technology Enhanced Learning (NPTEL) and National Mission on Education through Information and Communication Technology (NME-ICT), open educational resources, mobile education, etc.

Institute has introduced innovative practices in training in addition to the lecture method to enhance academic quality. Use of modern teaching aids like LCD projectors, Internet enabled computer systems, web based interactive tools (WACOM), Wi-Fi enabled laptops are usually employed in classrooms and other student learning environments.

Virtual Lab facility is provided to CSE and ISE students.
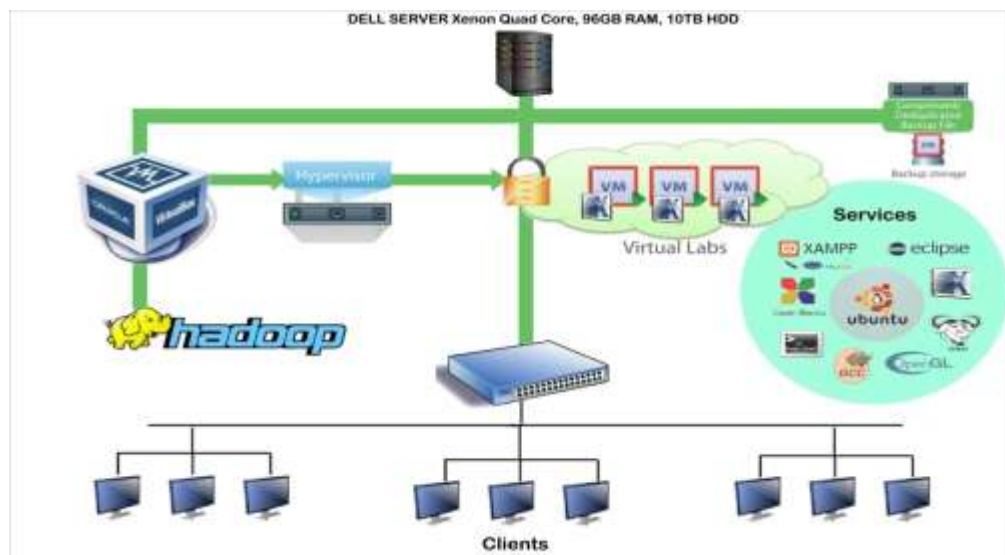
Virtual Lab Facility

Virtual machines for each Lab are created on main Server. Each student is given an account. All the programs executed by students in lab are stored on this server. Students can access their accounts over LAN in college and from hostels. The faculty has access to all the students account; hence he/she can track the progress of students anytime anywhere.

Faculty members use E-learning resources, working models, open course ware from national and international universities like IIT, MIT (USA) etc., for effective teaching. In addition, EDUSAT programme, Multimedia for various skills development is used. ICT usages such as SMART board with data storage facility, guidance to students to access NPTEL for learning material, are incorporated too.

- Video conferencing means are used to interact with eminent personalities.

- Webinars are organized for students to give them information on latest trends in research in advanced areas.

- Audio-visual aids to supplement lectures in classroom

- Access to multi-media learning material

- Industry visits

2.3.6   How are the students and faculty exposed to advanced level of knowledge and skills (blended learning, expert lectures, seminars, workshops etc.)?

The faculty members are encouraged to participate in short term courses, staff development Programmes and workshops on advanced topics to keep pace with the advanced level of knowledge and skills. Over the past years, the faculties have been participating /presenting papers in national/international conferences and publish their articles in national /international journals to enrich their knowledge. Each department conducts seminars/workshops and arranges industrial visits. Latest news clippings pertaining to current affairs, research work, job opportunities and career options are displayed on the departmental and Training &Placement display boards.

- Videoconferencing with experts from reputed international and national institutes

- Organizing National and International Seminars

- Organizing Extension lectures by experts in their respective fields to share their knowledge with students

- Interface with Industry experts

- Group Discussions and Seminars

- Training & Internships

- Educational trips to Industries, R & D organisations

- Guest lectures on a regular basis

- Student's participation in symposium/seminar conducted by the college & other institutions

- MOUs with IBM, INFOSYS etc., for collaborative training programmes in advanced areas of engineering and management.

2.3.7   Detail (process and the number of students \benefitted) on the academic, personal and psycho-social support and guidance services (professional counseling/mentoring/academic advise) provided to students?

The institute has developed a unique mentoring system called as Proctorial System. Under this system, every faculty member, called as proctor, is assigned a group of students from each year for whom the faculty is the counselor/ mentor /guide and care taker. The faculty counsels regarding academic, personal and other problems faced by the student. A progress report regarding the performance of the student in the test, examination and attendance in the ongoing semester is periodically sent to the parents. Critical cases are discussed with the HOD, Principal and parent. This mentoring system is made more effective with the use of Student Information System software, which gives information to the parents about the performance and attendance of their wards. This information can be accessed using the given password from anywhere in the world.

Type of mentoring:

Professional guidance – regarding professional goals, selection of career, higher education.

Career advancement – regarding self-employment opportunities, entrepreneurship development, morale, honesty and integrity required for career growth.

Course work – specific - regarding attendance and performance in internal tests and overall performance in the previous semester.

Personal and psycho-social support – Services of Professional psychiatrist is Utilized to provide effective counseling to students in distress. This has resulted in the improvement of students performance. Annually 5-10 students make use of Psychiatrist support.

Placement Cell: The Placement Cell of the college helps the students to take charge of their career development from exploring their options to securing the ideal job. The Cell not only offers help with career choice and job hunting but also helps in developing skills that employers look for by conducting training workshops. Numerous employers participate in on-campus presentations, talks and workshops. Campus recruitment fairs and interviews are organized to help the students find placements in companies of repute.

2.3.8   Provide details of innovative teaching approaches/methods adopted by the faculty during the last four years? What are the efforts made by the institution to encourage the faculty to adopt new and innovative approaches and the impact of such innovative practices on student learning?

The faculty members of the college aim to deliver their lectures in an effective manner to enrich the knowledge of the student's community. They carry out research to evolve innovative teaching methodologies. Some of the innovative teaching methodologies adopted are:

- Development of smart classrooms, which are provided with LCD projector. The faculty can utilize these facilities to illustrate the concept clearly through audio/video mode.

- Use of e-resources such as NPTELs, open course ware for better content delivery.

- Use of online tools for preparing presentations and pedagogical methods.

- Institute deputes faculty for Campus connect programs, industry academia meetings etc there by making them delivering to students the same.

- Providing industry exposure through industrial visits/ tours.

- The faculties circulate tutorial problems, assignments, lecture notes and other relevant materials to the students.

- Formation of different groups among the students and encouraging peer learning, which help the students who are academically performing poor.

- The students are given many tasks such as group assignment completion, problem solving and mini projects. These activities help the students to learn on their own through project base learning approach, about the developments in their field of study.

- All the faculty have a uniquely designed webpage in which students can access information on course material, assignments, projects pertaining to the course from anywhere in the world. Students discuss with faculty online and get clarifications whenever required apart from regular class interaction.

2.3.9   How are library resources used to augment the teaching- learning process?

Library is the knowledge hub of an elite institution. Recognizing its role in teaching –learning process, the institute has in place a state of the art library which caters to academic and research requirements of students and faculty.

The salient features are

- More than 36,732 book volumes with 8161 reference titles.

- 11 (national, international) print journals are subscribed to update the current knowledge of the stakeholders in their respective field.

- Technical Magazine 21

- 8611e-journals have been subscribed (i.e. IEEE-IEL, Science Direct, Springer, ASCE, Taylor & Francis, Proquest) and 13,235 e- books available (i.e. Springer and Taylor &Francis).

- As the e-journals access is IP based, the stakeholders can take benefit of this facility from anywhere in the campus at anytime.

- Digital Library comprises of 70 computers and Internet facility with the latest configuration, CD-Writers and multimedia facilities.

- Institutional Repository: The collection is developed through Dspace Digital Library, which works on Linux Operating System with Tomcat Apache as the Web Server and My-SQL as database server. All the VTU question papers, VTU Syllabus, Newspaper Clippings, and Faculty Publication are scanned and made into available through this Dspace Digital Library.

- Library is providing Current Awareness Service (CAS) : Email alerts are available for many of electronic resources, bibliographic databases and newspaper clippings.

- RFID Enabled book lending services: Library has implemented the RFID technology for the theft control. All the books are pasted with unique RF tags

- Free Book Bank facility for SC/ST students and book bank facility for open students at the nominal cost is also provided to fulfill their academic needs.

- Library Resource Security: CCTV Surveillance System in Library has covered by 13 CCTV Camera for Library resource security and also effective utilization of Library space and resources.

- Reprography and printing facility

- Open access facility is available. Library Staff motivate the students for open access to aware them about the latest arrivals.

- Separate Reference, Periodical, Circulation, Digital Library section and reading room facility is available in the Library. In addition to the central Library, each department has its own Departmental Library to facilitate easy access to the faculty, students and research scholars.

- A good collection of CD-ROMs in various subjects is also available for access. Library has a good collection of NPTEL video lectures in all subjects. It has 70 multimedia systems with server LAN and internet connection. The server has around 13,000 NPTEL video classes and there is a local LAN based website to share the resources throughout the campus for effective utilization.

- Extended library hours for the benefit of the students during exams

2.3.10   Does the institution face any challenges in completing the curriculum within the planned time frame and calendar? If 'yes', elaborate on the challenges encountered and the institutional approaches to overcome these.

Institution has a well laid down system to plan the schedule in advance and monitor the coverage of syllabus on regular basis to ensure curriculum completion within the given schedule. The Institution does not find any difficulty in completing the curriculum of the VTU within the planned time frame and calendar. Constant monitoring by the management and HODs ensure effective implementation of the work plans. HODs along with CRC members keeps track on syllabus coverage by

their department faculty on regular basis. If any discrepancies are found in completing the curriculum, extra classes are organized.

2.3.11   How does the institute monitor and evaluate the quality of teaching learning?

Quality of Teaching & Learning: It is monitored through feedback from the students every semester. The CRC members of each department go on rounds to monitor classes every semester and provides feedback on teaching learning. Teaching methods are discussed at department meetings.

HODs along with CRC members monitor and evaluate the quality of teaching-learning. A systematic mechanism has been developed to ensure and enhance the quality of teaching learning.

IQAC has been set up to monitor and evaluate the quality of teaching-learning. A systematic mechanism has been developed to ensure and enhance the quality of teaching learning.

Feedback relating to the teaching is obtained from the students, parents, academic peers, alumni and other stakeholders and the recommendations /suggestions received are discussed and incorporated in the curriculum to make it more relevant and effective. The online feedback obtained is analyzed and the concerned teachers are counseled to improve academic standards.

In-house meetings are held to review the teaching methodology and pedagogical tools employed. Workshops are organized to upgrade the teaching skills in view of the technological advancement and the role of IT in enhancing the quality of higher education.

CRC & LRC members monitors the implementation of Lesson plan and teaching methodologies. Head of the department conducts monthly meetings to review and suggest improvements.

2.4 Teacher Quality

2.4.1 Provide the following details and elaborate on the strategies adopted by the college in planning and management (recruitment and retention) of its human resource (qualified and competent teachers) to meet the changing requirements of the curriculum

The Institution recruits highly qualified, meritorious faculty with good research potential and experienced faculty as per the AICTE norms.

Recruitment policy:

Open Advertisement in National dailies/Website

↓

Screening of applications and short listing

↓

Constitution of Selection Panel

↓

Call letters to short listed candidates

↓

Interview -Screening of original documents/Certificates of the candidates - Technical demo – HR Round

↓

As per the recommendations of the Panel, announcement of selection list Issue of appointment letters.

↓

Orientation programme
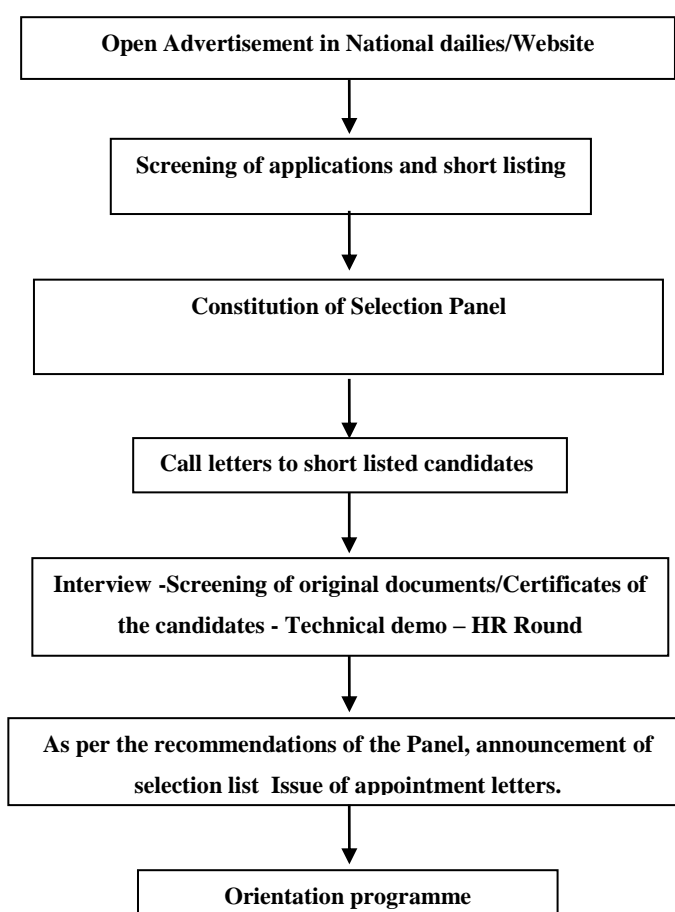
Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	M	F	M	F	M	F	
Permanent teachers							
D.Sc/D.Litt							
P.hD	21	3	6	8	2	5	45
M.Phil	-	-	3	2	2	10	17

PG	-	-	7	27	92	131	257
Temporary teachers							
PhD							
M.Phil							
PG							
Part –time teachers							
Ph.D							
M.Phil							
PG					3	2	5

Faculty retention: The Institute offers excellent recognition for the faculty which has resulted in low attrition rate. Ours is one of the first institutions to implement 6th Pay scales in the state.

The institute encourages its faculty to carry out quality research. Separate budgetary allocation for each department is made annually for research work and to procure equipments, instruments to improve research and consultancy at the institute to cater to faculty requirement/needs.

The institute supports with all infrastructure and other facilities for sponsored project laboratories and special labs in the departments. A separate dedicated laboratory for Collaborative Research and Consultancy activities is provided. In addition, all support is provided to faculties seeking grants from outside funding agencies. Sabbatical and study leaves are granted for higher studies or specialized training in a professional or technical subject for Doctorate, Post-graduate courses and other higher studies based on request.

Faculties are encouraged by all means to participate and present papers in conferences (both national and international), attend seminars and workshops. In-house training programmes funded by the institute and external agencies are regularly organized for both faculty and staff. The institute supports and stimulates every department and its faculty to conduct more activities and organize conferences both at national and international levels and contribute to their professional growth.

The facilities offered to the staff are:

- Best service benefits, PF, Gratuity, etc

- Flexible winter and summer vacations

- Encouragements for higher learning

- Better scope for research and development

- Awards for meritorious faculty members

- Higher promotion ladder

- Sixth pay commission Implemented

- All allowances as per the Government rules

- Incentives for research, consultancy, publications

- Maternity / Medical leave

2.4.2   How does the institution cope with the growing demand/ scarcity of qualified senior faculty to teach new programmes/ modern areas (emerging areas) of study being introduced (Biotechnology, IT, Bioinformatics etc.)? Provide details on the efforts made by the institution in this direction and the outcome during the last three years.

Recognizing the growing demand for best teachers, the institute has in place standard policies to train the faculty to be able to teach advanced courses. Faculty are deputed for premier research institutes for research and training. The institute has an exclusive variable budget for research and entrepreneurship. To attract the best faculty and to retain the existing teachers the Institution provides requisite facilities like subsidized transportation, research facilities like library, internet, and incentives for their publications etc. The Institution is paying higher scales to the faculty to meet the demand. As stated earlier, the Institution has more than sufficient number of qualified and competent teachers to handle the courses offered. Faculty development programmes, Train the trainer programmes, Refresher courses are regularly conducted to enhance the quality of teaching.

2.4.3   Providing details on staff development programmes during the last four years elaborate on the strategies adopted by the institution in enhancing the teacher quality.

a)   Nomination to staff development programmes

Academic Staff Development Programmes	Number of faculty nominated
Refresher courses	Nil
HRD programmes	10
Orientation programmes	352
Staff training conducted by the university	38
Staff training conducted by other Colleges	343

Summer / winter schools, workshops, etc.	31
Any other (please Specify)- Conferences ,Workshops, Seminars etc	370

b) Faculty Training programmes organized by the institution to empower and enable the use of various tools and technology for improved teaching-learning

No of FDPs/Seminars/Workshops/Training programmes/Conferences organized.

Academic year	CSE	ECE	EEE	ISE	ME	TCE	CIV	MBA	MCA	Applied science
2016-17	8	1	1	11	0	3	2	2	10	3
2015-16	17	6	5	17	7	6	8	3	8	6
2014-15	15	7	5	15	5	4	3	3	4	6
2013-14	13	6	4	12	5	4	2	3	8	5
2012-13	8	6	5	8	6	3	3	2	2	6
2011-12	3	6	3	3	4	6	3	3	10	5

Teaching learning methods/approaches

Institution has the provision of smart class-rooms where teachers can deliver their presentations and seminars. Workshops on teaching methodology are periodically organized to train the teachers.

Handling new curriculum

Most of the members of the faculty are highly qualified and experienced. So they are able to handle the curriculum with ease. Interaction and discussions with eminent persons through guest lecturers/ workshops/ FDPs/ training Programmes/ conferences helps the faculty in handling the curriculum changes.

Content/knowledge management

Content/knowledge management is carried out through course files and course sites maintained by each faculty for their respective subjects are shared among students as well as staff. College library has access to numerous books, e-books, journals and e-journals, etc which enhance the faculty and student knowledge.

Selection, development and use of enrichment materials

Faculty members are trained to use ICT methods and E – journals. Further the faculty members have been motivated to do research projects, publish their work in journals and presenting papers in leading national and other conferences.

Assessment

Self-assessment is the best way of analyzing one's performance. Faculty can make

Teaching more effective and result oriented by self-assessment. It gives a clear picture in terms of their performance and research needs.

Cross cutting issues

The cross cutting issues like climate, gender, environment education, human rights finds an ample space when it comes to applying them positively in to the curriculum. The subject of environment education is a part of the Institution curriculum.

Audio Visual Aids/multimedia

Our faculty are trained in use of audio visual aids in the classrooms. We have latest computer aided packages, web based interactive tools (WACOM) as per our requirement. Faculty members are provided with computers with internet facility for preparation of teaching/learning materials.

OERs (open educational resources)

The Institution provides the facility of open educational resources. The faculties have free access to internet that helps them to collect learning material. The Institution has a well-stocked library containing books and journals of various subjects as well as numerous e-books and e-journals. `

Teaching learning material development, selection and use

Teachers develop and share their notes and teaching material (in the form of course files and course sites) with other teachers through the hard copies/soft copies and the same shared with the students too. The teaching material develops through rigorous learning through various sources as mentioned in open educational resources as well as various training/FDP/workshops programs.

c) Percentage of faculty

▪ invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies

▪ participated in external Workshops / Seminars / Conferences recognized by national/ international professional bodies

▪ presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies

Percentage of faculty (no of faculty attended/total faculty)

Activities	ACADEMIC YEAR				
	2015-16	2014-15	2013-14	2012-13	2011-12
invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies	9%	6.1%	5%	5%	4%
participated in external Workshops /Seminars /Conferences recognized by national/ international professional bodies	31%	39%	31%	29%	33%
presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies	30%	29%	30%	24%	21%

2.4.4   What policies/systems are in place to recharge teachers? (eg: providing research grants, study leave, support for research and academic publications teaching experience in other national institutions and specialized programmes industrial engagement etc.)

The college Management strives to promote professional development of faculty by:

- Encouraging the faculty to attend faculty development programmes, Refresher Courses, Training Programmes and Workshops

- Organizing national /international seminars

- Granting Leave for attending national/ international Seminars organized by the reputed institutions

- Granting Study leave to the faculty for pursuing Ph.D

- Encouraging faculty to apply for research grants

- Organizing Guest lecturers in various upcoming areas in different disciplines for faculty

- Providing support for attending international conferences also on a case by case basis.

2.4.5   Give the number of faculty who received awards / recognition at the state, national and international level for excellence in teaching during the last four years. Enunciate how the institutional culture and environment contributed to such performance/achievement of the faculty.

The College has the distinction of having on its staff outstanding scholars whose erudition has been recognized at International and National level and added a new dimension to the reputation of the college. Formal Awards have been given to our faculty member in recognition of their meritorious excellence in their respective field.

S.NO	Name of the Faculty	Award/Recognition
1	Dr.Krishnan	Selected as Outstanding Educator & Scholar Award - 6th Teachers' Day Awards & Celebrations '2015 - National Foundation for Entrepreneurship Development (NFED), Coimbatore,
2	Dr.Phani Kumar	Mentor for Stanford University and Google University innovation fellows Program 2016
3	Dr.Chaitanya Lakshmi	Gyanbharati Rastrya Shiksha Award from Global Management council, Ahmedabad. DST young scientist award-2015

4	Dr.Sanjay Chitnis	Selected as REX Karmaveer Global Fellow for the RKGF 2015-16
5	Mr.Kashif Ahmed	Best Paper award for "A Multi-Agent Based Thermal Aware Task Migration Scheme in Multi-Core System" in the"National Conference on Advanced Communication, VLSI Design and Signal Processing" (NCCVS-13)
6	Dr.Jhansi Rani	Best Paper Award for the paper "Hash Function using Chaotic Maps" ,ICCN 2014
7	Mrs.Sharmila	Outstanding Faculty from Purple Patch Today Technologies-2016
8	Mr.Sunil Kumar & Mr.Chethan	Texas Innovation Award-2015
9	Mr.Sunil Kumar & Mr.Chethan	Robotech design innovations mentorship award-IIT Roorke 2014
10	Mr.Harsha	Best Paper Award-IEEE Coimbatore 2013
11	Mr.Manoj Challa	Best Paper Award from International Journal of Computer Science and Mobile computing,July 2013
12	Mrs.Poonam	Best Paper Award from NCRTCE-2016
13	Mrs.Geetha	Best Paper Award for the paper "Open Platform Wireless Sensor Networks providing energy for Bluetooth enabled agitate objects based on the Data Mining Techniques" at National conference on Advance Computing – Ooty 2013
14	Dr.Anuradha	Best Paper Award -International Academic Research Journal of Business and Management 2015
15	Dr.Priyameet Kaur	Best Paper award In international Conferences, on " Sustaining and Enhancing Competitiveness in Today's Business Scenario"- DMIMS, Nagpur, won 2ndPrize in IT Specialization track in 1st international conference EXLIR 2011 – for"SNS a Successful Business Tool", organized by DMIMS Nagpur 2011.

2.4.6. Has the institution introduced evaluation of teachers by the students and external Peers? If yes, how is the evaluation used for improving the quality of the teaching-learning process?

Yes. Evaluation of teacher's performance is done every semester. The Institution has a feedback system to evaluate the teachers by students, peers and by external experts too as mentioned in the figure below.
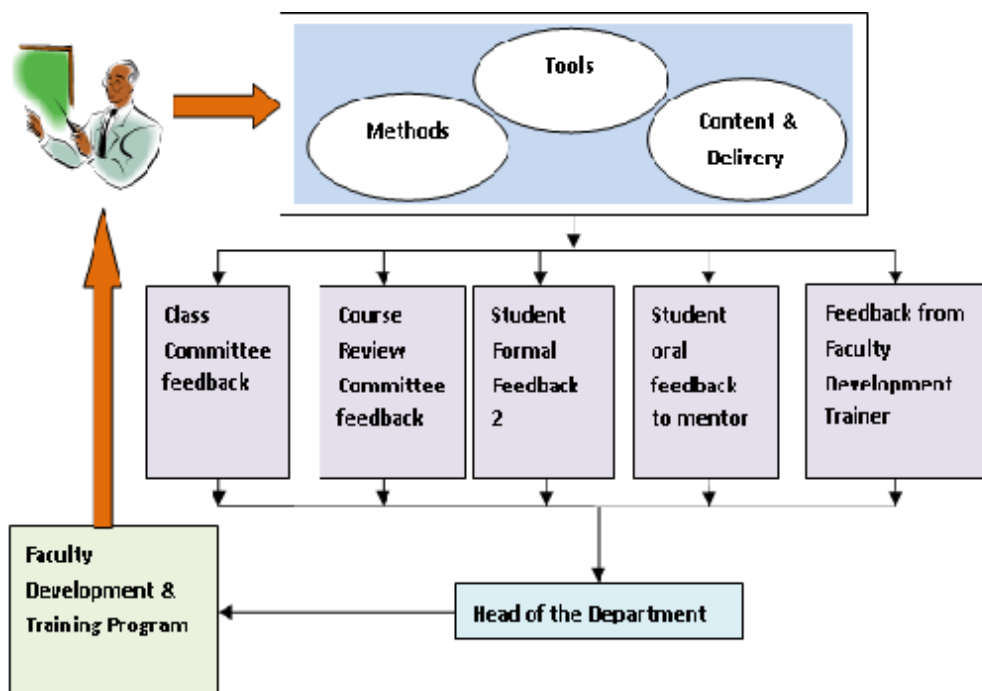
Feedback Mechanism for Effectiveness of Quality Teaching

i. **Class Committee Feedback:** Class committee is formed for every class, which comprises of six students carefully selected to have a mixture of high, average, and low performing students. Feedback from class committee is collected.

ii. **CRC Feedback:** Members of Course Review Committee (CRC) randomly inspect classes for every course and provide their feedback.

iii. **Student Formal Feedback:** Student feedback is obtained on a regular basis each semester, before the conduction of Internal Assessment Test.

iv. **Student Informal, Oral Feedback:** In addition to formal student feedback, more frequently informal, oral feedbacks are also obtained by the mentors from their respective mentees.

v. **Feedback from Faculty Development Trainer:** Faculty development trainer randomly inspects classes for each instructor, and provides feedback on the methods, tools, class control and other relevant attributes.

vi. **Faculty Development & Training Program:** Feedbacks from all the above mentioned sources are reviewed by the Head of the Department. Based on this assessment, constructive inputs are provided to the course instructors through the Faculty Development & Training Program.

During and at the end of each semester, online/manual questionnaires and feedback forms obtain feedback from students and peers, which evaluates faculty based on their teaching style, methodology or pedagogic skills, interaction level etc. The feedback system helps to identify the strengths and weaknesses of the faculty. Based on assessment of performance, HOD/peer gives necessary suggestions for the improvement in the teaching methods after obtaining feedback from various stakeholders. The faculty with good feedback is well appreciated which further strengthens their commitment to the teaching learning process.

External peers such as NBA,LIC certification authorities provides feedback on the teaching learning process. Based on these feedback, remedial measures are taken to improve the quality of teaching and learning.

The Institution recruits highly qualified, meritorious faculty with good research potential and experienced faculty as per the AICTE norms.

2.5 Evaluation Process and Reforms

2.5.1   How does the institution ensure that the stakeholders of the institution especially students and faculty are aware of the evaluation processes?

- *Student Orientation Programme*: Orientation Programme is conducted for the newly joined students at the beginning of the 1ˢᵗ semester. In this orientation programme, evaluation process is explained in detail to the students as well as parents. The evaluation process is also explained to the students by the respective department heads.

- *Proctor/Mentoring*: Every student is assigned a proctor/mentor to guide them. The proctors conduct regular meetings with the students every month and meet their parents during the parent – teacher meetings organized periodically.

- *Open Communication*: The HODs regularly interact and take feedback from students with respect to the evaluation process and any other difficulties that they may be facing. Students can approach the HODs or other faculty any time and for any reason.

- *Faculty Induction Programme*: In induction programme, faculty are briefed about examination reforms, evaluation process etc.

- *CRC and CCI*: There is a course refinement committee (CRC) set up in the institution. Every course is allotted a chief course instructor (CCI) who oversees the course conduction including the evaluation process (internal exam question papers, assignments, etc).

2.5.2   What are the major evaluation reforms of the university that the institution has adopted and what are the reforms initiated by the institution on its own?

The Institution has adopted various university reforms.

- *Projects and Seminars***:** For final year students, Project work and technical seminar are evaluated through regular reviews and presentations conducted internally, along with the University evaluation process. The project internal marks are thus appropriately divided to ensure continuous evaluation.

  The institute follows the project evaluation process as given below.

- *Project Evaluation Protocol :*

  - **Each student** will be evaluated by two referees:
  o   Guide / Co-guide; and
  o   External examiner
➢ **In a project team**, each student will be evaluated for **50 marks** against each sub-item as per Score Sheet Proforma by each of the two referees. Average of the two referee score will be taken for 50 marks.
  o   The final Internal Assessment score will be computed for 100 marks:
➢ Average of three in-sem evaluations: 50 marks
➢ One end-sem evaluation: 50 marks

➢ **Evaluation #1:** By Guide & Co-Guide for 50 marks (25 Marks by each Guide) as per the below format.

#	Particulars	Max. Marks
1	**Literature Survey** i. Grasp of state-of-art: 4 Marks ii. Context of problem vis-à-vis state-of-art: 4 Marks	08
2	**Problem Formulation** i. Clarity in problem statement: 4 Marks ii. Specifications for solution & proposed deliverables: 4 Marks	08
3	**Solution Design** i. Approach to solution: 2 Marks ii. Justification for choice of solution: 2 Marks iii. Possible limitations / pitfalls: 2 Marks	06

| 4 | **Regularity of interaction with the guide** | 03 |

➢**Evaluation** #2: By Guide & Co-Guide for 50 marks (25 Marks by each guide) as per the below format

#	Particulars	Max. Marks
1	**Literature Survey & Problem Reformulation** i. Relevance of literature to specific desired goals: 4 Marks ii. Relevance of problem formulation to desired goals: 4 Marks	08
2	**Solution Implementation** i. Modelling of solution: 5 Marks ii. Experiment / exploration / progress in solution: 6 Marks iii. Problems faced in solution process: 3 Marks	14
3	**Regularity of interaction with the guide**	03

➢ **Evaluation #3**: By Guide & Co-Guide for 50 marks (25 Marks by each guide)

#	Particulars	Max. Marks
1	**Results / Solution and discussions** i. Consolidation of effort leading to solution of problem: 4 Marks i. Goodness of solution vis-à-vis proposed solution : 4 Marks ii. Comparison with alternative solutions : 4 Marks iii. Documentation leading to final Project Report : 4 Marks	12
	Presentation / Communication Skill i. Presentation in slides : 4 Marks ii. Clarity of and articulation and communication skill : 6 Marks iii. Response to Q & A : 3 Marks	13

➢ **Final Evaluation**

Particulars	Max. Marks

Project Work
• Literature Survey & Problem Statement (2)
• Solution Design & Implementation (18)
    i.   Modelling & approach to solution (3 marks)
    ii. Details of implementation [hardware inclusive] (15 marks)
• Critical Analysis of the Solution (5)
    i.   Goodness of solution & comparative analysis (3 Marks)
    ii. Shortcomings & suggestions for further improvements (2 Marks)
	25

	<u>Presentation</u> • Presentation in slides and flow (4) • Articulation and verbal communication skills (6)	10
	Q & A	05
	Printed Project Report	10
TOTAL		**50**

- *Digital*: Everything is digital. online filing of examination applications, online question paper delivery, on line submission of Internal marks, On-line objective type, MCQ Examinations for some courses.

- ***Internal Evaluation*:** For internal evaluation, Institution conducts three unit tests for every course and average of the best two performances will be considered. Marks are also allocated for assignments and quizzes. This ensures continuous evaluation of the students.

- The process followed by the Institute for internal evaluation similar to the university is as given below.

Internal Assessment Test:

o The internal exams are conducted in a proper way by preparing timetable for each internal exam. All the CI-s handling the course should submit the individual question paper to the respective CCI three days prior to the test.

o CCI will verify the syllabus coverage, coverage of outcomes etc from all the CI-s and ensure questions from outcomes accordingly.

o With inputs from the different versions of QP-s from CI-s, one question paper is to be prepared by the respective CCI, in consultation with the CI-s, if required. A printed copy of the final version of the QP from the CCI has to reach the Test Coordinators of all the departments to which the students belong (in case the same paper is applicable across departments).

o The Chief course instructor would check the quality and standard of the question paper and suggest the required changes, if necessary . Each and every subject will have a moderator assigned. The CI should evaluate the paper and get it moderated by the allocated moderator.

o The scheme of evaluation is uploaded by the faculty after the completion of internal exams. Internal marks are also uploaded in the ERP.

o Continuous evaluation is done based on the three course modules.

  o For IAT I, approximately 35% of syllabus is covered

  o For IAT II, approximately 35% of syllabus is covered

  o For IAT III, approximately 30% of syllabus is covered

- *Remedial Classes and ICP***:** Remedial classes and ICP classes are conducted for the weaker students and those that have not done sufficiently well in the internal exams.

- *Mentoring*: All students are assigned mentors. These mentors monitor the students including their attendance, performance, difficult subject areas etc. The students can approach the mentors any time to discuss about any issues or difficulties they are facing. The mentors can additionally recommend the students to seek professional help.

- *Mini Projects* : Students, in their pre-final year, are instructed to form teams and execute a mini-project which can help to prepare them for open-ended investigative work.

  o *Lab Refinement Committee:* To ensure the smooth and efficient conduction of all the labs, an LRC is formed specifically by the institute which comprises of selected faculty from the department.

Enabling faculty for the conduction of experiments

- Before the semester commences, faculties undergo a Lab evaluation process which ensures that the allotted faculties are thorough with the experiments before the students start the lab.

- Each faculty must record observations for each experiment in the observation book.

- After the successful conduction of the experiment, details pertinent to it must be recorded.

- Submission of the completed observation and record books to departmental LRC team.

- Submission of collected Observation & Lab records to assigned reviewer/s.

Review of Lab Experiments: Each faculty must present & demonstrate experiments to Review committee.

- Approval for Lab conduction by the faculty for Even Semester by LRC

  Lab conduction guidelines are as follows:

1. Faculties who are allocated labs must utilize **50 min lab instruction classes** (LIC) to provide instructions to students of all batches/lab well in advance. Taking attendance for the instruction class is mandatory and MUST be construed as lab attendance.

2. Faculties are expected to actively participate in every lab session and utilize lab duration to enrich students' experience through thought provoking questions, improve critical observations, and zeal in experimenting, unlike merely following a procedure.

3. Departmental LRC MUST ensure that the observation and record books are checked regularly by the respective lab faculties.

4. Each student is asked to record VIVA question/s and later answer/s in the observation book in every lab session and must be evaluated by respective faculties during each session.

5. Departmental LRC MUST moderate observation and record books/lab/semester regularly. In the case of suggestions/errors, respective lab faculties are asked to ensure that students' observation and record books MUST incorporate necessary changes before every lab session.

6. Departmental LRC, lab faculties and departmental heads to monitor and ensure that students' MUST carry tool kit to labs.

7. Students MUST be engaged for the entire duration of the lab session even though they have completed their task/s well before allocated duration. Here, their services may be utilized to guide/help other students who have not yet completed the task/s.

Continuous Assessment in the laboratory

- Continuous assessment sheets for the labs are maintained by the faculties.
- Faculty should update **"Continuous Laboratory Assessment Sheets"** for every laboratory session, which is accountable for 15 Marks in Laboratory internal marks. Breakup is as follows;

    1. **Record - 02 Marks**
    2. **Viva - 07 Marks**
    3. **Conduction - 03 Marks**
    4. **Attendance - 03 Marks**

- Internal assessment test (IAT) for labs would be conducted at the end of the semester, which accounts for 10 Marks.

2.5.3   How does the institution ensure effective implementation of the evaluation reforms of the university and those initiated by the institution on its own?

- *Project Evaluation:* For final year students, Project work and technical seminar are evaluated through regular reviews and presentations conducted internally, along with the University evaluation process. The project internal marks are thus appropriately divided to ensure continuous evaluation.

- *Internal Tests Evaluation*: Faculty setting internal exam question papers are also required to give a scheme of evaluation. This is verified by the CCI of the respective course. The scheme as well as solution is displayed and distributed to students after the test. It is also archived in the institute library. All internal test answer scripts are shown to students to ensure transparency.

- *Internal Tests Conduction*: Exam committee is set up to ensure that internal tests are conducted appropriately, uniformly and transparently.

- *Assignments*: All assignments are discussed in the class and the solutions are put up on the web pages of the course.

- *Regular Feedback*: Course conductions are regularly monitored and frequent, regular feedback is taken from students. Students can also directly approach the HOD with any doubts or problems.

- *CRC and LRC*: The members of Course refinement committee and Lab refinement committee monitor course and lab conductions to ensure quality and content.

- To ensure better preparedness, mock project viva is conducted with external examiners.

- Internal Lab evaluation is done with internal and external examiners from other departments. The external examiner especially ensures that rigorous viva is conducted.

2.5.4   Provide details on the formative and summative assessment approaches adopted to measure student achievement. Cite a few examples which have positively impacted the system.

Though university is the sole authority for implementation of reforms in examination and evaluation, the Institution adopts both formative and summative

methods of evaluation. Formative approach continuously monitors student's progress in a conducive learning environment. It measures the student's achievements and performance through, assignments, creative presentation, organizing various events, mini projects etc. Summative approach is based on the evaluation of monthly tests and semester end exams at the end of the academic session.

Both the approaches have positive impact on the evaluation system, because performance of a student is not only judged by the marks, but also by his/ her other formative performances during the course.

- For all practical courses other than project work, the continuous internal assessment carrying 25 (UG) and 50 (PG) marks is subdivided into attendance, laboratory experiment / performance, viva etc.

- Project work is also evaluated through presentations before internal & external experts.

- The University end semester examination shall carry 100 marks for theory and 100 marks for practical examinations.

- Students are encouraged to participate in various events inside and outside the institute. This includes sports events, cult fest events, technical contests, seminars, workshops etc.

- Sports day is conducted by our institution in cooperation with the CMR family. All events have awards associated with them to encourage and felicitate participation.

2.5.5   Detail on the significant improvements made in ensuring rigor and transparency in the internal assessment during the last four years and weightages assigned for the overall development of students (weightage for behavioral aspects, independent learning, communication skills etc.

To monitor the student progress, Institution has the continuous internal evaluation system which consists of internal assessment tests (thrice in a term), Improvement Test and evaluation of practical exercises.

- Continuous Assessment Report is displayed on Notice board of respective department every month.

- In continuous assessment process, opportunities to improve marks are given to the students participating in activities based on the course like group discussion, seminars, presentation etc.

- Institution communicates progress report of their ward to the parents.

- Parents and teachers meeting is organized twice a semester and the progress of the students is updated.

- Affiliated university also conducts the written/theory/practical examination at the end of semester. The result of same are communicated to the student and parents on the website. The academic monitoring is done on the basis of university result.

- The Institution analyses Program-wise performance of students every semester.

2.5.6 What are the graduate attributes specified by the college/ affiliating university? How does the college ensure the attainment of these by the Graduate

Attributes as defined by the institution are,

a)Engineering knowledge b)Problem analysis c)Design/development of solutions d)Conduct investigations of complex problems e)Modern tool usage f)The engineer and society g)Environment and sustainability h)Ethics i)Individual and team work j)Communication k)Project management and finance l)Life-long learning:

The attainment of these attributes is measured through students performance in internal tests, external exams, participation in group activities, indirect surveys etc.

Evaluation of the attainment of Programme Outcomes:

The CO attainment levels are measured based on the results of the internal assessment conducted by the institute and external examination conducted by the university. This is a direct measurement of attainment. During the course of a semester, 3 internal assessment tests (IAT) are conducted. Each of the IAT test paper may have questions from Q1a to Q8c. Course attainment levels are calculated using the rubrics mentioned below.

STEP 1:

For every subject 4-7 course outcomes (CO) are defined and mapped to POs on a scale of 0 to 3. Highest correlation is 3. For example,

COURSE OUTCOMES		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
ECE302.1	Analyze diode circuits and its applications that involve diodes such as rectifiers clippers and clampers & Transistor switching circuit.	3	0	2	0	0	0	1	0	0	0
ECE302.2	Analyze BJT & FET bias configuration.	3	0	1	0	0	0	1	0	0	0
ECE302.3	Analyze ac operation of the transistor at low and high frequencies via transistor modeling.	3	0	1	0	0	0	1	0	0	0
ECE302.4	Interpret frequency response characteristics of single and multistage BJT amplifier circuit.	3	0	1	0	0	0	1	0	0	0
ECE302.5	Describe the effect of feedback on amplifier parameter & examine practical feedback circuit.	3	0	1	0	0	0	1	0	0	0
ECE302.6	Classify various Power amplifier & Oscillator circuit.	3	0	1	0	0	0	1	0	0	0

STEP 2 : Maximum marks are allotted to each question, and mapped to a cognitive level and the corresponding CO. For example,

STEP 3 : Record the percentage of students achieving a set percentage of max marks allotted to an individual CO in a given IAT.

STEP 4 : 2 best performances of a student from 3 IATs are used for calculating attainment levels for CO1. The process is described below.

Set M3>M2>M1 and S3>S2>S1,Defining,

S1 = % of students scoring more than M1% of Max marks allotted to CO1

S2 = % of students scoring more than M2% of Max marks allotted to CO1

S3 = % of students scoring more than M3% of Max marks allotted to CO1

Condition
IF S3% of students score≥ M3% of Max marks allotted to CO - Att. Lev. 3
ELSE IF S2% of students score≥ M2% of Max marks allotted to CO - Att. Lev. 2
ELSE IF S1% of students score≥ M1% of Max marks allotted to CO - Att. Lev. 1
ELSE Att. Lev. 0

STEP 5 : Repeat the above rubric to evaluate all COs.

STEP 6

For calculating the attainment levels based on VTU University Examination, the following rubric is used:

Condition	Attainment level
CMRIT pass % > VTU pass %	1
60% of CMRIT students Univ. exam >VTU Average	2
70% of CMRIT students Univ. exam> VTU Average	3

STEP 7 : CO attainment level for the that course is,

$$Course\ attainment\ level\ (CAL) = (0.8 \times External\ att.) + (0.2 \times Inernal\ att.)$$

STEP 8

Program outcomes are attained through the attainment of COs.For a given course, all COs are mapped to certain POs, as shown in STEP 1. The overall CO attainment value as computed in STEP 7 and the CO-PO mapping values given in the STEP1 are used to compute the attainment of POs.

STEP 9 : Defining,

m_i : Attainment level of ith course outcome for a given course, calculated from performance of the class in IATs. n_{ij} : CO-PO mapping

	j=1 to 12 →					Program Outcomes			
Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	...	...	PO9
CO1	n11	n21	n31	n41	n51	n61	...	...	n91
CO2	n12	n22	n32	n42	n52	n62	...	...	n92
CO3	n13	n23	n33	n43	n53	n63	...	...	n93
CO4	n14	n24	n34	n44	n54	n64	...	...	n94
CO5	n15	n25	n35	n45	n55	n65	...	...	n95
CO6	n16	n26	n36	n46	n56	n66	...	...	n96

i = 1 to 6

PO attainment levels for that course is calculated as follows:

$$Att(PO_{j, \ j=1 \ to \ 12}) = \frac{\sum_{i=1}^{6} n_{ji} m_i}{\sum_{i=1}^{6} n_{ji}}$$

STEP 10

Direct attainment of PO_j is average of PO_j of all courses.

STEP 11

Indirect attainment is determined from student exit surveys, employer surveys, co-curricular activities, extracurricular activities and mapped to POs.A questionnaire was designed for this purpose and the average responses of the outgoing students for each PO is computed.

STEP 12

The overall attainment of outcomes of a program (POs) is computed by adding direct attainment and indirect attainment values in the proportion of 80:20, i.e.,

Att(PO_j)= 0.8 x Direct Att(PO_j) + 0.2 x Indirect Att(PO_j)

Sample attainment report for Information Science and Engineering is as follows.

CMRIT, Bangalore   PO Attainment Report ISE

PO Attainment Report ISE

PO Attainment for Program (Direct Assessment)											
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1.86	1.89	2	1.52	2.12	2.04	2.47	2.1	1.17	1.39	1.83	1.28

PO Attainment for Program (Indirect Assessment)											
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
2.32	2.19	2.22	2.24	2.32	2.32	2.38	2.46	2.46	2.32	2.38	2.38

Final PO Attainment for Program 80% of Direct + 20% of Indirect											
PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
1.95	1.95	2.04	1.66	2.16	2.09	2.45	2.17	1.43	1.58	1.94	1.5

2.5.7   What are the mechanisms for redressal of grievances with reference to evaluation both at the college and University level?

Redressal of grievance at the college level:

The following redressal measures are available to students.

For Internal assessment:

The student can see his/her blue book after valuation and clarify doubts (if any) from the concerned faculty. In case of any discrepancy in evaluation, students may approach HOD & Principal.

The students are provided with the scheme and solutions of the internal assessment test

The marks in each subject are uploaded in the SIS (Student Information System) to which the students and their parents have access.

End Semester Examination

If the grievance is against the end semester examination results, the Institution assists the students by helping them to apply for revaluation to the office of the Registrar, Evaluation of the affiliated University through administrative office of the Institution. Students can apply for the revaluation within the stipulated period, by depositing the revaluation fee. University authorities get the answer sheets revaluated and then the revaluation results of the students is declared. In addition to this, the university makes arrangements for issuing photocopies of their answer scripts to the students. This allows the students to consult faculty to ensure fairness of Evaluation.

2.6. Student performance and Learning Outcomes

2.6.1   Does the college have clearly stated learning outcomes? If 'yes' give details on how the students and staff are made aware of these?

Yes, the institute has its clearly defined learning outcomes which are aligned with the Programme Educational Objectives and program outcomes. These learning outcomes are put up on the website and are also widely publicized through

- Bulletin/display boards in various departments
- Curricula books

- Discussed in Induction programme

- Debated in faculty meetings

Learning Outcomes:

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to

comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

> 2.6.2 Enumerate on how the institution monitors and communicates the progress and performance of students through the duration of the course/programme? Provide an analysis of the student's results/achievements (Programme/course wise for last four years) and explain the differences if any and patterns of achievement across the programmes/courses offered.

The Institution believes in continuous assessment of the performance of its students by conducting three periodical tests in each semester and subject teacher keeps the record and analyze the performance of the student. The academic progress of the student is measured through internal assessment, semester exams, class attendance, assignments and overall behavior of the students. Monitoring is also done by observing their performance in the internal examinations, and final semester examinations. If any shortcomings are observed, parents/local guardians are invited to the Institution to discuss the necessary action to be implemented for the progress of the student. Faculty Mentors help students to set their goal and offer career guidance. The students are guided properly by constant encouragement in all factors.

Sl. No.	Branch	2015-16			2014-15			2013-14			2012			2011		
		No. of students appeared	No. of students passed	Pass %	No. of students appeared	No. of students passed	Pass %	No. of students appeared	No. of students passed	Pass %	No. of students appeared	No. of students assed	Pass %	No. of students appeared	No. of students passed	Pass %
1	ECE	124	111	89.5	128	127	99.2	123	119	96.7	135	124	91.8	115	113	98.3
2	TCE	85	82	96.5	113	101	89.3	109	105	96.3	112	110	98	87	86	98
3	CSE	138	128	92.7	152	145	95.3	134	123	91.7	133	127	95.4	124	119	96
4	ISE	123	115	93.50	129	129	100	121	113	93.39	124	119	96	67	64	95.50
5	CIVIL	60	57	95	57	57	100	--	--	--	--	--	--	--	--	--
6	EEE	113	92	81.42	60	39	65	76	69	90.79	60	59	98.3	72	68	94.4
7	MECH	127	117	97.63	67	67	100	71	63	88.73	59	59	100	--	--	--
8	MBA	69	61	88.41	69	64	93	55	49	89	97	87	90	85	80	95
9	MCA	73	73	100	55	55	100	59	59	100	56	46	82	45	45	100

2.6.3 How are the teaching, learning and assessment strategies of the institution structured to facilitate the achievement of the intended learning outcomes?

The Institution aims to help students to reach their potential through the provision of a supportive, vibrant and challenging learning environment. All the staff are involved in the creation of this learning environment. All students are valued equally during their learning journey with the Institution.

 The curriculum, teaching and learning and assessment at Institution are student centric. The Institution has formulated various academic committees like Library committee, CRC,LRC, IQAC, RC etc.These committees aim at enhancing the quality of learning, teaching and assessment across the Institution by providing academic leadership for the continued development of excellence in academic practice.

The Institution is committed in creating an environment where students are supported to achieve their potential and working towards creating an inclusive learning community. This requires the identification of individual learning goals

and it will emphasize the importance of reviewing student progress against agreed objectives. Students are active partners with shared responsibilities for their own learning and achievement. This strategy recognizes the need to develop progressively self directed and confident learners with the knowledge, skills, attitudes and values, which enhance their employability and progression opportunities. It acknowledges that students learn most effectively if they are supported as individuals to achieve personal development.

2.6.4   What are the measures/initiatives taken up by the institution to enhance the social and economic relevance (student placements, entrepreneurship, innovation and research aptitudedeveloped among students etc.) of the courses offered?

- Institution has set up separate entrepreneurship development cell that organizes different Programmes to inculcate skills of entrepreneurship amongst the students.

- Training and placement department conducts training Programmes to enhance employability of the students through CMRLSI and Industry experts.

- Institution has structured research committee with the objective to develop research environment in the Institution and motivate faculty and students to get actively involved in research projects. It also helps the faculty to apply for research projects funded by professional bodies like VTU, AICTE, DST and other government agencies.

- Students are encouraged to take real time problems of the society as their problems for mini and major projects.

- Social outreach programmes in which student teams from various department visit NGO's and explore carrying out internships with them supporting them in a best possible manner.

2.6.5   How does the institution collect and analyze data on student performance and learning outcomes and use it for planning and overcoming barriers of learning?

Institution has the continuous internal evaluation system which consists of unit tests (thrice in term), Improvement Test. University conducts end semester examination. Analysis of internal examination results and end semester examination result is carried out and the same is related to achievement of learning outcomes.

After every internal examination, ICP classes will be held for evaluating the weak performers. Reasons are discussed for weak performance and accordingly action plan is devised which may include retest/assignment/question bank solution/presentations. Any shortcomings reported are addressed by planning additional tutorial hours if needed or by providing special study material to students. Using the report of above mentioned analysis, lesson plans and lecture plans are modified to overcome the barriers of learning if any.

2.6.6   How does the institution monitor and ensure the achievement of learning outcomes?

The institution monitors and ensures the achievement of learning outcomes through

• Continuous assessment (Internal exams, External exams, assignments)

The results of the various tests obtained by the students are analyzed which helps identify the performance of the students. Based on the performance, students are categorized as toppers and slow learners. Slow learners are assisted to excel in academics through remedial classes.

- Through Class committee meeting reports
- Project reviews and continuous lab assessment process
- Feedback from stakeholders
- The attendance records of students are regularly monitored and actions are taken to minimize absenteeism.
- Aptitude Test, Soft Skills and Personality Development training are conducted to equip students with necessary skills to face campus interviews.
- The students are encouraged to take up competency building activities in curricular, co-curricular and extracurricular activities which bring out the potentials in them.
- Students are encouraged to take part in NSS, club activities and Sports and Games.
- Student mentoring, grievance redressal, provision of all required facilities, financial assistance by means of scholarships, awards to achievers, parent- teacher interactions and counseling are some of the practices used to ensure achievement of learning outcomes.
- Effective feedback system helps to improve the performance of both teachers and students.
- Faculty development programmes are conducted to update the knowledge of the faculty in their respective field which ensures the learning outcome. The Institution has been maintaining good placement record over the past years.

2.6.7   Does the institution and individual teachers use assessment/ evaluation outcomes as an indicator for evaluating student performance, achievement of learning objectives and planning? If 'yes' provide details on the process and cite a few examples.

YES. The Institution uses assessment and evaluation both as an indicator for evaluating student's performance. The different criteria used for assessment are

Assessment Criteria	Learning Outcome
Written tests/Laboratory work	Gaining depth knowledge in subjects
Projects	Innovative thinking and gaining depth Knowledge
Assignments	Self learning with improved flow of thought and Expression
Attendance	Regularity and punctuality
Organizing various events (Quizzes/technical club activities etc)	Team/Individual Work
Symposia/Conferences/Presentations	Creativity to upgrade their knowledge and skills
Placement and Higher studies	Employability and research

CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION

3.1. Promotion of Research

3.1.1 Does the institution have recognized research center/s of the affiliating University or any other agency/organization?

YES, CMR Institute of Technology has been recognized as research center from the affiliating University. The research Centre activities include research by faculty, research by students, interaction with industries and also PhD Programme under Visvesvaraya Technological University (VTU).

Recognized research centers of the institution are listed below:

Registering Authority	Department name	Year of Recognition	Reference Number
VTU	Electronics & Communication Engineering	2009-10	VTU/Aca./2008-09/A-9/1147
	Computer Science Engineering	2012-13	VTU/Aca./2012-13/A-5/3686
	Electrical and Electronic Engineering	2012-13	VTU/Aca./2012-13/A-5/3686
	Mechanical Engineering	2015-16	VTU/Aca-Res-cen/2015-16/6502(z)
	Physics	2013-14	VTU/Aca-Res-cen/2013-14/3876
	Chemistry	2010-11	VTU/Aca/2010-11/A-9/5917
	Mathematics	2008-09	VTU/Aca/2008-09/A-9/1146
	Master of Business Administration	2010-11	VTU/Aca/2010-11/A-9/5918
	Masters in Computer Applications	2013-14	VTU/Aca-Res-Cen/2013-14/3877

3.1.2   Does the Institution have a research committee to monitor and address the issues of research? If so, what is its composition? Mention a few recommendations made by the committee for implementation and their impact.

Yes, the CMRIT research committee has taken few steps to improve quality & output of the research Centre. All departments research committee will inform the CMRIT research committee about the number of research proposals which could evolve from the research Centre.

Composition of Research Committee:

Sl.No.	Name	Designation	Department	Position
1	Dr. Sanjay Chitins	Principal	Computer science	Principal
2	Dr. H.N. Shankar	Dean -R&A	Electrical and Electronics Engineering	Chairman
3	Dr.Dwarka Das	Scientist	Chemistry	Convener
4	Dr. Muralishankar	Professor	Electronics and Communication Engineering	Member
5	Dr. Bijayani Panda	Professor	Mechanical Engineering	Member
6	Dr. Giridhar	Professor	Civil Engineering	Member
7	Dr. Chaitanya Lekshmi indira	Asso. Professor	Chemistry	Member
8	Dr. ShamSunder Hegde	Asso. Professor	Physics	Member
9	Dr. Girish	Professor &HOD	Management	Member
10	Dr. Deepa Anand	Professor	Information Science	Coordinator
11	Dr.Phanikumar	Professor	Chemistry	Member
12	Dr.Manavalan	Assoc.Professor	Electrical and Electronics Engineering	Member

The committee plays the following role:-

1. Cultivate the culture of research among faculty, staff and students.
2. Create infrastructure for carrying out the research work by granting finance to departments (Data collection, equipments, publication work etc)

3. Display the expertise domains among faculty and students
4. Identify interested faculty and students who can work on different domains
5. To review library procurement of journals, magazines and other research publications (hard copies and e-subscriptions) and suggest improvements
6. To encourage faculty and students to use the facilities (hardware and digital library)
7. To showcase prominently the research and project works of various groups
8. Encourage faculty and students to publish their research outcomes in conferences with financial assistance and reward individual (or group) whose outcomes have published in reputed journals.
9. Research projects may be invited among faculty and students and innovative projects may be financed
10. To oversee the selection process of JRF/RA etc.
11. Encourage faculty to submit their research proposals to funding agencies.
12. Increase industry interactions for carrying out collaborative research work (it may start with invited talks, advisory board member, FDPs etc.)
13. Updating in the CMRIT website about research activities and outcomes. Encourage faculty to create their websites and linked to CMRIT
14. Review the research proposals to be submitted to funding agencies as well as to CMRIT, and review the progress of projects sanctioned
15. To support PI/co-PI for the successful completion of the project.

Few of the recommendations from the committee: -

1. Faculty involved in research can be given less workload to facilitate research and development.
2. Bring all the centers-of-excellence in one place to facilitate increased interaction between academic researchers and product developers.
3. The committee recommended to apply for research centers from affiliating university and other research institutions

Decisions taken by Committee in the past 6 months:

The research Committee has approved the following papers for submission to conference/journal.

Sl. No.	Author	Name of paper	Submitted to
1	Dr.Muralishankar R (ECE), Dr.H.N. Shankar	Spectrum Sensing in the Presence of Cauchy Noise through Differential Entropy	IEEE DISCOVER 2016

	(EEE) Dr.Sanjeev G(PESU),		
2	R. Krishnan	An Efficient approach for handling degradation in Character Recognition	Int. J. of Advanced Intelligence Paradigms (IJAIP)
3	Ninikrishna	A Framework For Integrating IoT And SDN Using Proposed OF-Enabled Management Device	ICCPCT 2016
4	Deepa Anand	Aspect Based Sentiment Analysis for Movies using Review Filtering	Journal - IET Nanobiotechnology
5	C. Maxwell Rejil	Influence of flash trap profiles on joint properties of friction welded CP-Ti tube to 304L stainless steel tube plate using external tool	Transactions of Nonferrous Metals Society of China, Elsevier,2016
6	Kashif Ahmed	A Stand-alone Hybrid Renewable Energy System: Simulation, Optimization and Comparison	International Journal of Power Systems and Power Electronics 2016
7	Sudhir K. Routray, Mahesh K. Jha, Abhishek Javali, Laxmi Sharma, Sutapa Sarkar, Ninikrishna T	Software Defined Networking for Optical Networks	IEEE DISCOVER 2016
8	Kamal Kumar	Domination in some Classes of ditrees	Bulletin of the International Mathematical Virtual Institute
9	Phanikumar Pullela	Sodium Polyacralyte (SPA) enhanced FPIA based detection of pesticide residue with PPB/PPT level Detection Limit	Journal – IET Nanobiotechnology 2016

10	Sanjeev Gurugopinath, Samudhyatha B.	"Multi-Dimensional Anderson-Darling Statistic Based Goodness-of-Fit Test for Spectrum Sensing"	IWSDA 2015
11	Sachin Saurav, Nishant Aman, Kumar Aman, Harsh Vardhan, Sanjeev G., R. Muralishankar and H. N. Shankar	Channel Model Characterization and Validation in a Powerline Communication System	NCETAR-15
12	Bhanu Sahay, K. J. Priyanka, Kajal Sinha, Krithika M., Sanjeev G., R. Muralishankar and H. N. Shankar	Voice Chat Using Broadband Over Powerline --A Step Towards Multimedia Communication Over Powerline	NCETAR-15
13	Sanjeev Gurugopinath	Energy-Based Bayesian Spectrum Sensing Over −µ Fading Channels	IEEE CONECCT 2015
14	Vidya T. V., Sanjeev G., R. Muralishankar and H. N. Shankar	Recognition of Boundaries between Primary Heart Sounds -- Systolic and Diastolic	RIICTeM 2015
15	Naveen Nischal G P., Mohan N., Chandrashekar L., Gagan M., Sanjeev G., R. Muralishankar, H. N. Shankar	Design and Development of a Handheld Device for a Traffic Constable to Wirelessly Control Traffic Signals	RIICTeM 2015
16	Sanjeev Gurugopinath	Energy-Based Bayesian Spectrum Sensing Over K−µ and K−µ Extreme Fading Channels	NCC 2015
17	Prof. Shankar, Prof. Muralishankar, Prof. Sanjeev	Differential Entropy Driven Goodness-of-fit Test for Spectrum Sensing	CROWNCOM 2015
18	Sreelakshmi	Spectral Analysis of Multi-Hinged Articulated Towers in Random Sea	TISI-2015 , NIT Calicut
19	Padmavati Kulkarni	Comparison of aerosol extinction between lidar and SAGE II over Gadanki, a tropical station in India	Annales GeoPhysicae

20	Chaitanya Lekshmi Indira	Spin filter effect in iron oxide nanocrystal arrays	Journal of The Indian Chemical Society
21	Chandrappa M, Swathi Korrapati, Shilpa Kammaradi Sanjeeva, U. Vijayalakshmi, Shiva Reddy GV, Rahaman Fazlur, Priti Gupta, Phani Kumar Pullela	Silica gel coated Magnetic Nanoparticles for Bulk scale synthesis of 4-chloro-2,2':6',2"-terpyridine	OPRD (Organic Process, Research & Development, an ACS journal
22	Swathi Korrapati, Chandrappa M, J Sivakumar Reddy, Gopinadh Pulaparthi, Shilpa Kammaradi Sanjeeva, Chandrasekhar B Nair, U. Vijayalakshmi, Ramamoorthy Siva, Phani Kumar Pullela	Objective measurement of Isoniazid (INH) levels: a practical approach for monitoring TB drug treatment adherence	Current Science
23	M. N. Asha , K. S. Chandan, H. P. Harish, S. Nikhileswar Reddy, K. S. Sharath	Recycling Of Waste Water Collected From Automobile Service Station	5th International Conference on Solid Waste Management IconSWM
24	Chaitanya Lekshmi Indira	Investigation of high-k yttrium copper titanate thin films as alternative gate dielectrics	Journal of Physics D: Applied Physics

25	Preeti Jacob	Ground water quality assessment around effluent fed Bellandur lake, Bengaluru	20th International Conference on Hydraulics, Water Resources and River Engineering, IIT Roorkee
26	Dr.Muralishankar.R, Dr.H.N. Shankar	Speech enhancement using discriminative random fields	IEEE TenCon 2015
27	Sreelakshmi	Spectral Analysis of Multi-Hinged Articulated Towers in Random Sea	TISI-2015 , NIT Calicut

3.1.3 What are the measures taken by the institution to facilitate smooth progress and implementation of research schemes/ projects?

CMRIT comprises of both engineering, Management and basic science departments. CMRIT has constituted a research committee, which overlooks the planning and execution of research. At CMRIT, we promote interdisciplinary and strong interaction between faculties. We follow a bottom up approach of research wherein we start from the "problem statement". CMRIT strongly believes in this and it reflects in the composition of CMRIT research committee. The core research committee comprises of 8 researches with at least one representation from each department. Every research proposal, research article, conference paper, monographs etc. will be reviewed by the research committee and provides a written feedback within a set time frame about key aspects like plagiarism, quality of the written document, prior art, relevance to the research of current importance etc. the

feedback could be from any of the research committee members irrespective of their branch or discipline.

- Autonomy to the principal investigator

  The choice of field of research, area of research and focus of research of an individual faculty lies with the respective faculty. Faculty are encouraged both intellectually & financially to collaborate with both industries and other academic institutions.

- Timely availability or release of resources

  We reimburse faulty for their incurred expenses during industrial visits. Every faculty will be given complete autonomy in spending the research grant for their respective research as long as the norms, rules& regulations of granting agency are followed.

- Adequate infrastructure and human resources

  As soon as a grant or an award is obtained by a scientist from any department, the institution makes provision for research space, manpower, other infrastructural support etc

- Time-off, reduced teaching load, special leave etc. to teachers

  The faculty who are passionate about research will be given reduction in teaching load to allow them to focus on research problems. Every faculty who proposes a research problem, writes a grant, defends it in front of the empowered committee of a granting agency and obtains a grant will be rewarded with 10% the grant amount as research incentive.

  Apart from this, every research paper published in a peer reviewed, non-payment journal (either national or international) respective faculty will be rewarded with cash incentives.

  CMRIT focuses on recruiting faculty with industrial background and who also possess good teaching skills to empower students with both theoretical and practical knowledge. Any faculty attending a conference, technical discussion with a subject expert, an industrial visit, workshop, faculty development program, student project conference etc will be given paid leave and the leave application is hassle- free and integrated in the faculty employee resource package (ERP)

- Support in terms of technology and information needs

  Every faculty is provided with a desktop computer for research. CMRIT subscribes many national and international journals and faculty can access the same. Most class rooms are fitted with audio visual tools and there are dedicated conference rooms in almost every floor of the college campus for faculty to indulge in technical discussions. Faculty is given permission at the library to issue extra books for reference. The faculty login to central internet server allows unlimited data access (no data limit on downloads)

- Facilitate timely auditing and submission of utilization certificate to the funding authorities

  Faculty will be given administrative support to comply with the granting agency's rules & regulations. We give periodic training to faculty and support staff on formats & importance of submission of utilization certificates (UC) to granting agencies.

- any other

  The expertise with faculties within the institution may be utilized by industries and corporate entities for their value addition. Since faculties on the rolls of CMRIT will be permitted to invest their time in consultancy it is common practice to establish an arrangement of sharing the consultancy remuneration so obtained between the faculties offering consultancy and CMRIT. It is only ethical and mandatory for all faculties to seek and obtain explicit prior permission from CMRIT before entering into a formal consultancy arrangement.

  Consultancy maybe received directly by the institution and then assigned to a certain team of faculties within CMRIT. Then the revenue sharing will be as follows:

  - 75% of the revenue to CMRIT
  - 25% of the revenue to the equally shared among the members of the team of faculty consultants.
  - Consultancy may be received directly by team of faculty. Then the revenue sharing will be as follows:
  - 25% of the revenue to CMRIT.
  - 75% of the revenue to the equally shared among the members of the team of faculty consultants.

3.1.4   What are the efforts made by the institution in developing scientific temper and research culture and aptitude among students?

At CMRIT, we also strongly believe that students are integral part of the research ecosystem. In this direction students are encouraged to participate in research competitions of many sorts. Faculty are often mandated to ensure that the students who miss classes due to attending these competitions, will not miss the subject and ensures extra classes are conducted for those students and also go to the extreme of re conduction of the missed exams. Students are provided with financial support for taking up challenges/problems which are relevant to society.

List of student projects:

Sl. No.	Department	Student Name	Title of the project	Guide
1	Chemistry	Anoop CJ Kushal I Pavan R	Vehicle Safety Module (VSM); IEEE UPP Mini project	Dr. Phani Kumar Pullela
2	Chemistry	Syed Abrar Hussaini, Raazia Fathima, Rushingwa Grace	IEEE Aleyhum	Dr. Phani Kumar Pullela
3	Chemistry	Juhi Joseph & Sai Apoorva	Crowd funding for farmers: preventing farmer suicides	Dr. Phani Kumar Pullela, Dr. Fazlur Rahaman
4	Chemistry	Kavya K & Priyanka M	Financial empowerment of rural women via demystifying government Programmes	Dr. Phani Kumar Pullela, Dr. Priti Gupta
5	Chemistry	Mrunalini Srinivas & Aishwarya Jakka	Technological Guidance for Micro, Small and Medium Scale Enterprises (MSME) Entrepreneurs for Rural Development	Dr. Phani Kumar Pullela, Dr. Fazlur Rahaman
6	Chemistry	Pavankondoji,	Fly ash based polymeric	Dr. Phani Kumar

		Sruthi R, Rinita KM, & Pawani Tungana	bricks: Minimization of coal tar and concrete use	Pullela, Dr. Fazlur Rahaman
7	Chemistry	Tarun B	Recycle to reuse: Polymeric innovations to reuse every packing material and find a secondary use in customer hand	Dr. Phani Kumar Pullela, Prof. Shivareddy
8	Chemistry	Vinay M, Sripada Bhat, Deepak R, Uday Kiran	Cashew Biofuel: Possibility of a zero-cost biofuel for diesel engines	Dr. Phani Kumar Pullela, Prof. Shivareddy
9	Chemistry	Samatha R, Priyanka Purva, Lavanya, Sneha Miriam John	Affordable lateral flow diagnostics (dipstick); A process innovation	Dr. Phani Kumar Pullela, Dr. Priti Gupta
10	Chemistry	Sai Yatindra, Pranav, Naren, Naveen Kumar	Ionic liquid based three dimensional solar cells	Dr. Phani Kumar Pullela, Dr. Soma Das
11	Chemistry	Prachi Shukla, Swarna, Yash Jain, & Hariharan	Gas phase ammonium nitrate detection-Special emphasis on hand-held detection of ANFO Bombs	Dr. Phani Kumar Pullela, Dr. Priti Gupta
12	Chemistry	Anoop CJ, Sai Ganesh, Pavan R, Rini Jacob	An Universal population screening binoculars for ophthalmological problems and an associated medical information system	Dr. Phani Kumar Pullela, Dr. Soma Das
13	Chemistry	Anjana Mohan, Deepika, Sindhu, Nisarga R Raju	Conversion of seawater to farming water: a new approach to solve the agriculture water shortage problems of India	Dr. Phani Kumar, Dr. Manjunatha M.

14	Chemistry	Golla Harshavardhan, Charan Kumar, Ramachandra Reddy, Hemanth Kumar	Dismantable Houses: A technological innovation for slum dwellers and a boon to low income housing	Dr. Phani Kumar, Dr. Manjunatha M
15	Chemistry	Yashita Reddy, Akarsh Ramesh Khatagahalli, Ajay, Sanjay BC	Waste composites for practical management of garbage problem in India	Dr. Phani Kumar, Dr. Manjunatha M
16	Chemistry	Sai Ganesh	Generic formulations for making Indian Silicone catheters: Providing technical adequacy for Indian health industry	Dr. Phani Kumar Pullela, Dr. Soma Das
17	Chemistry	CJ Anoop	Innovative approach for exploring the possibility of making Indian public transport free	Dr. Phani Kumar Pullela, Prof. Shivareddy
18	Chemistry	Vinod,	Micro Mosquito Smasher: An UV –LED (354nm) based sound enabled field deployable mosquito destroyer for Indian soldiers	Dr. Phani Kumar Pullela, Dr. Rahaman
19	TCE	Syed Mubarak Shoukhi khan Megha. B Sahana. N	Wireless Sensor Network and their application to precision agriculture	Mrs. Sujatha. S
20	TCE	Divyam Raj	Persistence of Vision	-----
21	TCE	Dheeraj. C Arjun Raj Bhargavi	Voice controlled Robot	Mrs. Meenakshi. M. Devikar
22	TCE	Mohan. N, Naveen Nischal, Chandrasekar. L, Gagan	Wireless Traffic Control	Dr. H.N. Shankar, Dr. Muralishankar, Mr. Mahesh Kumar Jha
23	TCE	Ashik. R,	Advanced Incubator	Mrs. Shobha

		Ashwini. M, D. Anand Benjamin		
24	ECE	Pranav Bhat, Gururaj, Nithin M V, Pavan, Naren Mohan.	Fly ash a cheap solution to Bellandur lake's pollution	Prof. Phani Kumar
25	ECE	Anirudh, Anjali, Nirish Patill, Ashwath Aishwarya C, Akhila Vijay	Traffic light controller	Prof.Murali Shankar
26	ECE	Joel Keith Pais Harshavardhn K, Kaushal J. N.	Lake health monitoring system	Prof.Surya
27	ISE	C J Anoop	Manthan-A Businesss Plan Presentation Competition	
28	ISE	Parul	Aquaponics :smart farming	
29	CSE	Ayush Gupta Fisba Ashish	Water on call:Tap-That	Dr.Sanjay Chitnis
30	CSE	Shruthi Varadhan, Sonali Raj, Nishtha Kumar, V Keerthi Kumar	Blood Helfer	Swathi.Y
31	CSE	Aben George, Siddharth Krishnamurthi, Sargam Garg	Wifi enabled smart power bar	Aishwaryalakshmi
32	CSE	Abhimanyu Choudhary, Tauhid Alam	Emergency routing and ambulance request	Manjul Gupta

33	CSE	Edna Johnson, Sai Manasa D, Monisha Ramesh, Priyanka Prakash	Intelligence prediction of the likelihood of the occurance using AI technique	Maya Krishnan
34	CSE	Preethika Anand Samreen Taj Vignesh	Smart and instant medical assistance	Dr.Jhansi Rani
35	CSE	Vinay Kumar Shankar Prasad Lekha.S Shwetha	Intelligent search in legal documents	Alekhya Pinni
36	Mechanical	Jayanth K	Performance and exhaust evaluation of oxyhydrogen fuel enhanced diesel engine	Prof. Rajendra Prasad Reddy
37	Mechanical	Shankar S Praveen Kumar	Investigation of production storage of antimatter and realization of antimatter propulsion engines	Prof.Harish.P
38	Mechanical	Chandrashekhar H Brahmananda	Synthesis and characterization of AL6061/AL203 Particulate matter composite	Prof. Narendra.N
39	Mechanical	Praful Guru Prasad	Evaluation of Mechanical Properties of AL6061 reinforces with graphite particulate metal matrix composite	Prof. Narendra.N
40	Mechanical	Vishwas B S Yogesh Shivaraj Kumar Suheel Ahmed	Design, Development & Fabrication of Cotton Harvesting Machine	Prof.Cyril.S
41	Mechanical	Jayanth N M Swaroop G	Tesla Turbine design and performance analysis	Prof. Harish P
42	Civil	Shreyank H S	Idea conclave for better Bangalore	------

43	Civil	Karthik J Mendu Sneha Mohan Kumar A Chandrasekhar S	Indian Bridge Building Championship IIT Mumbai	------
44	Civil	Karthik J Mendu Sneha Kiran Kattamani Chandu Kumar S V	National Students' Project Exhibition- 2016	Dr.Asha Dr.Chaitanya Ms.Sreelakshmi
45	Civil	Priya Augustine Fateh Arshed Shashi Kumar S Mohammed Khaja	Project Exhibition – Shristi 2016	Dr.Asha Dr.Chaitanya Ms.Sreelakshmi

3.1.5 Give details of the faculty involvement in active research (Guiding student research, leading Research Projects, engaged in individual/collaborative research activity, etc.

The research committee and subcommittee are actively involved in grooming students /research scholars to take up projects and research works in emerging areas. As we mentioned at 3.1.1 and 3.1.2, the institute encourages both faculty and students to involve themselves in research activities. As a result of that the following table gives a clear picture of number of faculty involved in guiding students for various projects/research scholars to invent new innovations.

Department	Faculty name	Number of student projects guiding/ mentoring	Externally funded research projects	Research collaborations with other institutions (Industry/ academics)
ECE	Dr. Muralishankar	4	1	1
	Dr. Kalaga Madhav	3	0	0
	Ms. Pappa.M	2	0	0
	Ms. Sharmila.K.P	2	0	0
	Mr. Sunil Kumar	2	0	0
	Mr. Chetan H	1	1	1

Civil	Dr Asha M Nair	2	3	0
	Mrs Preeti Jacob	1	0	0
	Ms Bhavya K	2	0	0
	Mrs Sreelakshmi G	2	0	0
	Mr Karthik N M	2	0	0
	Ms Vibha Dalawai	3	0	0
Mech	Prof. Rajendra Prasad Reddy	2	0	0
	Mr Gopi.S	2	0	0
	Mr Prashanth Hatti	3	0	0
	Mr Sagar M B	3	0	0
	Mr Narendra N	2	0	0
EEE	Dr H. N. Shankar	5	2	0
	Dr.Manavalan.G	0	1	0
Physics	Dr. S.S. Hegde	2	0	1
	Dr. Suvitha	1	0	7
	Mr.Sandeep	0	0	4
Chemistry	Dr. Chaitanya Lekshmi	4	2	7
	Dr. Phani Kumar	3	2	7
CSE	Dr.Sanjay Chitnis	1	0	0
	Swathi.Y	2	0	0
	Dr.Parasnath Singh	2	0	0
	Sudhakar K.N	2	0	0
	Shanthi M.B	2	0	0
Maths	Dr.K.Meenakshi	2	0	0

List of few best proposals:

Sl. No.	Faculty name	Title of Project	Overview of the proposal
1	Dr. Rekha & Dr. B Narasimhamurthy	Biosensors for analysis of phenolic compounds in textile industry effluents	Project dealt with developing enzyme based biosensors for phenolic compound detection in water and textile effluents (real samples). The sensing was based on detecting the oxygen content in water.
2	Dr. Rekha & Dr. B Narasimhamurthy	Biosensors for analysis of organo-phosphorous pesticides in food and environmental samples	Project dealt with developing enzyme based biosensors for organo-phosphorous compound detection in water. Organo-phosphorous compounds are major ingredients in pesticides and detecting their levels is important to assess the quality of food products and also for various environmental remediation processes.
3	Dr. Chaitanya Lekshmi Indira	Development of Metal-oxide Heterostructures for Nano electronic and Photocatalytic Studies	Project targets on developing metal oxide thin film and nanocrystal based Nano electronic heterostructures to investigate electronic, dielectric and magneto transport properties useful for devices and different functional properties. Detailed investigation of their structure-property correlation features and electronic structure is aimed for this. Developing multi-oxide composite photo catalysts for degradation of organic dyes is also a target of the project.
4	Dr. Chaitanya Lekshmi Indira	Spintronic Studies on Nanostructured Ferrites and Selected Composites	Proposal aims to prepare ferrite based novel spintronic materials for detailed magnetic and magneto-transport study and spin structure analysis. The aim is also to under the influence of external electric field on regulating precisely the magneto-transport features useful for practical spin device applications.

5	Dr. Phani Kumar P	Material chemistry support for stabilizing neem limonoids material chemistry support for stabilizing neem limonoids	Neem is one of the best pesticides in the world. But, the active component azadirachtin is unstable at room temperature. This proposal is to find a material chemistry support which can stabilize neem limonoids. The proposal will help Karnataka & Indian farmers, especially vegetable growers.
6	Dr. H. N. Shankar Dr. Muralishankar	Spectrum Sensing for 5G: Exploration and Study with Sensing Based on Differential Entropy and Under Generalized Gaussian Noise	Application for grant of research project under 'defence grant-in-aid scheme.
7	Dr. Bijayani Panda	Effect of various parameters on the liquid metal embrittlement of stainless steel	DST Young Scientist scheme. Ref No. 192015001860

3.1.6 Give the details of workshops/ training programme / sensitization programmes conducted / organized by the institution with focus on capacity building in terms of research and imbibing research culture among the staff and students.

a. Workshops

Sl. No.	Department	Title of workshop	Number of participants	Date
1	CSE	Workshop on Cyber Security	21	24th - 27th Feb 2017
2		Workshop on DAA with Java, Microprocessor Programming and Software Testing	39	16th- 21st Jan 2017

		Laboratories		
3		Workshop on 3D Animation And Game Designing	75	30th Sep-2nd Oct 2016
4		Workshop on Big Data	70	9th Feb to 13th Feb 2016
5		Foundation Program 4.0	30	14th July 2015
6		Workshop Research Methodologies	40	14th February 2015
7		Workshop on MS-Office Fundamentals with Google Apps	60	8th - 9th January 2015
8		Workshop on Design Thinking by SAP Labs, Bangalore	20	7th November 2014
9		Workshop on NS-2 Simulator	20	27th to 28th June 2014
10		"NS-2 Simulator"	15	28th March 2012
11		Workshop on Robotics	19	2nd - 3rd February 2012
12		Oriented Cloud Computing and the Aneka Platform	14	23rd September 2011
13		Wifi Network Analysis	40	23/2/2017
14	TCE	FDP on Linear Integrated Circuits	20	16/1/2017 to 21/1/2017
15		Workshop on Plagiarism	300	4/3/2016 to 5/3/2016

16		Optical Fiber Communication System Design	30	3/12/2015
17		ARM7 Based Embedded System Design	38	16/9/2015
18		Recent Trends in Antenna Design- using FEKO simulation software	50	21st - 22nd January 2015
19		Speech Processing and Applications	100	2012
20		Social Behavior E-mail Etiquettes Presentation and Professional Ethics	35	2/2/2016-8/2/2016
18		Social Behavior E-mail Etiquettes Presentation and Professional Ethics	50	27/01/2016 -29/01/2016
19		Two Day Workshop on Networking	40	30/09/2016-01/10/2016
20	MCA	ERP and SAP	60	15/09/2016
21		Interview Tips for Technical round of Interview with Maventic	63	26/9/2016
22		Introduction to Magneto-eCommerce Platforms	58	25/10/2016
23		Introduction to IoS development	66	5/11/2016
24		Trend in Web Technologies	64	3/12/2016
25		Industrial Unix	58	19/11/2015

26		Trending Technologies in Software Industry	67	14/9/2015
27		How to seek Job in a dream company	70	21/8/2015
28		Data Storage technology Learning Objectives	62	7/5/2015
29		Workshop on Storage Area Network by EMC^2	50	21st - 26th July 2014
30		Workshop on BlueMix App Development by Mr Sachin Shinde , IBM	20	24th April 2014
31		Workshop on WorkLight App Development by Mr Jijin & Mr Balaji , IBM	50	12th March 2014
32		Workshop on DB2	60	2nd - 4th Sep 2013
33		FDP-"LIC with PSPICE"	20	16th to 21st Jan 2017
34		Workshop on "Embedded Control Systems"	60	11th-16th Jan 2016
35	EEE	FDP-"Control systems with MATLAB"	25	27th – 30th Jan 2016
36		FDP and workshop on "Smart Grid and Smart Metering"	85	1st and 2nd of Oct-2015
37		A five day national workshop on "Power System Stability and Control	37	27th Feb -2nd March 2012
38	Physics	One day symposium on Recent Trends in Advanced Materials and Nanotechnology	35	23rd January 2015
39	Civil	Workshop on E-Tabs and total Station	40	8th - 9th May 2015
40		FDP on LIC with PSPICE	20	16/01/2017 - 21/07/2017
41	ECE	Spontaneous project building	50	31/03/2016
42		Web Technology Workshop	60	23/03/2016
43		Analog and Mixed	30	28/01/2016-

		mode Design using CAD tools		30/01/2016
44		Embedded Control System	60	11/01/2016 - 13/01/2016
45		Workshop on Robotics:-Quadcopter	320	17th-20th Sep 2014
46		Hands on with Lab view by National Instruments	23	24th -27th Jan 2012
47		Altium designer board.	20	12 - 13 Jan 2012
48		Matlab and implementation by MathWorks	35	18th - 19th Mar 2011
49		FDP on Image processing.	30	28th – 29th Jan 2011
50		Around the World	50	16/2/2017
51		Ethical Hacking Workshop	50	24/2/2017 & 25/2/2017
52		Virtual Reality & Augmented Reality	80	28/2/2017
53		Workshop on Skill trek	31	26/2/2017
54		Wifi Network Analysis	40	23/2/2017
55		Workshop on DAA,ST and Microprocessor	30	16/1/2017-21/1/2017
	ISE	Workshop on Big Data	150	2016
56		NETWORK SECURITY AND CYBER SECURITY	40	2016
57		Workshop on animation and game design using blender	**75**	2016
58		R Programming	50	25th Apr 2015
59		IBM, BlueMix	30	05th Nov 2014
60		Network Simulator-2 Workshop	40	27th - 28th Jun 2014
61		Free Software Workshop	40	04th Apr 2014
62		AJAX-DWR	80	01st Oct 2011
63	Mech	Workshop on Robotics	200	03rd - 4th Apr 2011
64		Two days national conference on "Scope of advanced material in energy and environment"	100	07th - 08th Aug 2013
65	Chemistry	Two Day Interdisciplinary Workshop on Upgradation of Knowledge on Nano	60	7/1/2015 - 8/1/2015

		materials		
66		Workshop on "Project Dissertation"	90	24 Sep 2016
67		Workshop on "Case Analysis"	80	9th Dec 2016
68		Workshop on "Case Analysis"	80	24th Nov 2016
69		Workshop on "Project Dissertation"	90	15th March 2015
70		Workshop on "Union budget"	70	14th March 2015
71	MBA	Workshop on "Lean Six Sigma"	60	14th March 2015
72		Workshop on "Entrepreneurship-development	80	27th Sep 2014
73		Workshop on "Case Analysis"	80	14th March 2014
74		Workshop on "Case Analysis"	80	20th Dec 2012
75		Workshop on "Entrepreneurship-Development"	75	24th Aug 2012
76	Maths	FDP on Liner Algebra,Fourier Series and Measure Theory	25	1st Feb – 10th Feb 2017
77		FDP on Advanced Graph Theory	60	1st Aug 2009

Training programmes

Sl. No.	Department	Title of Training programme	Number of participants	Date
1	CSE	Workshop on DAA with Java, Microprocessor Programming and Software Testing Laboratories	39	16th- 21st Jan 2017
		Computer Networks	100	8th Oct 2016

2		Foundation Program 4.0	30	14th July 2015
3		FDP on ISM	30	21st to 26th July 2014
4		UML	19	20th January 2012
5		Academic Development Program	23	28th - 29th July 2011
6	Mathematics	Faculty Seminar	15	Jan 21st -1st Feb 2017
7		Faculty Seminar	15	15th July-22nd July 2016
8		Faculty Seminar	30	4th Jan-15th Jan 2016
9		Math discussion forum	20	June - July 2014-2015
10		Lecture series	30	June-July 2014-2015
11	TCE	FDP on Linear Integrated Circuits	30	16/1/2017 to 21/1/2017
12		Workshop on Plagiarism	300	4/3/2016 to 5/3/2016
13		Optical Fiber Communication System Design	30	3/12/2015
14		ARM7 Based Embedded System Design	38	16/9/2015

15	Mech	Value Added Training on CATIA	55	April 2016
16		FDP on Introduction to Scientific Programming using MATLAB	20	22nd - 23rd Jan 2015
17	ECE	Lecturer Series	35	23-25 Jan 2017 30th Jan to 6th feb 2017
18		Lecturer Series	30	July 2014 1st to 3rd September 2014 December 1st week, 2014 Feb 2015
19		Cadence	20	14th Sep 2015
20		LAB View	20	July 2014
21		Power electronics-Pspice	15	August 2014
22		Orcad cad Tools for Mtech	20	August 2014
23	EEE	Lecturer Series	20	23-25 Jan 2017 30th Jan to 6th feb 2017
24	ISE	Workshop on MS-Office Fundamentals With Google Apps	50	2015
25		Workshop Research Methodologies	60	2015
26		Foundation Program 4.0	40	14th July 2015
27		Information System Management	40	21st - 26th July 14
28	Chemistry	Modelling & Simulation of Multiscale Systems.	60	09th - 10th July 2015
29	MBA	MS Excel Training Programme	60	17/10/2016 – 9/11/2016
30		Business English	82	2/12/2016

		Certificate Program		
31		Aptitude Training from Quantech	60	20/7/2016
32		Certification Course in Financial Market for Beginners	25	20/6/2013
33		Certification Course "Total Quality Management"	20	9th Aug 2012 - 25th Oct 2012
34		Certification Course on "Customer Relationship Management (CRM) & Financial Analysis (FA)	20	14th March 2012 - 23rd May 2012

The following table summarizes the research scholars pursuing their research towards their Ph.D degree

Sl. No.	Name of the Guide	Name of the research scholar	Research Area	Status
1	Dr. Dinesh Anvekar	Mr. Sudhakar	Load Balancing in Self Organized Wireless Sensor Networks	Waiting for Comprehensive Viva
2	Dr. Dinesh Anvekar	Ms. Shanthi	Secure Localization Using PSO and Gradient Descent Methods for Under Water Wireless Sensor Networks	Waiting for Comprehensive Viva
3	Dr. Sanjay Chitnis	Ms. Swathi	Game Theory approach on security strategy in wireless	Course work in Progress

			sensor networks	
4	Dr. Linga Reddy	Ms. Savitha	Evolutionary cross layer Architectures for Wireless Sensor Networks to Enhance Network Lifetime	Course work in Progress
5	Dr. Sanjay Chitnis	Mr. Kiran	Dynamic trust management and adversary detection in delay tolerant network	Course work in Progress
6	Dr. Chandramouli	Mr. Mahesh	Efficient Bandwidth Scheduling in wimax Networks using Evolutionary Computing Technique	Course work in Progress
7	Dr. Jitendranath M	Mr. Anand R	QOS in MANETS	Comprehensive Viva completed
8	Dr. Deepa Lakshmi	Ms. Geetha.S	Wireless Sensor Networks	Comprehensive Viva completed
9	Dr. Sanjay Chitnis	Ms. Danthuluri Sudha	Cloud Computing	Course work completed
10	Dr. Sanjay Chitnis	Ms. Madhu. G	Wireless Sensor Networks	Course work completed
11	Dr.Jhansi Rani	Mrs.Sagarika Behera	Ensuring Data Security using Cryptographic Algorithms in Cloud Computing	Applied for course work

			Environment	
12	Dr.Jhansi Rani	Mrs.Poonam	Scable Tensor Mining for Cross Platform Data	Applied for course work
13	Dr.Jhansi Rani	Mrs.Kanthimathi	Ensuring Security Against Packet Dropping Attacks in Wireless AdHoc Networks	Applied for course work
14	Dr.Jhansi Rani	Mr.Shyam Sundar	Visualizing Big Data Originated from Social Networks	Applied for course work
15	Dr.Jhansi Rani	Mrs.Padmapriya	Secure and Optimized Data Storage Mechanism for Mobile Cloud Computing using DNA based Security Algorithm	Applied for course work
16		Ms. Sutapa Sarkar	5G Cellular Communication	Applying for course work
17	Dr. H.N. Shankar Dr. Muralishankar	Ms. Mamata O Wandalkar	Performance Evaluation and control of a grid connected Hybrid Energy Renewable system	Applying for course work
18		Mr. Ajey. S.N.R	Speech and audio enhancement &	Pre-Comprehensive viva completed

			its applications	
19		Ms. Vidya Thekke Varier	Acquisition segmentation and classification of Phono Cardiograms	Course work completed
20		Mr. Nikhil Joshi (MS)	Clinical psychology Therapy using mixed reality	Applying for course work
21	Dr. Shivakumar E. G	Ms. Reba Kundu	Space vector PWM for Multilevel inverter fed in Induction motor drive.	pursuing
22	Dr. Ramesh	Sharmila. K.P	wireless communication	Pre-comprehensive viva completed
23	Dr. Ramesh	Pappa. M	Wireless Communication	Pre-comprehensive viva completed
24	Dr. Tamilarasi	Meena. P	Wireless body area networks	Comprehensive Viva completed Thesis write up completed
25	Dr. K.V. Ramakrishanan	Kavitha. V	Multi processors on chip	Course Work Completed Thesis write up ongoing
26	Dr. Indumathi G	Mr Chetan H	Image processing & VLSI	Pre-comprehensive viva completed

27	Dr.Ramesh.C	Mrs.Suganya.S	Wireless Communication	Pre-comprehensive viva completed
28	Dr. Indumathi G	Mr Harsha	VLSI	Applying for Course Work
29	Dr. Indumathi G	Mrs Shruthi	VLSI	Course Work completed
30	Dr. Indumathi G	Mrs SriDevi	VLSI	Applying for Course Work
31	Dr. Indumathi G	Mr Sunil Kumar	Image compression	Course Work Completed
32	Dr. Naveen Kumar	Mrs. Archana	wireless	Pre-comprehensive viva completed
33	Dr. Sudershan Rao	Mrs. Meenakshi	Wireless Communication	Applying for Course Work
34	Dr. Naveen Kumar	Mrs. Pushpa	Wireless Communication	Applying for Course Work
35	Dr. Naveen Kumar	Mrs. Shobha	Wireless Communication	Pre-comprehensive viva completed
36	Dr. Mahesh	Mr. Naveen Kumar	Power electronics	Pre-comprehensive viva completed
37	Dr. P. Dhananjeyan	S. Sujatha	Wireless Communication	Thesis Submitted
38	Dr. Fathima Jabeen	Pooja Mohnani	Wireless Body Area Networks	2 meetings completed. Publishing Papers
39	Dr. Sudershan Rao	Meenakshi. M. Devikar	Wireless Communication	Applied for Course work

40	Dr. Y.V.S. Lakshmi	Mr Mahesh	Wireless Optical Communication (VLC)	Applied for Course work
41	Dr. Navin Kumar	Mrs Richa	Analog & Digital Communication	Applied for Course work
42	Dr. Dola Sanjay	Ms. P. Anita	Wireless Communication	Cleared entrance waiting for Approval
43	Dr. Shiva S Yellampali	Ms. Sophiya S Susan	VLSI	Applying for Course work.
44	Dr. R.K. Gopal	Mrs. Miraim George	Marketing	course work completed
45	Dr. Girish C	Mr. Anandappa	Marketing	Pursuing
46	Dr Anuradha A	Mrs. Kavashree	Marketing	VTU Entrance exam cleared
47	Dr Chandni Lekhwani	Ms. Divya, & Mr. Harish	Finance	VTU Entrance exam cleared
48	Dr N P Gopalan	Mr Nagarajan S	Dynamic Context Aware Role - based Access Control Model for Wireless Network Security	To submit synopsis and thesis by end of Sept 2015
49	Dr. B. Narasimhamurty	Ms. Sarika	Characterization of phenol compounds by biosensor	Coursework & Comprehensive viva completed.
50	Dr. B Narasimhamurty	Mrs. Preetha S	Novel metal oxide Nano Structure for Photovoltaic cell studies	Coursework completed.
51	Dr. B Narasimhamurty	Mrs. Padmavathy Mohan	Nanomaterials for Catalysis	Coursework completed.

52	Dr. B Narasimhamurty	Mr. K. Sreenivas	Spectrophotometric estimation of fluoride in drinking water of rural areas in Chikkaballapur district of Karnataka.	Coursework completed.
53	Dr. B Narasimhamurty	Mr. K. N. Chandrasekhar	New Analytical Method Development for the active pharmaceutical ingredients using visible spectro photometry.	Coursework completed.
54	Dr. Fazlur Rahaman	Mr. Shivareddy G V	Synthesis, Characterization and biological studies of metal complexes of Schiff base ligands	Coursework & Comprehensive viva completed.
55	Dr. Fazlur Rahaman	Ms. Anusya	Synthesis, Characterization and biological studies of metal complexes of heterocyclic molecules	Coursework completed
56	Dr. Fazlur Rahaman	Mr. Padmanabha Gowda V N	Synthesis, Characterization and physico-chemical Studies on transition metal complexes	Coursework completed
57	Dr. Chaitanya lekshmi Indira	Mrs. Lakhirupa Devi	Metal-oxide Heterostructures for Nanoelectronic and Spintronic Studies	Applied for Course work

58	Dr. Phani Kumar	P Gopinadh	Biotechnology	Coursework completed
59	Dr. Phani Kumar	J Sivakumar Reddy	Biotechnology	Coursework completed
60	Dr. Phani Kumar	Chandrappa M	Organic Chemistry	Coursework completed
61	Dr. K. Meenakshi	Mr. Harisha. C. S	Study of Hyper Graphs	Applied for Course work
62	Dr. T.V. Pradeep Kumar	Mr. D. Prathap	Graph Labellings	Ready for Submission
63	Dr. Murali	Mr. M. Kamal Kumar	Domination theory in graphs	Submitted Thesis
64	Dr. K. Meenakshi	Mr. Harisha. C. S	Study of Hyper Graphs	Applied for Course work
65	Dr. T.V. Pradeep Kumar	Mr. D. Prathap	Graph Labellings	Ready for Submission
66	Dr. Murali	Mr. M. Kamal Kumar	Domination theory in graphs	Degree Awarded
67	Dr.Vivekanandan	Ms.Helen Josephine	Opinion Mining	Course work completed
68	Dr.K.Kartheeka Pavan	Ms.Vijayalaxmi.B	Data Mining	Course work completed
69	Dr. ChaitanyaLekshmi Indira	Mrs.Sageetha	Zno nanoparticle preparation and photocatalytical applications	Applied for Course work
70	Dr. Manjunatha M	Mr. Putta Raju	The impact of fly ash application in soil & plant growth and bicrbial eco system	Applied for Course work
71	Dr. Soma Das	Ms. Divya	Green Crosslinking of Carbohydrate And Protein	Applied for Course work

			Composites For Commercial Applications	
72	Dr.Bijayani Panda	Mr.Trishul M A	Post Weld & Pre Weld properties of AA2219	VTU Entrance exam cleared
73	Dr.Bijayani Panda	Mr.Shreyas.P	Study of liquid metal embrittlement of stainless steel welded to galvanized carbon steel	Applied for Course work
74	Dr.Bijayani Panda	Mr.Dinesh	Development of novel filler alloy for Aluminum-aluminum vacuum furnace brazing.	Applied for Course work
75	Dr.Bijayani Panda	Mr.Smruti Rekha Swain	Synthesis of Al-CNT composites by Mechanical mixing: optimization of process parameters.	Applied for Course work
76	Dr.Vijayanand Kaup	Mr.Venkatesh Naik	Preparation and Characterization of Hybrid Green Composite Material using Mango Seed Cover and Screw Pine as the Reinforcement in Phenol Formaldehyde and Epoxy Resin Matrix	Applied for Course work
77	Dr.Vijayanand Kaup	Mr.H.Manikandan	Computational Synthesis and	VTU Entrance exam cleared

			Analysis of Epi-cyclic gear trains	
78	Dr. Manavaalan G.	Mrs. Illa Rai	Challenges in RIS Integration at grid level: A new approach for control and protection technique	course work ongoing
79	Dr. K. Meenakshi	Mr. Harisha. C. S	Study of Hyper Graphs	Appeared for Course work
80	Dr. K. Meenakshi	Mr. Hanumesha.A.G	Study on labeling, factorization and number theory on Semi Graphs	Applied for Course work
81	Dr. T.V. Pradeep Kumar	Mr. D. Prathap	A study on labeling of Graphs	Submitted
82	Dr.C.V.Vinay	Thulasi.L	Mixed convection on cason fluids	Cleared entrance
83	Dr D P Giridhar Dr Chaitanya Lekshmi Indira	Ms. Bhavya K	Heavy metal removal on Nanotechnology	Applied for Course work
84	Dr.Asha.M.Nair	Ms. Divya V	Biological method of soil stabilization	Applied for Course work
85	Dr.P.Nagesh	Mr. Karthik M	Hydrogeological Studies in Kanakapura Taluk using Remote Sensing and GIS Techniques	Completed Course work
86	Dr D P Giridhar	Mr. Karthik N M	Seismic analysis Of masonry structures	Applied for Course work
87	Dr.Shalini	Mr. Phaniraju M	Hydrogeomorphological analysis of water management-	Completed Course work

			Kumadvathi River basin using GIS and Remote Sensing	
88	Dr G S Dwarakish	Ms. Preeti Jacob	Effective of impervious cover on urban flood	Completed Course work
89	Dr.Asha.M.Nair	Ms. Sreelakshmi G	Soil Structure Interaction	Applied for Course work
90	Dr D P Giridhar	Ms. Vibha N Dalawai	Seismic analysis Of masonry structures	Applied for Course work

3.1.7   Provide the details of prioritized research areas and the expertise available with the institution.

The following are the research areas of various Departments for which the expertise is available in the institution.

Details of prioritized research area as follows

Dept.	Prioritized Research area	Expertise available
ECE	Image Processing, Signal Processing,	Dr. Muralishankar
	Wireless Communication.	Dr. Ramesh
	Image Processing, Signal Processing,	Dr. Binish Fathima
	Wireless Communications	Dr.Benjamin
	Wireless Communications	Dr.Sudershan Shinde
	Electronics	Dr.Abdul Nazir
	Signal Processing	Dr.Kalaga Venu Madhav
CSE	Artificial Intelligence,	Dr. Sanjay R Chitnis
	Computer Vision	Dr. Krishnan

	Soft Computing	Dr. Jhansi Rani
	Object Oriented Modelling	Dr.Parasnath Singh
ISE	Internet of Things	Dr.Premkumar Ramesh
	Soft Computing	Dr.Jhansi Rani
TCE	Signal Processing	Dr. K.V.S. Anandababu
	Optical Networks and Narrow band internet of Things (IOT)	Dr. Sudhir Kumar Routray
EEE	Intelligent Systems and Control, Speech processing, VAD for Voice over Internet Protocol (VoIP), Sensor Networks, Biomedical Signal Processing	Dr. H.N. Shankar
	Network Control System, Hybrid Electric Vehicles, Mobile Robots	Dr. Manavaalan G.
	Multi Level Inverter	Ms. Reba Kundu
MECH	Kinematics Synthesis	Dr. Vijayananda Kaup
	Dynamics & control	Dr. Krishnarao Dhuri
	Machine Design	Mr. Rajendra Prasad Reddy
	Material Science	Dr. Bijayani Panda
PHY	Thin film Solar Cells	Dr. S.S. Hegde
	Polymer Nano-composites Nano Materials Irradiation of polymers	Dr. Kalpana Sharma
	Astrophysics	Dr. Rajesh Gopal
	Atmospheric Physics	Dr. Padmavati Kulkarni
	Ceramic materials	Dr. Ragavendra Sagar
CHEM	Photo Catalysis	Dr. B. Narasimhamurthy
	Chemical biology	Dr. Phani Kumar Pulela

	Electronic materials and Nanocomposites	Dr. Chaitanya Indira Lekshami
	Inorganic & Bioinorganic Chemistry	Dr. Manjunatha M.
	Inorganic & Bioinorganic Chemistry	Dr. Fazlur Rahaman
	Organic Chemistry	Dr. Priti Gupta
	Inorganic Chemistry, Nanoscience	Dr. Soma Das
	Quantum Chemistry	Dr. Subhi B Konwar
MATHS	Graph theory	Dr. K. Meenakshi Mr. M. Kamal Kumar Mr. D. Pratap(Submitted Thesis)
	Water wave mechanics.	Dr. Sunandha Saha
MBA	Market Research	Dr. Girish C
	Marketing Strategies	Mrs. Miriam George
	Portfolio Management	Mr. Saravanakrishnan V
MCA	Artificial Intelligence	Dr.Deepa Anand
CIVIL	Urban water management, Seismic design of structures	Dr. D P Giridhar
	Geosynthetics, Ground Improvement, Fatigue behavior of pavements	Dr. Asha M Nair

3.1.8 Enumerate the efforts of the institution in attracting researchers of eminence to visit the campus and interact with teachers and students?

No of eminent researchers visited institute to interact with faculty & students exclusively related to research						
Department	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**

CSE	3	2	2	7	5	5
TCE	6	2	4	7	2	1
ECE	4	2	3	2	2	1
ISE	3	8	5	7		
EEE	3	4	4	5	5	1
Physics	1	1	4	1	6	
Chemistry	1	2	3	4	2	2
Maths	2	2	1	1	1	
MBA	1	2	2	4	3	

3.1.9 What percentage of the faculty has utilized Sabbatical Leave for research activities? How has the provision contributed to improve the quality of research and imbibe research culture on the campus?

The management is supportive in the regards of providing assistance for research work. Dr. Vindhyawasini Prasad has been provided a sabbatical leave for a research at Beijing from 1st July 2016 to 31st June 2017. Dr. Manavaalan G from Electrical and Electronics Engineering Department has been provided a sabbatical leave for 3 months to carry out his research project at IIT Kanpur. CMRIT has also provided him a loan of Rs. 40,000 during this period.

The above faculty after their sabbatical leaves, they have improved their research skills thus they are able to guide students in their respective area.

3.1.10 Provide the details of the initiative taken up by the institution in creating awareness /advocating/ transfer of relative findings of research of the institution and elsewhere to students and community

College supports the faculties in following ways to ensure that the knowledge developed through research is disseminated:

- Support for establishing SPOC with industries so the products can be developed based on research findings.

- Research findings are published in peer-reviewed journals both at the national and international levels.
- Research findings are presented both at national and international conferences.
- College encourages faculties to innovate and apply for patents.
- UG and PG students are given parts of the research work as projects and are encouraged to innovate and get an experience of working on real-time projects.
- The Staff members, whose papers are published, have shared it through Outlook, Group Mail to the faculties and Students.
- Time upon time when Conferences, Seminars & Workshops are organized in various colleges, the faculties are encouraged to present their papers.
- UG students are given parts of the research work as projects and are encouraged to innovate and get an experience of working on real-time projects.
- Encourages faculty to innovate and apply for patents.
- Faculties train students to actively participate in Research Festivals organized by VTU and other institutions.
- The students are allowed to utilize the laboratory to perform projects which were portrayed either as paper or poster presentations in conferences and seminars organized by other colleges.
- The students are allowed to utilize the laboratory to perform projects which were portrayed either as paper or poster presentations in conferences and seminars organized by other colleges. For example, the student project on "Traffic Light control Using ZIGBEE Technology" by Babita Susan George, Balamaruti T and Avinash. M was tested by Bangalore Traffic Police in Bangalore under the guidance of Prof. H.N. Shankar.
- The IEEE Humanitarian award received by CMRIT students for desalination of sea water is for broader interest of farmers and we are in talks with NGOs for field testing.
- The Gold nanoparticle concentration using SPA is widely useful for reducing cost of health care and has received interest from Tulip Group, Goa. Ammonium nitrate bomb detection does not exist in field and our acid sensor research using Rhoda mine compounds is being considered as an option for ANFO bomb detection.
- The awards received by CMRIT chemistry department students reflect the social consciousness and interdisciplinary nature of the projects.
- The research activity done by the research scholars will be shared with the faculty and students in faculty research forum.

3.2 Resource Mobilization for Research

3.2.1   What percentage of the total budget is earmarked for research? Give details of major heads of expenditure, financial allocation and actual utilization.

Budget allocated for research											
2011-2012		**2012-2013**		**2013-2014**		**2014-2015**		**2015-2016**		**2016-2017**	
Allocation	Actual Utilized	Allocation	Actual Utilized	Allocation	Actual Utilized	Allocation	Actual Utilized	Allocation	Actual Utilized	Allocation	Actual Utilized(Till 31.03.2016)
500000	183814	1200000	1148675	2100000	1888533	3000000	2722935	3000000	2820000	3500000	2910000

3.2.2   Is there a provision in the institution to provide seed money to the faculty for research? If so, specify the amount disbursed and the percentage of the faculty that has availed the facility in the last four years?

Yes.

The institution provides seed money of Rs 500000/- for faculty members to pursue research and to make project proposal.

The faculty is provided Rs. 74,841 as part of Research Publications Incentive Scheme.

*The CMRIT has sanctioned a contributory grant for purchasing sputtering machine as part of the encouragement for the faculty's research.

3.2.3   What are the financial provisions made available to support student research projects by students?

There is a separate financial provision made by the Institution for student's projects under student centric initiatives. There were many occasions where Institution has provided financial support to the student for their research projects.

Institution also provides financial support for travelling and boarding to participate in the different events at state and national level computations.

Students can use Institution infrastructure and resources after working hours for doing their projects

In last two years, the Institute has provided research support to the students to the tune of Rs. 1 Lakh approx.

Rs. 1,19,500 Paid towards to 81 students for Student Assistantship Programme.

3.2.4   How does the various departments/units/staff of the institute interact in undertaking inter-disciplinary research? Cite examples of successful endeavors and challenges faced in organizing interdisciplinary research.

Research and Development cell is composed of Engineering, Management and Basic Science & Humanity (BSH) faculty. Many interdisciplinary research promotion activities are carried out by our faculty members of Engineering and BSH.

The following are successful endeavors organized under interdisciplinary area. Considering expertise and facilities available, the research committee identifies the interdisciplinary areas of research.

The HODs and concerned faculty regularly interact and find the interdisciplinary areas. The major challenges are identification of interdisciplinary research problem, and labs and defining scope of each area.

Student Projects- inter-disciplinary Department	
Competition	**Topic/ Area of research (collaborated departments)**
IEEE Aleyhum 2014	This is project is for desalination of water to increase farming water for farmers. First of its kind in the world, developed to reduce suicide deaths of farmers (Chemistry & Civil)
Ideas for India	This project is for crowd funding for farmers to provide interest and risk free farming loans (Chemistry & CSE)
Ideas for India	This application is to simplify government Programmes for rural women and for their empowerment (Chemistry & CSE)
Ideas for India	Indian MSME are the most vulnerable class due to globalization and this project tries to provide technological guidance for them (Chemistry & CSE)
CMR IMS Eureka 2K15	Waste Polymer- fly ash composites are the materials of future due to their origin and quantum. This project is to

	develop near zero-cost bricks for non-critical structures (Chemistry & MBA)
Ideathon 2.0	This project is to develop "Smart Hat" which will record photos & videos "hands-free" (Chemistry, NGO & Industry)
Ideathon 2.0	This project is to create a platform to auction bank mortgaged houses for obtaining optimum prices for the home owners and elimination brokers and artificial spiking of prices (Chemistry & CSE)
FKCCI	This project is called Slim Pizza & uses a Karnataka local substitute of tamarind Kokum (Garcinia Indica) for making pizza sauce. An Indian version of pizza, which will have our Indian natural product named "Hydroxy Citric acid (HCA)" which prevents fat deposition in arteries (Chemistry & Food Science & Technology)
TP Pitch Off	This award is also for "Slim Pizza". Some of the investors came for competition have taken the CMRIT MOUs for consideration (Chemistry & Food Science & Technology)
Srishti, a state level engineering student competition	This is in response to Mr. Modi's call for "Swacha Bharat". This project aims to create a reuse for every plastic packaging material, say for example a washing powder sachet will expand to become a garbage bag. An additional secondary use for every packaging material. (Polymer Science & Chemistry)
Srishti, a state level engineering student competition	This is the second award for our Women Empowerment application
Srishti, a state level engineering student competition	This project has found a very cost effective tool called "sodium polyacrylate" to concentrate gold nanoparticles enabling very cheap lateral flow diagnostic devices (Chemistry & Industry)
KSCST	This award is for dismantlable houses for urban & rural slums & use recycled plastic, fly ash and sand for building the same. (Chemistry, Mechanical Engineering)
Project	Planning of Smart Buildings with light transmitting, self-cleaning & glass waste concrete (Chemistry, Civil Engineering)
Project	Analysis of detection of end point detection by recognising formats in the spectrum of speech packets in non stationary noisy environment (Electronics and Electrical Engineering)

Project	Broadband interworking of WMN with broadband on power-line (Wireless Mesh Networks) (Electronics and Electrical Engineering)
Publications	1.Channel modeling for Power line communications 2.Voice data transmission over Power line communications 3.Optimal power allocation over a fading MAC with varying observation SNRs resource constrained wireless sensor network
Students of 6th semester are required to undertake mini projects which can be inter-disciplinary, projects teams and guides are encouraged to be formed comprising multiple departments.	

3.2.5   How does the institution ensure optimal use of various equipment and research facilities of the institution by its staff and students?

Students are given free access to use all the facilities which are available in the research center and various labs across various Departments during and beyond working hours. The facilities created are used by sister concern institutions, nearby industries, outside consultancy and research scholars from other institutions.

3.2.6   Has the institution received any special grants or finances from the industry or other beneficiary agency for developing research facility? If 'yes' give details.

Yes,

Institution has received grants for developing research facility. The details are as follows.

Sl. No.	Title	Department	Sanctioned by	Amount in Rs (Lakhs)
1	Material Chemistry support for stabilizing neem liemonoids (SMYSR SCHEME)	Dr. Phani Kumar Pullela, Chem Dept	VGST	4.00
2	Development of Metal-oxide Heterostructures for Nanoelectronic and Photocatalytic Applications.	Dr. Chaitanya Lekshmi Indira, Chem Dept	DST Govt of Karnataka	60
3	Spintronic Studies by	Chem	DST	20.8

	Nanostructured Ferrites and their Selected Composites	Department		
4	Fluorescence Nose (F-Nose) for MTB VOC detection	Prof. Phani Kumar Pullela and Prof. B. Narasimha Murthy	DST	49.5
5	Material Chemistry support for stabilizing neem liemonoids (SMYSR SCHEME)	Dr. Phani Kumar Pullela, Chem Dept	VGST	4.00
6	Fabrication of Low Cost Solar Cells	Dr. Shamsunder Hegde , Physics	VGST	0.4
7	To set up a prototype of Wireless Electricity modal	Prof. Abhishek Javli, TCE	VGST	0.4
8	Bio sensor for analysis of Phenolic compounds	Dr. Rekha & Dr. B N Murthy Bio Technology	DST Govt of India	28.98
9	"Broadband interworking of wireless Mesh Networks"	Prof. H.N. Shankar & Prof. Murali Shankar EEE & ECE	VTU	13.12
10	"Bio sensor for analysis of organophosphorus pesticides	Dr. Rekha & Dr. B.N. Murthy Bio Technology	VTU	11.57
11	"Analysis of Robustness of Endpoint Detection	Prof. H.N. Shankar & Prof. Murali Shankar EEE & ECE	VTU	8.0
12	Centre of Excellence in Quality enhancement audio video signals	Dr. Indumathi G, ECE Dept.	VGST	60.00
13	FDP	MATHEMATICS	AICTE	2.0
14	MODROBS	ECE	AICTE	15.0
15	DST Project Young scientist scheme	Mech	DST	18.85
16	Development of Software and Controller Board for WEDM Machine	Dr Manavaalan G	Concord United Products Private Limited	5.5
17	Two weeks SDP on	Dr.L.Sudershan	AICTE	2.0

	Advanced Graph theory	Reddy, Mathematics		
18	Stabilized Mud blocks as an alternative building materials	Civil	KSCST	0.05
19	Application of particle image velocimetry to investigate pile soil interaction behaviour	Civil	KSCST	0.05
20	Experimental studies to investigate the potential of using optical fibers/fabrics and titanium dioxde in manufacturing light transmitting and self cleansing masonry blocks	Civil	ACC Cements Pvt Ltd	0.2
21	Experimental studies to investigate potential of using waste materials as infills for geocell reinforced constructions 3 months	Civil	SITARA	0.12
22	Locking of textile industry dyes , RO reject water chemicals using Fly ash as matrix and conversion of same to bricks	Civil	SHELL APPARELS	0.75
TOTAL				**305.29**

3.2.7   Enumerate the support provided to the faculty in securing research funds from various funding agencies, industry and other organizations. Provide details of ongoing and completed projects and grants received during the last four years.

Institution provides support to the faculty and the students:

a.   Project based pooled lab space: Research lab space in CMRIT is provided as pooled one and it allows the faculty and students to use the facilities as common ones. Important aspect here is that, a faculty who is early in career could use the same facility as senior well-funded faculty. The granting agencies are strongly emphasizing and building centers of excellence with common pooled research areas for this reason only.

b. Dedicated administrative support: Offer to provide additional administrative support for compliance like dispatch of utilization certificates, procurement of research chemicals, documentation handling for import of items etc. This way the researchers could focus their efforts towards innovation.

c. Liberal rewarding/ incentives for productivity: A 10% cash reward for amount grant obtained from external granting agency and 75% of the total amount for industrial consultancy. These three parameters are one of the reasons why we attract reasonably good researchers in this competitive environment.

d. The institute assists faculty and students in making proposals to various government and non-government agencies.

e. The institute provides financial support inform of seed money or otherwise while making various proposals.

The following are the projects that have been completed and ongoing in last four years.

Sl. No.	Title of the Project	Sponsored Agency	Amount Sanctioned (in Lakhs)	Sanctioned Letter No.	Duration	Name of the Investigator	Department	Status
1	Material Chemistry support for stabilizing neem liemonoids (SMYSR SCHEME)	VGST	4.00	No. VGST/SMY SR/GRD-444/2014-15 dtd 07/01/2015	2014-2015 (1 Year)	Dr. Phani Kumar Pullela	Chemistry	Completed
2	Development of Metal oxide hetero structures for Nano electronic and Photo Catalytic applications	DST	50.00	No. SR/NM/NS-1161/2013 Dtd 21/07/2014	2014-2017 (3 Years)	Dr. Chaitanya Lekshmi Indira	Chemistry	Ongoing
3	Fabrication of Low Cost Solar	VGST	0.40	No. VGST/P-5/TRIP/	2013 (6 Months)	Dr. Shyamsunder Hegde	Physics	Completed

	Cells using Sns Thin Films			2013-14 Dtd 23/12/2013				
4	Fluorescence Nose (F-Nose) for MTB VOC detection	DST	49.5	DST Ref. No. SR/NM/NT-1034/2015 (G)	2016-18	Dr. Phani Kumar P	Chemistry	Ongoing
5	Material Chemistry support for stabilizing neem liemonoids (SMYSR SCHEME)	VGST	4	VGST Ref. No. VGST/SMYSR/GRD-444/2014-15	2014-16	Dr. Phani Kumar P	Chemistry	Ongoing
6	To set up a prototype of Wireless Electricity modal	VGST	0.40	No.VGST/TRIP/2012-13/242 dtd 22/12/2012	2012 (6 Months)	Prof. Abhishek Javli	TCE	Completed
7	Biosensor for analysis of phenolic compounds in textile industry effluent	DST	28.98	NO. DST/TSG/ME/ 2009/65 dtd 10/02/2011	2011-2014 (3 Years)	Dr. Rekha K Dr. B Narasimha Murthy	Bio-Tech	Completed
8	Bio sensor for the analysis of organophosphorous pesticides in food and environmental samples	VTU	11.57	No. VTU/Aca/2010-11/A9/11343 dtd 07/12/2010	2011-2014 (3 Years)	Dr. Rekha K Dr. B Narasimha Murthy	Bio-Tech	Completed
9	Centre of Excellence in Quality enhancement audio video signals	VGST	60.00	No. VGST/PRMG/CESEM-5/2009-10/208 Dtd 26/06/2010	2010-2013 (3 Years)	Dr. Indumathi G	ECE	Completed
10	Analysis of robustness	VTU	08.00	No. VTU/Aca/20	2010-2011	Dr. Shankar H	EEE	Completed

			10-11/ A-9/11384 Dtd 07/12/2010	(1 Year)	N Dr. Muralishan kar R		
of end point detection in the spectrum of speech packets in non stationary noisy environmen t							
11	Broad band interworkin g of WMN with broad band on power lines. (Wireless Mesh Networks)	VTU	13.1 2	No. VTU/Aca/20 10-11/ A-9/11377 Dtd 17/12/2010	2010- 2013 (3 Years)	Dr. Vijaya Pandey Prof. Soma Pandey transferred to Dr. Shankar H N Dr. Muralishan kar R	ISE transf erred to EEE	Ongoing Change of PI & Co-I With an extension
12	MODROB	AICTE	15	No200- 21/FIN/2001 - 2002/666/22 33	2010	Dr. G Indumathi	ECE	Completed
13	Staff Developme nt Programme	AICTE	2	F.No. 1- 78/FD/SDP(179)/08-09	2010	Dr. L Sudarshan Reddy	Mathe matic s	Completed
14	Conversion of Salt water to Farming Water using Fly Ash	DST WTI	3	DST/TM/W TI/2K15/26	2015	Dr. Phani Kumar Pullela	Chem istry	Ongoing
15	Chemical assay for Homocyste ine & glutathione	DBT Nanobiote chnology	3	BT/PR14291 /NNT/28/862 /2015	2015	Dr. Phani Kumar Pullela	Chem istry	To be Resubmit
16	Diagnosis	DBT GCE	1	IKP/GCE/Bi	2015	Dr. Phani	Chem	Ongoing

	of pediatric TB	along with Bigtec labs, Bangalore		gtec/1/2015		Kumar Pullela	istry	
17	Building a commercial supplier catalogue for Magnetic nanomateri al based functionaliz ed surface for enabling chemistry and biochemistr y	BIRI DBT	3	BT/SBIRI13 29/28/15	2015	Dr. Phani Kumar Pullela	Chem istry	Site Visit(Unde r Considerati on)
18	Colorimetri c assay for metals, pesticides, endocrine disruptors and food adulterants- tools for ppb level detection with naked eye	BIPP, DBT	2	BT/BIPP092 3/35/15	2015	Dr. Phani Kumar Pullela	Chem istry	Funded but money yet to be sanctioned
19	Effect of various parameters on the liquid metal embrittlem ent of stainless steel	DST Project Young scientist scheme	18.8 5	Ref No: 1920150018 60(Proposal Submitted)	2015-18 (3 years)	Dr. Bijayani Panda	Mech anical	Ongoing
20	Discrete Mathematic s and its application s	submitted to AICTE for Seminar Grants in Jan 2017	2	----	1 DAY	Dr.K.Meen akshi	Math s	Submitted
21	Fine-	submitted	2.75	---	2017	Dr.Deepa	MCA	Submitted

	grained opinion mining and review summarization from learner reviews.	to AICTE for RPS SCHEME in Jan 2017				Anand		
22	Digital India – Fraud prevention, detection & Resolution	submitted to AICTE for RPS SCHEME in Jan 2017	23.59	---	2017	Dr.R.P.Sigh	CSE	Submitted
23	Skill & Personality program centre for developmnent of SC/ST students	Submitted to AICTE in Jan 2017	25	---	2017	Dr.Phanikumar Pullela	Chemistry	Submitted
24	Next Generation Automation in Indian Context	submitted to AICTE for FDP Scheme in Jan 2017	7	---	2017	Dr.Premkumar	CSE	Submitted
25	Advanced Industrial Automation	submitted to AICTE for FDP Scheme in Jan 2017	7	---	2017	Dr.Vijayanand	Mech	Submitted
26	Modernisation of Microwave Lab	submitted to AICTE for MODROB Scheme in Jan 2017	20	---	2017	Dr.R.Muralishankar	ECE	Submitted
27	Modernisation of Advanced Communication Lab	submitted to AICTE for MODROB Scheme in Jan 2017	20	---	2017	Dr.R.Muralishankar	ECE	Submitted
28	Adjunct Faculty	Submitted to AICTE in Jan 2017	6	--	2017	Dr.Benjamin	ECE	Submitted

29	Network Science and Engineering for Communication Engineers	submitted to AICTE for FDP Scheme in Jan 2017	5.6	--	2017	Dr.Sudhir K.Routray	ECE	Submitted
30	Evaluation and Enhancement of Wireless & wired Network,Networking Protocols for Smart City Applications	submitted to AICTE for MODROB Scheme in Jan 2017	13.88	---	2017	Dr.Premkumar	CSE	Submitted
31	Geotechnical Site Investigation	submitted to AICTE for FDP Scheme in Jan 2017	2.5	---	2017	Dr.AshaNair	Civil	Submitted
32	STRIVING FOR EXCELLENCE IN INSTITUTIONS OF HIGHER EDUCATION	submitted to AICTE for Seminar Grants Scheme in Jan 2017	1.65	---	2017	Dr.Priyameet	MBA	Submitted
33	Mentoring Millenials For Leadership	submitted to AICTE for FDP Scheme in Jan 2017	2.8	----	2017	Ms.Miriam	MBA	Submitted
34	Books in Regional Language	submitted to AICTE in Jan 2017	0.5	---	2017	Dr.Jhansi Rani	CSE	Submitted

3.3 Research Facilities

3.3.1 What are the research facilities available to the students and research scholars within the campus?

The research and development committee guides various research activities in the Institution.

High bandwidth internet connectivity and Wi-Fi facility is made available for the students and faculty.

The library provides access to E-journals, printed journals, reference material and thus supports the research work of students and faculty.

Besides the above common facilities, Project laboratories and research laboratories are equipped with appropriate software.

Computing center and labs of the Institution are made available beyond working hours.

Institution has established research labs which are availed by the faculty and students. Each Department has project lab for students.

An exclusive research laboratories available with following major equipment.

Sl. No	Department	Equipment Name
1	ECE	NI's Image, processing kits, FPGA boards, Matlab, Lab View Computer System- Server IBM 2U Rack Server, Desktops: Lenovo Think Centre Dell Systems Xilinx ISE 12.4 System Edition Texas DSP Kits – 6713 Processor Vertex 5 FPGA Board Xilinx Make FPGA & CPLD Cadence Software Code Composer Studio Version 3.3 (Academic Version) Matlab with simulink and all tool boxes LabVIEW – Full Development System, NI USB 5132 with Multisim Intelligent Universal Programmer Spartan III based DSP in VLSI Protoboard Arbitrary Function Generator (Techtronix Make) OMAP 3530SBC Bundle (Texas Make) Image Daughter Card (ND Tech Make) 4 Channel Audio Daughter Card AD- DA Multichannel Daughter board (ND Tech Make) Digital and Advanced Communication Training System Mini

		ARM Evaluation Boards ARM 9 Based Embedded Linux Lab Voice Recorder (Sony Make) Digital Camera (Sony Make) Handy Camera (Sony Make) Digital Storage Oscilloscope - 25 MHz, 100 MHz ARM 7 Trainer Kit MSP 430 Microcontroller Kit (Texas Make) + Power Supply 01 No of Altium Nano Board 2 and 05 number of license and Altium Designer CBI C Compiler For ARM 7 with Debugger Speech Databases (Imported) AURORA
2	EEE	HP IDS DSC 8460w Base NB PC XU744AV Care Paq for HP 3y NBD Support LT-U4414E HP Carrycase-KG 205PA Server Camera Sound card Camera (webcam pro 9000) Camera (webcam c170) Hard disk drive Microphone 3kva online ups/batteries 2 tb external storage for server.
3	Mech	Universal testing machine Metallurgical Microscopes Hardness testing (Brinell, vicker, Rockwell) Fatigue testing machine Impact testing machine Torsion testing machine Wear testing machine IC Engines (petrol, diesel, four/two stroke) Turbines (pelton wheel, francis) Heat treatment furnaces Machine tools(lathes, milling, drilling, shaping, grinding machines) Journal bearing setup
		Profile projector (l.c-10-4mm) Pollariscope Autocollimator Ansys software version 14.0 for analysis Solid edge software version ST5 for 2D and 3D Drafting Viscometer Electronic balance (d= 0.1 mg) Non-destructive testing machine (magnetic particle inspection, ultrasonic flaw detector, dye penetration)
4	Physics	Ultrasonic Interferometer
		Four Probe Set-up
5	Chemistry	Electronic balance (d= 0.1 mg)
		Shimadzu HPLC
		Weighing balance (1 g accuracy)
		Biological & chemical Refrigerator, Laminar flow
		Gas chromatograph (GC)
		Portable fluorescent gas sensor
		RT-PCR machine (Truelab)
		Centrifuges
		Magnetic nucleic extraction device (TrueprepmAG)
		Fume hoods, Hot air oven
		Magnetic stirrers, pH meter
		Conductometer

6	CSE	Ultrasound bath sonicator
		BOD incubators
		Sputtering machine
		Rota vapor with vacuum pump
		DELL Server:94GB RAM,20 cores,40 Threads,10TB HDD, Network Rack,Desktop i3 systems with 4GB RAM,Printer

3.3.2 What are the Institutional strategies for planning, upgrading and creating infrastructural facilities to meet the needs of researcher especially in the new and emerging areas of research?

An exclusive LRC (Laboratory Refining Committee) has been formed to look into the requirements and up gradation of infrastructure facilities to meet the need of research activity especially in emerging areas.

- The Institution has budget allocation for R and D initiatives and provides required funds to upgrade and create infrastructural facilities required for research.
- Institution initiates research Programmes and deputes faculties for such Programmes. Such facilities are also made available for students at UG and PG levels.
- Institution has introduced the best research project scheme for U.G. Students. Under this scheme the innovative projects are selected from different streams of Engineering after evaluation by the committee.
- PG students are encouraged to undertake industry based problems for their dissertation work under the guidance of expert faculty.
- Faculty undertakes industrial consultancy and research assignments involving research work.

3.3.3 Has the institution received any special grants or finances from the industry or other beneficiary agency for developing research facilities?? If 'yes', what are the instruments / facilities created during the last four years.

C.M.R.I.T has received various grants from different granting agencies, and is listed below. New facilities are created to improve research facility in the college. The institution is supporting/ encouraging faculty members to submit project proposals which has led to the improvement of faculties and research scholars.

Sl. No	Branch	Faculty Name	Grant Name	Granting Name	Year of Sanction	Status	No. of Papers Published	Grant Amt	Duration	Title of Research / Project
1		Dr. Muralishankar & Dr. H. N. Shankar .	Research grant	VTU	2011	Ongoing	2	13.12l akhs	2Years	Broadband over power line.
2		Dr. Muralishankar & Dr. H. N. Shankar .	Research grant	VTU	2010	Completed	3	8 lakhs	2years	analysis of robustness of end point detection in spectrum of speech packets
3	ECE	Dr. G Indumathi	Aicte -modrob	Aicte	2010	Completed	2	15 Lakhs	1 Year	Modernization of VLSI & Embedded lab
4		Dr. G Indumathi	Center of excellence audio & video	Vgst dst govt. Of karnataka	2010	Completed	10	60LAKHS	3years	Image & Audio processing
5		Dr. H. N. Shankar & Dr. Muralishankar	Research grant	VTU	2011	Ongoing	2	13.12l akhs	2Years	Broadband over power line.

6	EEE	Dr. H. N. Shankar & Dr. Muralishankar	Research grant	VTU	2010	Completed	3	8 lakhs	2years	Analysis of robustness of end point detection in spectrum of speech packets
7	CHEM	Dr. Rekha and Dr. B Narasimha Murthy	Research grant	VTU	2011	Completed	3	11 Lakhs	3 Y	Biosensor for Analysis of Organophosphorus Pesticides in Food and Environmental Samples
8		Dr. Rekha and Dr. B Narasimha Murthy	Research grant	DST	2011	Completed	3	29 Lakhs	3 Y	Biosensor for Analysis of Phenolic Compounds in Textile Industry Effluents
9	CHEM	Dr. Chaitantya Lekshmi Indira and Dr. B Narsimha Murthy	Research grant	DST	2015	ongoing	3	60 Lakhs	3 Y	Development of Metal Oxide Heterostructures for Nanoelectronic and Photocatalytic Applications

		Dr. Chaitanya Lekhshmi Indira	Research Grant	DST	2015	ongoing	3	20.8 lakhs	3Y	Spintronic Studies by Nanostructured Ferrites and their Selected Composites
10		Dr. Phani Kumar P	Research Grant	VGST	2014	ongoing	2	4 lakhs	2Y	Material Chemistry Support for Stabilizing Neem Limonoids.
11		Dr. Phani Kumar P and Dr. B Narasimha Murthy	Research Grant	DST	2016	ongoing	2	49.5 lakhs	2 Y	Fluorescence Nose (F-Nose) for MTB VOC detection
12	MECH	Dr.Bijayani Panda	Research grant	DST	2015	Ongoing	1	18.85 Lakhs	3 Years	Effect of various parameters on the liquid metal embrittlement of stainless steel

3.3.4 What are the research facilities made available to the students and research scholars outside the campus/other research laboratories?

- Institution encourages students and research scholars to visit different lab for research purpose by providing leaves and other facilities.
- Institution arranges industrial visits for student.
- Institution sponsors students for participating in technical competitions, exhibitions.
- The institute has MOU's with various institutions, Industry and research institutions. Faculty and students are made use of the facilities created by these organizations for their research activities and projects.

The following are the MOU's & Collaboration made by the department with different industries.

Sl. No	Department	Collaboration with	MoU Signed Yes / No	Faculty Coordinator
1	ECE	Texas Instruments through Cranes Software	Yes	Mr.Chetan
2	Mechanical	1 .SKF Tecnologies India Pvt Ltd 2. Enlivening Technologies Pvt Ltd. 3. MEDINI, Certification Center for Autodesk	Yes	Mr.Rajendra Prasad
3	CSE	1. IBM 2. Infosys Campus Connect 3. EMC2 Academic Alliance 4.Hitachi 5.Huawei 6.Delphi	Yes	Mrs.Swathi
4	ISE	1. IBM 2. Infosys Campus Connect 3. EMC2 Academic Alliance	Yes	Mr.Manoj
5	MCA	1. IBM 2. Infosys Campus Connect 3. EMC2 Academic Alliance	Yes	1. Mr. Vikash Kumar 2. Ms. Varsha
6	Civil	Trying with SECON	No	Preethi Raj M.Phaniraju
7	Chemistry	1. Bigtec labs 2. Robust Materials Pvt Ltd	Yes	Dr. Phani Kumar

		3. Sreeni Labs, Hyderabad 4.Green Hood Group, Bengaluru 5.Isquared D, Bengaluru 6.Shell Apperal Pvt Ltd, Bengaluru		
8	TCE	1.3G Network Solutions Private Limited	Yes	Mrs.Sharmila.K.P
9	EEE	Concord United Products Private Limited	YES	Dr Manavaalan G

3.3.5 Provide details on the library/ information resource center or any other facilities available specifically for the researchers?

The following facilities are available at resource center -

Library holdings	Year 2016-17		Year 2015-16		Year-2014-15		Year–2013-14		Year–2012-13		Year–2011-12	
	Number	Total Cost	Number	Total Cost	Number	Total Cost	Number	Total Cost	Number	Total Cost	Number	Total Cost
Textbooks	1553	827992/-	1031	118619/-	1924	1114972/-	2485	1216724/-	2460	1210888/-	3699	1695621/-
ReferenceBooks	347	414610/-	216	254819	168	218640/-	187	99053/-	44	20416/-	525	287826/-
Journals/ Periodicals	69	152616/-	31	37781/-	30	34765/-	79	97708/-	135	169539/-	158	112987/-
e-resources	8611	1767000/-	10088	1632500/-	5627	1308022/-	19469	992825/-	145	360952/-	2321	115615/-
Anyother (specify)	DELNET	11,500/-	DELNET	11,500	DELNET	11,500/-	DELNET	11,500/-	DELNET	11,500/-	DELNET	7,500/-

Criteria 3.4: Research Publications and Awards

3.4.1   Highlight the major research achievements of the staff and students in terms of Patents obtained and filed (process and product)

CMRIT faculty have following granted patent

Dept	Patent Number	Authors	Title & Year	Granting Authority
ECE	US8380494 B2	Muralishankar Rangarao, Vijay Satyanarayana Rao, Venkatesha Prasad Rangarao, Shankar Hebbale Narasimaiah	Speech detection using order statistics, [Filing date Jan 24, 2007]	USPTO
EEE	US008380494B2	Dr. H N Shankar	"Speech Detection Using Order Statistics"- [issue date Feb 19, 2013.]	US Patent
	"Application no. 12/664,888 filed date Dec 16, 2009	Dr. H N Shankar	"Determining Presence of a User in an Online Environment	
ME	Acknowledgement No. 39/CHE/2010 filed in India	Dr. S.V. Prakash	Coconut Shell Powder slurry fuel preparation and use it as fuel for industrial furnaces (Applied in 2010)	Indian Patent
	Acknowledgement No. 2132/CHE/2011 filed in India		A light weight internal combustion diesel engine with reduced maintenance (Applied in 2011)	Indian Patent

Patent No. 8448962	Dr. Krishnarao Dhuri	Systems and methods providing variable spring stiffness for weight management in a rail vehicle (Granted in 2013)	US Patent

Original research contributing to product improvement

The original research done by CMRIT faculty & students resulting in product improvement are

Traffic monitoring at the junctions by traffic police is becoming increasingly difficult in India- A hand held device that will enable the traffic policemen to control the traffic lights remotely at the junctions is developed by EEE & ECE researchers.

Nucleic acid concentration in clinical samples for infectious disease diagnosis is a critical problem in healthcare industry- Use of sodium polyacrylate (SPA) for nucleic acid concentration from urine was developed along with bigtec labs, Bangalore. (An IKP GCE (Grand Challenges Explorations) project was applied with bigtec, National Institute for Research in Tuberculosis (NIRT) for pediatric TB diagnosis using urine, first of such attempts).

Lateral flow diagnostics are one of the most widely used products for analyse detection and almost 50% of its manufacturing cost is due to usage of ultra-centrifuge for gold nanoparticle concentration- We developed a cost-efficient, field deployable solution for concentration of gold nanoparticle using sodium polyacrylate based system. (Talking to an interested company, Tulip group in Goa to use it in making affordable lateral flow diagnostics).

Ammonium nitrate based ANFO bombs are responsible for most bomb blasts in India and there is no instrument to detect ammonium nitrate (before bomb blast occurs)-CMRIT has designed a simple Rhodamine based acid sensor with possibility of ammonium nitrate detection (A hand-held device for ANFO bomb detection with Bigteclabs via CMRIT sensor facility is under progress).

Mycobacterium tuberculosis (MTB) is increasingly becoming a concern for health officials due to poor drug treatment adherence- CMRIT is developing tools for

monitoring TB drug treatment adherence using a blue dye and android based application.

- Dr. Phani Kumar of Chemistry received a VGST grant from Karnataka Government to develop a solid support for immobilization of neem limonoids to help Karnataka farmers.
- Dr. Chaitanya Lakshmi Indira of Chemistry Department has received two grants from DST under Nanomission and Young Scientist schemes. Under the former grant a thin film deposition set up will be purchased to be used for developing core and recent nano electronic device structures and spintronic systems, which find important applications in memory and sensors. A part of the project also address on developing oxide based composite catalysts to be used for organic compounds and dye degradation studies as part of environmental remediations. The second grant address developing newer nanosized spintronic materials for investigating magneto transport and external field effects, which are concepts to be used in device structures.
- Dr. B. Narasimha Murthy of Chemistry Department and Dr. Rekha of Biotechnology Department have obtained two research grants in the year of 2011-2014 for developing and investigating enzyme based biosensors for phenolic compound detections in water. The study is useful for developing a simple and sustainable method for pollutant detections in waste water to be used for environmental remedations requirements.
- Dr. H.N. Shankar of EEE Department and Dr. R Muralishankar of ECE Department have obtained one research grant of 8 lakhs from December2010 to December 2011 from VTU research grants scheme on Analysis of Robustness of end point detection by recognizing formants in the spectrum of speech packets in non-stationary noisy environment.
- Dr. H.N. Shankar of EEE Department has obtained grant of 13.12 lakhs from VTU Research grant scheme on Broadband interworking of WMN with broadband on powerline (Wireless Mesh Networks).
- Dr. Manavaalan G of EEE Department has obtained grant of Rs. 5.5 Lakhs from Concord United Products Private Limited on Development of Software and Controller Board for WEDM Machines.
- Dr. Manavaalan G of EEE Department has obtained grant of Rs. 20,862/- from CMR Jnanadhara Trust on Network Control System for Electric Vehicle.

Research inputs contributing to new initiatives and social development

Dr. H N Shankar, Dean A&R, CMRIT has been serving as a jury member in Manthan, FKCCI from 2013 till date. FKCCI Manthan is an initiative by

Federation of Karnataka Chamber of Commerce & Industry to enable student entrepreneurs to start companies.

Prof HN Shankar has been involved with various institutes:

- Apr. 2001 – Mar 2004: **Honorary Adjunct Associate Fellow,** National Institute of Advanced Studies, Indian Institute of Science Campus, Bangalore

- 2009 – 2011: **Member, Executive Committee,** IISc Alumni Association, with special charge of Summer School (Imparting teaching training to engineering faculty through workshops/lectures)

- 2011 –: Member of the Enterprise Development, Technology & Innovation Committee of Federation of Karnataka chambers of Commerce & Industry (FKCCI)

- 2011 –: **Member, Executive Committee,** IISc Alumni Association

- Recognized reviewer for conference / journal papers. He reviewed 6 papers in the last four years and total 21 papers.

- Dr. Manavaalan G, Associate Professor, Department of EEE, CMRIT is a recognized reviewer for conference / journal papers. He reviewed 6 papers in the last four years and total 7 papers.

3.4.2   Does the Institute publish or partner in publication of research journal(s)? If 'yes', indicate the composition of the editorial board, publication policies and whether such publication is listed in any international database?

No

3.4.3   Give details of publications by the faculty and students

Sl. No.	Name of the Department	Name of the faculty	Editorial board/reviewer	Publisher
1	ECE	Dr. Muralishankar	Reviewer	IEEE Symposium on Industrial Electronics & Applications, 2012
			Reviewer	Technical Program Committee, IEEE Globecomm, 2012
			Reviewer	ICWMC 2016

3		Mr. Chetan	Reviewer	ICSYS 2015
4		Ms. Kavitha	Reviewer	2015 Annual IEEE India Conference (INDICON)
			Reviewer	WCI 2015
5	CSE	Dr. Sanjay Chitnis	Reviewer	IEEE International Advanced Computing Conference 2015(IACC-2015)
8		Dr.Krishnan	Reviewer	ICWT 2016
9	ISE	Manoj Challa	Reviewer	IEEE International Conference on Computer Communication and Control (IC4-2015)
10		Deepa Anand	Reviewer	EIT 2015
11	EEE	Dr. Manavaalan G	Reviewer	IEEE Innovative Smart Grid Technologies Asia (ISGT Asia), Conference
			Reviewer	Indian Control Conference (ICC). Conference (3 papers), 2015, 2016 and 2017.
			Reviewer	ICBME, Manipal, India, Dec. 2011.
12		Dr. H. N. Shankar	Reviewer	IEEE INDICON 2016
			Reviewer	Centenary Conference, EE, (CCEE), IISc." ,Dec. 2011.
			Reviewer	"IEEE ICC 2012", June 10-15, 2012, Ottava, Canada.
13			Reviewer	"2013 IEEE Multiconference on Systems and Control", August 28-30, 2013. Hyderabad, India.
			Reviewer	"2013 International Conference on

			Connected Vehicles & Expo", ICCVE-2013, Dec. 2-6, 2013, Las Vegas, Nevada,USA.
		Reviewer	"IEEE International Power and Energy Conference (PENCON-2014)", Kuching, Malaysia, Dec. 1-3, 2014.
14		Reviewer	IEEE Student Conference on Research and Development (SCOReD 2015), IEEE Malaysia Section, Kuala Lumpur, Malaysia.
15		Reviewer	15th IEEE International Symposium on Signal Processing and Information Technology (ISSPIT - 2015), Abu Dhabi, UAE.
16		Reviewer	International Conference on Multimedia systems and Signal Processing (ICMSSP - 2016), New Taipei, Taiwan.
17		Dr. S.V. Prakash	Editorial Member	EIC Conference Florida, USA
18	MECH	Dr. C. Solaimuthu	Editorial Member	International Journal of Research in Science & Technology e-ISSN:2249-0604, p-ISSN:2454-180X
			Editorial Member	International Journal of Advances in Engineering & Research e-

				ISSN:2231-5152, p-ISSN:2454-1796
19	MBA	Dr R.K Gopal	BOE member & LIC Core Committee Member.	VTU
20		Dr Anuradha. A	BOE member	VTU
			Editorial Board Member	Asia pacific Journal of Research Management
21		Miriam George	Reviewer	SJBM(Science PG)2016
22		Miriam George	Reviewer	AJMSE(Science PG)2016
23		Dr. Priyameet Kaur Keer	Editorial Board Member in Human Resource Management Journal	Science Publishing Group, USA
			Reviewer	Editorial Board Premium Publishers
24	MCA	Dr Deepa Anand	Reviewer	Elsevier, Springer
25	Physics	Dr. Kalpana Sharma	Reviewer	AASCIT
26	Chemistry	Dr. Phani Kumar P	Editorial member	IJIFR
27		Dr. Soma Das	Editorial board	STM journal
			Editorial board	Journal of Chemistry: Environmental Sciences and its applications, Journal of Chitkara
			Reviewer	Material Science and Engineering C (Elsevier)
28	TCE	Dr. Sudhir K.	Editorial Member	Journal of Selected

		Routray		Areas of Telecommunications (JSAT)
29			Editorial Member	International Journal of Technology & management
30			Reviewer	Journal of Optical Communication & Networking
31			Reviewer	Journal of Light Wave Technology
32			Reviewer	IEEE Potentials Magazine
33			Reviewer	Reviewer of IEEE Network Magazine, Piscataway, NJ, USA.
34			Reviewer	Reviewer of IET Networks, London, UK.
35			Reviewer	. Reviewer of IETE Technical Review, New Delhi, India

Total number of publications of faculty of different departments at CMRIT-

Department	National	International
ECE	16	75
CSE	0	123
TCE	22	53
ISE	20	63
EEE	44	54
Mech	0	16
CIV	8	31
MBA	0	20
MCA	3	23
Mathematics	0	7
Physics	0	5
Chemistry	0	21

Year-wise publications of different department over past four years

Department	2012	2013	2014	2015	2016	2017
ECE	09	17	26	21	17	1
CSE	29	33	24	15	23	0
TCE	5	28	32	22	18	10
ISE	14	31	15	17	16	0
EEE	10	10	11	26	27	0
Mechanical	0	0	6	10	2	0
Civil	1	3	4	16	15	0
MBA	5	6	4	2	3	0
MCA	0	11	6	5	4	0
Mathematics	0	1	1	3	2	0
Physics	0	2	0	3	0	0
Chemistry	0	1	6	5	9	0

Conference publications/ presentations:

Department	National	International
ECE	16	34
CSE	2	9
TCE	23	52
ISE	15	27
EEE	21	18
MECHANICAL	0	2
CIVIL	8	4
MBA	0	2
MCA	3	7
MATHEMATICS	0	0
PHYSICS	0	0
CHEMISTRY	0	0

Other publication related details

Department name	Number of publications listed in International Database	Mono graph s	SNP	SJP	No of books	No of Book chapters	Books edited
ECE	10	0	0	0	0	0	2
CSE	1	0	0	0	2	2	0
TCE	1	0	0	0	3	2	0
ISE	0	0	4	4	1	0	0
EEE	0	0	0	0	0	3	0
MECHANICAL	0	3	0	0	4	0	0
CIVIL	5	0	0	0	0	0	0
MBA	0	0	0	0	11	1	1
MCA	0	0	0	0	4	0	0
MATHEMATICS	14	0	0	0	1	0	0
PHYSICS	43	0	0	0	1	0	0
CHEMISTRY	75	0	0	0	0	3	0

Publications per faculty year wise publications

Dept	ECE						
Sl. No.	Name	Number of publications					
		2016	2015	2014	2013	2012	2011
1	Dr. G. Indumathi			2	1		4
2	Dr. Muralishankar	4	1		1		6
4	Dr. Binisha Fathima		5				
5	Prof. Sharmila K. P.	4			3		1
6	Prof. Kavitha V		1	2	1		1
7	Prof. Meena Priya Dharshini		2	4	2	1	
8	Prof. Sri Ranjini					1	1
9	Prof. Sridevi S			1	1		
10	Prof. Shilpi Banerjee						1
11	Prof. Sunil Kumar K. H.	1		2			

12	Prof. Chetan H	1	1	1	1		1
13	Prof. Harsha B. K.			2			
14	Prof. Archana A. N.	1	1				
15	Prof. Gowthami			1			
16	Prof. Naveen Kumar G. N.		2	4			
17	Prof. Nagratna			1			
18	Prof. Sumit Maheshwari			2		4	1
19	Prof. Mahesh G.			1			
20	Prof. Veerender Reddy			1		1	
21	Prof.Pappa.M	2					
22	Prof.Ninikrishna	4					
23	Prof.Suganya.S	3					
Total:		28	11	23	7	5	16

Dept	**CSE**						
Sl. No.	**Name**		**Number of publications**				
		2016	**2015**	**2014**	**2013**	**2012**	**2011**
1	Dr. R Krishnan	4	3	9	1	3	-
2	Dr.Sanjay Chitnis	2					
3	Dr. Jhansi Rani P	5	-	4	-	1	3
4	Swathi. Y		2	1	1	1	-
5	Manoj Challa		2	8	9	4	1
6	Manimozhi	2	3	10	1	4	3
7	Sudhakar K N	2	2	4	-	1	-
8	Shanthi M B	3	2	-	2	1	-
9	Kiran Babu		2	2	2	1	1
10	Aparna	2	-	2	-	-	-
11	Sagarika	2	1	-	-	2	1
12	Poonam Tijare	1	-	1	-	-	-
13	Sherly Noel		1	-	-	-	-
14	Shruthi		-	1	-	-	-

15	Sundeep Kumar		-	-	10	2	-
16	Dr. Jitendranath Mungara		-	-	2	16	5
17	Dr. Dinesh Anvekar		-	1	1	-	-
18	Sujatha		-	-	5	-	-
19	Manjima R L		-	-	3	1	-
20	Manjunath		-	-	1	-	-
21	Savitha		1	1	-	-	-
22	Mahesh D S		-	1	-	1	-
23	Priyadarshini Mishra		-	-	1	1	-
24	Sridevi K N		-	-	-	2	-
25	Banu Priya	2	-	1	2	-	-
26	Sahana V	2	1	-	-	-	-
27	Damindar	2					
28	Navaneetha	2					
Total		31	20	46	41	41	14
Dept	**TCE**						

Sl. No.	Name	2016	2015	2014	2013	2012	2011
1	Dr. K.V.SAnanda Babu				1	1	1
2	Dr.Sudhir.K.Routray	8	1	2			
3	Dr. Ramesh Babu. K				1		
4	Mrs. Sujatha S	5	5	6	4	2	
5	Mrs. Pooja		4	3	3	1	
6	Dr. Navin Kumar				11		
7	Mrs. Anita. P				4		
8	Mrs. Sophiya Susan						3
9	Mr. Mahesh Kumar Jha	1	2		1	1	1
10	Mrs. Meenakshi				1		
11	Ms. Priya. R				1		
12	Mrs. Sutapa			2			
13	Mrs. Suma			2			

14	Mrs. Prachi			1			
15	Ms. Shruthi Murthy			1			
16	Mrs. Laxmi Sharma			13			
17	Mrs. Nisha Shailendra Singh			4	1		1
Total		6	11	32	28	5	6

Dept	**ISE**						

Sl. No.	Name		**Number of publications**				
			2015	**2014**	**2013**	**2012**	**2011**
1	Dr. A. Srinivasa Rao		-	-	9	3	3
2	Mrs. Geetha. S		2	2	3	1	2
3	Mr. Anand R		-	-	3	3	-
4	Mrs. Lalitha Asokan		-	-	3	-	1
5	Mrs. Madhu. G		1	-	1	-	-
6	Mrs. S. Kanthimathi		-	4	-	1	-
7	Mrs. Febin A. Vahab		1	-	1	-	-
8	Mrs. Tejaswini N		-	1	-	-	
9	Ms. Anisha K S		1	2	-	-	-
10	Ms. Priyanka. R		1	3	2	1	-
11	Ms. Prajwala T R		1	2	-	1	-
12	Mrs. Danthuluri Sudha		-	-	1	1	-
13	Ms. Sheetal. R		-	-	1	1	-
14	Mrs Tulsi Ajwalia		-	-	-	-	1
15	Mrs Shilpapande		-	-	1		2
16	Ms. Divya Singh		-	-	1	-	2
17	Dr Aswatha Kumar M		-	-	1	1	-
18	Mrs J yothi M		-	-	2	-	-
19	Mrs. Sudhamayi.P				1	1	
20	Mrs. Soubhagyalakshmi		-	-	1	-	-
21	Mr. R Ganesh Kumar		-	-	2	5	-
22	Ms. Roopahree		-	-	-	1	-

Sl. No.	Name	2016	2015	2014	2013	2012	2011
23	Mrs. Soma Pandey		-	-	-	2	1
24	Mrs Shweta		-	-	-	-	1
25	Mrs S.G. Suma		-	-	-	-	1
26	Ms. Shakuntalasajjanar		2	-	-	-	-
Total			9	14	33	23	15

Dept	EEE						

Sl. No.	Name	Number of publications					
		2016	2015	2014	2013	2012	2011
1	Dr H N Shankar	4	4	-	1	-	3
2	Mrs. Reba Kundu		-	-	-	1	1
3	Mrs Geetanjali U		-	1	-	-	-
4	Dr. Manavaalan		2	-	-	2	-
5	Dr Sanjeev G		7	4	-	-	1
6	Mrs. Sanitha Michail. C	1	1	-	-	1	-
7	Mrs. Anju Das	1	2				
8	Mr. Kashif Ahmed	1	-	3	3	1	-
9	Mrs Suganya S		3	-	-	3	2
10	Mrs. Nagalakshmi G		-	-	1	-	-
11	Dr H N Shankar		4	-	1	-	3
12	Mrs. Chithra M		-	-	-	-	1
13	Mrs Anjani G		-	-	-	-	2
14	Mrs Priyanka Priyadharshi Padhi	1	-	-	-	3	2
15	Mrs Shikha Gupta		-	-	1	-	-

16	Mrs. Saranya S	2	-	-	-	-	2
17	Mrs. Keka Mukhopadhya	1	1	2	-	-	-
18	Mrs. T Aruna Kumari	1	-	-	-	-	-
19	Mrs. Lousha N		-	-	-	1	-
20	Mr. Varun Kumar		-	-	1	-	-
21	Mr Parikshith Savanth	1	-	-	-	-	-
22	Mr Jagadish Kumar Patra	6	2	-	-	-	-
23	Mr Anup		1	-	-	-	-
24	Mr Anand Bhat	2	-	-	-	-	-
25	Ms Tania H M	6	2	-	-	-	-
26	Ms Jeffina	1	-	-	-	-	-
Total		28	25	10	7	12	14

Dept	**MECH**						
Sl. No.	**Name**		**Number of publications**				
			2015	**2014**	**2013**	**2012**	**2011**
1	Dr. S.V. Prakash		1	2	1	--	--
2	Dr. Bijayani Panda		--	1	1	--	1
3	Dr. Viyanand Kaup		3	1	--	--	--
4	Dr. Solai Muthu		3	7	4	2	--
5	Ms. Prakrathi		1	1	2	1	--
6	Mr. Shreyas. P		4	3	--	--	--
7	Mr. Sagar M.B		--	2	--	--	--
8	Mr. Trishul		6	--	--	--	--
9	Mr. Abhinav. T		1	--	--	--	--
	Total		19	17	8	3	1

Dept	MBA						
Sl. No.	**Name**		**Number of publications**				
		2016	2015	2014	2013	2012	2011
1.	Dr. Girish C		1	-	3	1	-
2.	Dr. Anuradha A		1	1	5	-	-
3.	Dr. Chandni Lekhwani		2	1	-	-	-
4.	Dr. Priyameet Kaur Keer		1	4	4	-	-
5.	Dr. R.K. Gopal		-	-	2	-	-
6.	Mrs. Miriam George		1	1	2	-	
7.	Mr. Saravanakrishnan		-	-	1	1	-
8.	Prof. Bholanath Dutta		-	-	-	1	2
9.	Mrs. Shwetha		-	-	2	-	-
10.	Mrs. Shruti Agrawal		-	-	2	-	-
11.	Mrs. Arpita		-	-	1	-	-
Total			6	7	22	3	2
Dept	**MCA**						
Sl. No.	**Name**		**Number of publications**				
		2016	2015	2014	2013	2012	2011
1	Dr. Deepa Anand		3	5	1	-	-
2	Prof. Baswaraj B		-	-	3	3	3
3	Prof. Sudipto Das		1	1	2	-	1
4	Prof. Nagarajan S		1	4	4	5	1
5	Prof. Rachna Sharma		-	1	8	-	-
6	Prof. Gomathi T		-	-	1	-	-
7	Prof. Neha Agrawal		-	-	1	-	-
8	Prof. Usha Patnaik Das		-	-	1	-	-
9	Prof. Nithya Ramesh		-	-	1	-	-
10	Prof. Arshdeep Kaur		-	-	1	-	-
11	Prof. Pratima V Patil		-	-	1	-	-
	Total:		5	11	24	8	5
Dept	**MATHS**						

Sl. No.	Name	Number of publications				
		2015	2014	2013	2012	2011
1	Dr. K. Meenakshi	1	1	-	-	3
2	Dr. M. Kamal Kumar	2	3	1	1	2
3	Mr.Prathap				1	1
4	Dr.Sunanda Saha			1	1	
Total:		3	4	2	3	6
Dept	**PHYSICS**					
Sl. No.	Name	Number of publications				
		2015	2014	2013	2012	2011
1	Dr. Shamsunder Hegde	1	0	1	1	2
2	Dr. Rajesh Gopal		0	0	1	0
3	Dr. Kalpana Sharma	2	0	3	0	0
4	Dr. Raghavendra Sagar	0	0	3	4	8
5	Dr. Padmavati Kulkarni	1	0	1	0	0
6	Mr. Raveesha K.H.	2	1	2	0	0
7	Mr. Prasad B.K.	1	0	2	0	0
8	Dr V Prasad	0	1	2	2	2
9	Dr.Suvitha	2	0	3	0	0
Total:		9	2	17	8	12
Dept	**CHEMISTRY**					
Sl. No.	Name	Number of publications				
		2015	2014	2013	2012	2011
1	Dr. B. Narasimhamurthy	1	-	-	1	-
2	Dr. Phani Kumar Pulela	-	2	1	-	
3	Dr. Chaitanya indira Lekshami	1	1	1	1	1
4	Dr. Manjunatha M.	1	1	-	-	2
5	Dr. Fazlur Rahaman	-	2	-	2	2
6	Dr. Priti Gupta	-	-	-	1	1
7	Dr. Soma Das	-	5	4	1	1

Total:		3	11	6	6	7

Dept	CIVIL						
Sl. No.	**Name**		**Number of publications**				
		2016	2015	2014	2013	2012	2011
1.	Dr. Asha M. Nair	8	1	5	1	3	2
2.	Dr. Shankar B S					2	
3.	Dr Niranjan P S			1			
4.	Mrs Preeti Jacob		2				
5.	Mr Karthik.N.M	5	2				
6.	Mrs Divya.V	1		1			
7	Mrs Sreelakshmi.G	3	1				
8	Mohammed Ismail		1				
9	Mr. Naresh Dixit	3					
10	Mr. Kiran R G		1				
11	Mr. Karthik M	1					
12	Ms. Azhaginiyal			1	1		
13	Ms. Shijina		4				
14	Mr. Mohamed Yusuf		1				
15	Mr. Ruchir A J	2					

Career citations of individual faculty

Sl. No.	Faculty Name	Citations Index
DEPARTMENT: ECE		
1	Mr. Chetan H	2
2	Prof. Veerendra	2
3	Mrs Binish Fathima	4
DEPARTMENT: CSE		
1	Dr. Krishnan	160
2	Dr. Jhansi Rani	6
3	Mr. Sudhakar K.N	1
4	Mr. Manoj Challa	2
5	Ms. Manimozhi. I	6
6	Ms. Aparna	7

	DEPARTMENT: TCE	
1	Dr. Sudhir K. Routray	14
2	Mr. Mahesh Kumar Jha	2
3	Mrs. Meenakshi Devikar	2
4	Dr. Navin Kumar	2
5	Mrs. Laxmi Sharma	1
6	Ms.Priya.R	1
7	Ms.Sujatha.S	3
	DEPARTMENT: ISE	
1	Dr. Srinivasa Rao A	1
	DEPARMENT: EEE	
1	Dr. H.N.Shankar	19
2	Dr. Manavaalan G	16
3	Dr. Sanjeev	4
4	Ms. Chithra M	16
5	Ms. Priyanka	6
	DEPARTMENT: MECHANICAL	
1	Dr. Bijayani Panda	64
2	Dr. SolaiMuthu	25
3	Ms. Prakrathi	4
	DEPARTMENT: CIVIL	
1	Dr. Asha M Nair	8
2	Mr. Karthik NM	1
3	Mr. Kiran RG	3
	DEPARTMENT: MBA	
1	Dr. Anuradha A	3
2	Dr. Priyameet Kaur Keer	3
	DEPARTMENT: MCA	
1	Dr. Deepa Anand	116
	DEPARTMENT: MATHEMATICS	
1	Dr. K. Meenakshi	2
2	Mr. Kamal Kumar	2
3	Mr. Prathap. D	1
	DEPARTMENT: PHYSICS	
1	Dr. Shamsunder Hegde	40
2	Dr. Rajesh Gopal	49
3	Dr. Kalpana Sharma	6
4	Dr. Raghavendra Sagar	48
5	Dr. Padmavati Kulkarni	20
6	Dr. V. Prasad	50
7	Dr. Vindhyawasini prasad	9

8	Dr. Suvitha	12
9	Dr. Raveesha KH	3
DEPARTMENT: CHEMISTRY		
1	Dr. B. Narasimhamurthy	78
2	Dr. Phani Kumar Pulela	711
3	Dr. Chaitanya Indira Lekshmi	428
4	Dr. Manjunatha M.	68
5	Dr. Fazlur Rahaman	26
6	Dr. Priti Gupta	529
7	Dr. Soma Das	53

Impact factor range for individual faculty

DEPARTMENT: ECE		
Sl. No	**Faculty Name**	**Impact Factor Range**
1	Prof. Sunil Kumar K. H.	3.115
2	Prof. Chetan H	2.5-5.8
3	Prof. Naveen Kumar G. N.	1.002
4	Prof. Sumit Maheshwari	0.72-2.28
5	Prof. Kavitha V	1.252
6	Dr. Indumathi	5.9
DEPARTMENT: CSE		
1	Dr. Krishnan	0.3 -3.2
2	Swathi.Y	1.1-2.0
3	Manoj Challa	0.4-5.4
4	Manimozhi	1.0 - 4.4
5	Sudhakar	1.0- 4.4
6	Shanthi M B	0.2-4.4
7	KiranBabu	0.4-5.4
8	Aparna	0.4-1.2
9	Sagarika	2.0-4.4
10	PoonamTijare	0.4
11	Sherly Noel	4.4

12	Shruthi	0.4
13	Savitha	1.8-2.0
14	Mahesh D S	2.0-8.9
DEPARTMENT: TCE		
1	Mrs. Sujatha S	0.25-0.462
2	Mrs. Pooja Mohnani	1.09
3	Dr. Navin Kumar	0.403-1.253
4	Mr. Mahesh Kumar Jha	1.7
5	Mrs. Meenakshi Devikar	1.7
6	Dr. Ramesh Babu	1.76
7	Mrs. Sutapa Sarkar	0.254
8	Mrs. Suma Sannamani	1.04
9	Dr. Sudhir K. Routray	0.026-2.064
10	Ms. Shruthi Murthy	2.324
11	Mrs. Laxmi Sharma	2
DEPARTMENT: ISE		
1	Dr. Srinivasa Rao A	0.349-4.438
2	Mr. Anand .R	1.275-1.76
3	Ms. Geetha.S	0.31
4	Ms. Kanthimathi.S	0.23-1.09
5	Ms. Prajwala	1.05-1.23
6	Ms. Febin	1.261
7	Ms. Priyanka	1.82
DEPARTMENT: EEE		
1	Dr. H.N. Shankar	0.356-0.786
2	Dr. Manavaalan	1.22
3	Dr. Sanjeev	2.907
DEPARTMENT: Civil		
1	Dr. Asha M Nair	0.24 - 1.32
2	Mr. Karthik NM	1.76
3	Mr. Kiran RG	1.76
4	Mr. Mohammed Ismail	1.76
DEPARTMENT: Mechanical		

1	Dr. S.V. Prakash	2.114-8.829
2	Dr. Bijayani Panda	0.831-4.42
3	Dr. Viyanand Kaup	0.709-1.214
4	Dr. Solai Muthu	0.132-5.597
5	Ms. Prakrathi	0.615
6	Mr. Shreyas. P	2-6.74
7	Mr. Sagar M.B	0.8-2.01
8	Mr. Trishul	2 – 6.74
9	Mr. Abhinav.T	4.16
DEPARTMENT: MBA		
1	Dr. R.K Gopal	1.1 – 3.2
2	Dr. Girish C	0.01 – 0.47
3	Dr. Anuradha A	1.1 – 3.2
4	Prof. Bholanath Dutta	0.04 -3.454
5	Dr. Chandni Lekhwani	0.4 – 3.150
6	Dr. Priyameet Kaur Keer	0.471 -3.162
7	Mr. Saravanakrishnan	0.04 -3.454
8	Mrs. Miriam George	2.091-4.164
9	Mrs. Shwetha	0.4
10	Mrs. Shruti Agrawal	0.4 – 4.4
11	Ms. Nikita Bhargava	0.4
12	Mrs. Krupa Joshi	0.2 – 1.25
13	Mrs. Nidhi Nandwani	0.2 – 2.01
DEPARTMENT: MCA		
1	Dr. Deepa Anand	2.02 – 3
DEPARTMENT: Mathematics		
1	Dr. K. Meenakshi	1-3.0
2	Mr. M. Kamal Kumar	0.5-2.52
3	Mr. Prathap. D	1.5-2.3
4	Dr.Sunanda Saha	1.4-2.4
DEPARTMENT: Physics		
1	Dr. Shamsunder Hegde	1.2-1.9
2	Dr. Rajesh Gopal	1-6
3	Dr. Kalpana Sharma	1-1.5
4	Dr. Raghavendra Sagar	1-2.5

5	Dr. Padmavati Kulkarni	1-3.5
6	Dr. V. Prasad	2-3
7	Dr. Rajesh Gopal	1-6
8	Dr. Suvitha	1-1.5
9	Dr. Raveesha KH	0.5
DEPARTMENT: Chemistry		
1	Dr. B. Narasimhamurthy	0.3-3.7
2	Dr. Phani Kumar Pulela	2.2-6.8
3	Dr. Chaitanyaindira Lekshmi	0.3-12
4	Dr. Manjunatha M.	0.6-2.2
5	Dr. Fazlur Rahaman	0.6-2
6	Dr. Priti Gupta	2.4-5.7
7	Dr. Soma Das	0.3-5.3

H-index of individual faculty

Sl. No	Faculty Name	h-index
DEPARTMENT: ECE		
1	Mr Chetan H	2
2	Mrs Binish Fathima	1
DEPARTMENT: CSE		
1	Dr. Krishnan R	4
2	Dr. Jhansi Rani	2
3	Aparna	1
4	Manimozhi.I	1
DEPARTMENT: TCE		
1	Dr. Sudhir K. Routray	2
2	Mrs. Laxmi Sharma	1
3	Mrs.Sujatha.S	2
DEPARTMENT: ISE		
1	Dr.SrinivasaRao.A	1
DEPARTMENT: EEE		
2	Dr. H.N.Shankar	2
3	Dr. Manavaalan G	1

4	Dr. Sanjeev	1
5	Ms. Chithra M	1
6	Ms. Priyanka	1
DEPARTMENT: Mechanical		
1	Dr. Bijayani Panda	4
2	Dr. SolaiMuthu	3
3	Ms. Prakrathi	2
DEPARTMENT: Civil		
1	Dr. Asha M Nair	2
2	Mr. Karthik NM	2
3	Mr. Kiran RG	1
4	Mr. Mohammed Ismail	1
DEPARTMENT: MBA		
1	Mrs. Miriam George	1
DEPARTMENT: MCA		
1	Dr. DeepaAnand	5
DEPARTMENT: Mathematics		
1	Dr. K. Meenakshi	2.2
2	Mr. M. Kamal Kumar	1
3	Mr. Prathap. D	1
DEPARTMENT: Physics		
1	Dr. Shamsunder Hegde	3
2	Dr. Rajesh Gopal	2
3	Dr. Kalpana Sharma	1
4	Dr. RaghavendraSagar	5
5	Dr. Padmavati Kulkarni	2
6	Dr. V. Prasad	7
7	Dr.Suvitha	1
8	Dr.Raveesha	1
DEPARTMENT: Chemistry		
1	Dr. B. Narasimhamurthy	8
2	Dr. Phani Kumar Pulela	9
3	Dr. Chaitanya Indira Lekshami	8
4	Dr. Manjunatha M	1
5	Dr. FazlurRahaman	4
6	Dr. Priti Gupta	12
7	Dr. Soma Das	6

3.4.4. Provide details (if any) of Research awards received by the faculty

DEPARTMENT: ECE				
Faculty name	**Name of the award**	**Granting agency**	**Date of award**	**College/State/ national/ international level**
Dr. Murali Shankar. R	Best Paper Award	IEEE Computer Society	June 29-July 5, Bucharest, Romania, 2008.	International
	Best Paper Award	Proc. NCEEE'08	Anna University, Chennai, March 20-21, 2008	National
	Felicitation	IEEE-Bangalore Section	Feb-08	National
	Research fellowship for doctoral students	the Indian Institute of Science	1998 - 2003	National
	Swayambu Memorial Award International Travel Support for Research Students		2002	National
	Post-Graduation fellowship for graduate students		1996 - 1998	National
	Second prize	TMA Pai Student Paper Competition	National Conference on Biomedical Engineering, Manipal, Karnataka, India, 1998	National
Dr. Indumati	Center of Excellence (VGST)	DST-VGST, Karnataka	2012	State
Dr.Sudhir .K.Routray	Research Fellow	Institute of Telecommunications,	2013 and 2014	International

		Portugal		
	Research Fellow	University of Aveiro, Portugal	2012	International
	Listed in the International Biographical Center (IBC)	Cambridge for the contributions to popular science	2007	International
	Listed in the "Marquis Who's Who"	For the contributions to popular science	2006	National
	One of the winners of the IEEE student paper contest for the paper titled "History of Electronics"	IEEE	2004	National
	Recipient of the National Scholarship	Ministry of Human Resource Development, India	2001	National
Mrs.Pappa.M	Question paper reviewer	Christ University	2015	National
Mrs Devi Meenakshi	Best paper Award	National Conference @ East west college of Engineering	2011	College
Mr Chetan H	Texas Innovation Award-2015	TI-University Program	2015	National
	Best Paper Award-	International conference, BMSCE-Bangalore	2011	College

	Best Paper Award-	International conference, (IJECE) Chirala, AP	2014	College
	Texas Instruments Expert Advisory Panel	Texas Instruments - Bangalore	2015	National
	Robotech design innovations-Mentorship award	IIT- Roorke	2014	College
Mr Sunil Kumar	Texas Innovation Award-2015	TI-University Program	2015	College
	Robotech design innovations-Mentorship award	IIT- Roorke	2014	College

DEPARTMENT: CSE				
Faculty name	**Name of the award**	**Granting agency**	**Date of award**	**College/State/ national/ international level**
Dr. Sanjay Chitnis	Won First Prize of Rs.5000 in "Ideas for India" competition	Universe Health, Education and Environment Trust	2014	International
Dr. Jhansi Rani	Best paper Award	IMCIP (International Conference on Information Processing)	2014	International
Sudhakar K N	Won Third Prize of Rs.3000 in "Ideas for India" competition	Universe Health, Education and Environment Trust	2014	International
Manoj Challa	Won Consolation Prize of Rs.2000 in "Ideas for India" competition	Universe Health, Education and	2014	International

Name of the Faculty	Name of the Award	Granting Agency	Date of Award	College/State/ national/ international level
		Environment Trust		
Sahana. V	Secured Silver partnerships at Inspire Campus connect faculty partnership model & Faculty excellence Award.	Infosys	2015	National
	Awarded A grade at FEP on Foundation program 4.0	Infosys	2015	National
Alekhya. P	Secured Bronze partnership at Inspire Campus connect faculty partnership model & Faculty excellence Award	Infosys	2015	National
DEPARTMENT: ISE				
Name of the Faculty	**Name of the Award**	**Granting Agency**	**Date of Award**	**College/State/ national/ international level**
Ms. Sheetal R	SILVER partner faculty award under "Inspire – The Infosys Campus Connect Faculty Partnership model"	Infosys Technologies Ltd.	2015	National
Ms. Madhu G	BRONZE partner faculty award under "Inspire – The Infosys Campus Connect Faculty Partnership model"	Infosys Technologies Ltd	2015	National
Mrs Geetha S	Best Paper Award for the paper	National conference	2013	National

	"Open Platform Wireless Sensor Networks providing energy for Bluetooth enabled agitate objects based on the Data Mining Techniques" at National conference on Advance Computing – Ooty	on Advance Computing		

DEPARTMENT: EEE				
Faculty name	**Name of the award**	**Granting agency**	**Date of award**	**State/ national/ international level**
Mr. Anand Bhat B	First Place	Transformerless SMPS for Cost Minimization of Low Power rated LED Bulbs, National Conference on Emerging Trends in Engineering and Technology, (NCETET), GMIT Mandya	2016	National
Ms. S. Saranya	Best Paper Award	Passive Authentication Systems – Interactive and Behavior based Security Systems, National Conference on Futuristic trends in Power Integration & Computing Techniques (NCFPIC)	2015	National

Mr. Kashif Ahmed	Best Paper Award	"A Multi-Agent Based Thermal Aware Task Migration Scheme in Multi-Core System" in the "National Conference on Advanced Communication, VLSI Design and Signal Processing" (NCCVS-13)	2014	National
Dr. H. N. Shankar	Best Paper Award	Cardiac Arrhythmia Detection and Classification Based on Warped Discrete Cosine Transform Cepstrum, National Conference on Electric Engineering and Embedded Systems, NCEEE' 08, Anna University, Chennai, 20-21 Mar, 2008	2008	National
Dr. Manavaal an G	Best Teaching Assistant	Won the best teaching assistant award in IIT Kanpur in 2010	2010	National

DEPARTMENT: MBA

Faculty name	Name of the award	Granting agency	Date of award	State/ national/ international level
Dr Anuradha .A	Best Paper Award	International Academic Research Journal of Business and Management	2013	International
Dr Chandni. L	Best Performance for faculty		2013	
	Best paper award	Sustaining and Enhancing Competitiveness in Today's Business Scenario"- DMIMS, Nagpur,	2011	International
Ms. Priyameet Kaur Keer	Won 2ndPrize in IT Specialization track in 1st international conference EXLIR 2011 - for-"SNS a Successful Business Tool	DMIMS Nagpur	2011	International

DEPARTMENT: TCE

Name of the faculty	Name of the Award	Name of Agency	Year	State/ national/ international level
Mrs. Sujatha S	Question paper reviewer	Christ University	2015	National
Mrs. Nisha Shailendr a Singh	Organized "National level research paper competition"	TRPCS	2014	National

DEPARTMENT: Chemistry

Name of the faculty	Name of the Award	Name of Agency	Year	State/ national/ international level

Dr. Phani Kumar Pullela	DOD Breast cancer concept award	US Army	2005	International
	ASBMB award	American Society for biochemistry and molecular biology	2005, 2006, 2007	International
	IUPAC award	IUPAC	2001	International
Dr. Chaitanya Lekshmi Indira	DST Young Scientist Award	DST	2015	National
	Visiting Scientist, Massachusetts Institute of Technology	MIT, USA	2005	International
	Post Doctoral Fellowship under European Union Project	National Nanotechnology laboratory, Italy	2007	International

Incentives given to faculty for receiving state, national and international recognitions for research contributions.

1. Dr. Manavaalan G was given incentive of Rs. 4269.00/- to present his paper titled "Path tracking control of moon rover" at the Indian Control Conference 2015 held at IIT Madras, from 5-7 January 2015.

2. Dr. Manavaalan G was given incentive of Rs. 3665.00/- to present his paper titled "System identification of dual-motor ball-beam testbed" at the National Conference on recent innovations in information, communication technology and management (RIICTeM – 2015) held at VTU, Kalaburagi, Karnataka, from 21-22 May 2015.

3. Dr. H N Shankar and Dr. Muralishankar R were presented a paper titled "Optimal power allocation over a fading mac with varying observation SNRS in resource constrained wireless sensor networks" at the IEEE ICC – 2011 conference held at Koyoto, Japan. The registration amount of Rs. 36,973.00/- was sponsored by CMRIT.

4. Dr. Deepa Anand received Rs. 14000 for her publication in an International Journal and two International conferences

5. Dr. Padmavati Kulkarni was given incentive of 6000/- to present her paper entitled, "Comparison of aerosol extinction between lidar and SAGE II over Gadanki, a tropical station in India", Ann. Geophysicae, 33(2015) 351-362.

6. Dr. Phani Kumar Pullela received Rs. 3750/- for Industrial interaction and project sponsorship. Consultancy fee paid for visit to bigtech Labs for "Development of Ammonium Nitrate gas sensor".

7. Dr. Fazlur Rahaman was given incentive of 6000/- to publish his paper entitled "Synthesis, spectral characterization and biological activity studies of transition metal complexes of Schiff base ligand containing indole moiety" in Complex metals, 1(1), 88-95,2014.

8. Dr. Manjunatha M has received incentive of 6000/- to publish his paper entitled "Synthesis, characterization, fluorescence and biological studies of Mn(II), Fe(III) and Zn(II) complexes of Schiff bases derived from Isatin and 3-substituted-4-amino-5-mercapto-1,2,4-triazoles" in Complex metals, 1(1), 128-137,2014.

9. Dr. Chaitanya Lekshmi Indira was given incentive of 6000/- to publish her paper entitled "Assembly of iron oxide nanocrystals supercapacitors" in Sci. Adv. Mater., 5(1),2013.

3.5 Consultancy

3.5.1. Give details of the systems and strategies for establishing institute-industry interface?

Institution has a strong liaison with the Industry. An Institution – Industry interaction cell is established. It meets regularly to enhance the industry participation in the academics. Following are the areas of Interaction with Industry. The institution encourages the establishment of MoUs for institute industry interaction. The list of MOU is follows

Sl. No.	Department	Collaborative agreements/ MOUs signed with Academic/ Industry	Year	Details
1	Electronics & Communications	TEXAS INSTRUMENTS	2009	Academic Projects are undertaken
2	Civil Engineering	Autodesk	2014-15	Sponsoring a faculty to attend a FDP in Mumbai
3	Chemistry	Bigtec labs, Bangalore		Helped to build a sensor worth Rs.

				1.3crore
		Robust materials, Bangalore		Developed and submitted a SBIRI research proposal for treatment of polluted water using advanced oxidation process and a BIPP proposal for instant assay of contaminants in water
		Sreeni labs, Hyderabad		Development of nanomaterial catalysts for organic reaction catalysis and a grant proposal in that direction is submitted to SBIRI
4	TCE	3G Network Solutions Private Limited	June 2016	Academic Projects for PG
5	CSE/ MCA	IBM Excellence Centre		Provide Intensive training to student on the latest technology used in Industry and excel to take certification Exam and make them ready for placement. Set Up IBM –CoE Lab &Prometric Center

Systems

Industry experts are involved in curriculum development. They are also invited as resource persons and evaluators for faculty and students Programmes. Institution

plans visits of faculty and students to industry and interact. Faculty and Students are involved in industry sponsored projects.

Department of Mechanical Engineering and Civil Engineering has established Societies of Engineers which aims to make collaborations with industries and sign MoUs for consultancy activities.

The institute encourages the faculty to interact with industry and obtain consultancy and any money generated through industrial interaction, 75% of it is given to faculty as gift. Any industrial visit by a faculty will be supported by with an 'on duty paid leave' and payment of the travel and incidental expenses. A single window clearance of documents related to industry and complete freedom to individual faculty for choosing the kind of industry and the research problem. The institute also supports collaborations of industries for student projects and internships. The industrial representatives and experts are members of the departmental advisory boards.

The Institution – Industry interaction cell is established along with carrier development program which ensures the healthy interaction of the institution with industries.

The Objectives of Industry Interaction Cell is to keep liaising with R & D organization and industry for knowledge sharing to bridge gap between Institution and industry. The cell ensures faculty exchange with industry to arrange expert lecturers for enhancement of inherent skill. The main objective includes, developing the skill of student and to get acquainted with practical or real word problems, industry requirement, process and managerial skill. The cell undertakes review of curriculum and suggests the industrial supplementary contact as per need of industry and state of art.

CDP (Career Development Program): Under this activity college invited eminent Speakers from Industry to talk to students and faculties to share knowledge about new trends in the industry.

Name	Organization	Program
Sahana Kumaraswamy	Infosys	Foundation Program
Anoop Singh	Infosys	Foundation Program
Mrs. Sarala	SECON Pvt. Ltd.	Society of Civil Engineers

Every Year CMRIT arranges Alumni meet where professionals from different industry can exchange their opinions to improve the quality of Education and to

build institute-industry interface. The faculty and students are involved in industry sponsored projects and students visit industrial exhibitions like IT Expo, IBM Blue Mix etc.

The department of MCA have made attempts to forge alliances with reputed Corporate like Oracle, IBM and EMC2 which would give us a platform to conduct industry-relevant trainings for our students, making them more employable, and giving them a chance to get better placed.

3.5.2 What is the stated policy of the institution to promote consultancy? How is the available expertise advocated and publicized?

The institution encourages faculty members to use their expertise to undertake consultancy work to facilitate industries and corporate entities for their value addition. To motivate faculty members to take up consultancy, the institute provides incentives, consultancy remuneration and resources to support the work. The institution mandates the faculty to seek and obtain explicit prior permission before entering into formal consultancy arrangements.

Faculty are advised to attend the conferences of repute and institution will pay complete registration fee and 50% of the incidental expenses and this will allow the faculty to indulge in an informal discussion with industries. This will be followed up with a site visit to the respective industry and getting a clear understanding of the research problem. Further plan will involve putting resources at the college level and providing value to the industry.

Through Alumni database consultancy work can be promoted. It is part of the policy for professors in particular to visit the organizations of repute to promote and have MOU for consultancy.

The institute identifies the domain of expertise in each department which help in developing the interdisciplinary expertise to render the consultancy for the needs of institution and industry. The institution regularly conducts workshops, technical talks and invites industry experts to present their work. During in these interactions faculty's expertises are showcased. The available expertise is displayed in institutional website.

3.5.3 How does the institution encourage the staff to utilize their expertise and available facilities for consultancy services?

The research committee of the Institution and Heads of Departments first identify the area expertise of the faculty. If required, Institution deputes the staff for skill

development Programmes. Institution organizes the Programmes on product development, design and research methodology which encourage the staff for consultancy. Institution provides facilities and seed money to carry out the consultancy. Institution deputes the staff for industrial training where they can find the potential for consultancy. CMRIT encourages faculty to pursue consultancy during working hours, by reducing their academic workload appropriately. Furthermore in the annual appraisal due importance is given to faculty who involve in consultancy work; and they are rewarded either through salary increments and/or promotions – apart from reduced academic workload.

A) As a policy CMRIT allows access of all facilities created at the institute level to all faculty members.
B) Any industry consultancy will be viewed as a team/institute responsibility and we have a secondary mechanism for output cross-verification. For example, chemistry department delivered a gas phase acid sensor to industry, which was cross-validated by a different CMRIT departments.

Industry name	Type of consultancy provided	Revenue generated due to consultancy
Bigtec Labs	Internship at Prof. Phani Kumar's lab	Rs 8000/- paid to Raazia Fathima and this has resulted in obtaining IEEE humanitarian award of Rs 15,780/- to the college and has resulted in a grant proposal sent to DST's Water Technology Initiative (WTI)
Bigtec Labs	Consultancy fee given to Prof. Phani Kumar Pullela	Rs 5000 is pad as project support & consultancy
Universe trust (NGO)	Project support	Rs 5000 given to develop "smart hat"
Universe Trust (NGO)	Project support	Rs 5000/- given for crowd funding
Universe Trust (NGO)	Project support	Rs 3000 given to develop "women empowerment" app
Universe Trust (NGO)	Project support	Rs 2000/- given to support MSME app

- List the broad areas and major consultancy services provided by the institution and the revenue generated during the last four years.

Department	Year	Industry	Amount in Rupees	Area of Consultancy / Facility / equipment created
Chemistry		Bigtec Labs	Lakhs	Micro PCR Trueprep MAG Fluorescent gas sensor
		Bigtec Labs	1 Crore	Essential equipment for chemistry lab >400 chemicals (List is available on file)
Electrical & Electronics Engineering	2013	FON ESS INDIA PVT LTD	Rs 1,00,000.00 Sanctioned	Development of power supply -- rescue operation for lift
	2011	MEHER ENERGY VENTURES PVT LTD	Knowledge Exchange	Energy Efficiency and Energy storage application
	2011	ADINYA TECHNOLOGIES	Knowledge Exchange	Adaptive control, Intelligent systems and Signal processing
Computer Science & Engineering	2011-12	Web Technology Computer Networks Mobile Networks	1,25,000/-	Web Technology Computer Networks Mobile Networks
	2013-14	Enterprise Resource Planning	20,000/-	Enterprise Resource Planning
Civil Engineering	23-Sep-2014	STP Earth movers	1,800	Geotechnical Engineering
	23-Sep-2014	D3 Estates &Construction(India) PVT. LTD.	3,000	Geotechnical Engineering
	26-Dec-2014	D3 Estates &Construction(India) PVT. LTD.	2,950	Geotechnical Engineering & Concrete
ISE	2012-13	ERP system	1.5 lakhs	Enterprise Resource Planning

Bigtec Labs	Internship at Prof. Phani Kumar's lab	this has resulted in obtaining IEEE humanitarian award of Rs 15,780/- to the college and has resulted in a grant proposal sent to DST's Water Technology Initiative (WTI)	Rs 8000/-	Chemistry oriented
Bigtec Labs	Consultancy fee given to Prof. Phani Kumar Pullela	project support & consultancy	Rs 5000	project support & consultancy
Universe trust (NGO)	Project support	to develop "smart hat"	Rs 5000	As a part of social responsibility
Universe Trust (NGO)	Project support	given for crowd funding	Rs 5000/-	As a part of social responsibility
Universe Trust (NGO)	Project support	given to develop "women empowerment" app	Rs 3000	As a part of social responsibility
Universe Trust (NGO)	Project support	support MSME app	Rs 2000/-	As a part of social responsibility

3.5.4   What is the policy of the institution in sharing the income generated through consultancy (staff involved: Institution) and its use for institutional development?

The institutional policy for sharing the income generated through consultancy.

The entitlement through consultancy may be received directly by the institution and then assigned to a certain team of faculties within CMRIT. Then the revenue sharing will be as follows: 75% of the revenue to CMRIT and 25% of the revenue to the equally shared among the members of the team of faculty consultants.

Consultancy may be received directly by a team of faculty. Then revenue sharing will be as follows: 25% of the revenue to CMRIT and 75% of the revenue to the equally shared among the members of the team of faculty consultants.

3.6 Extension Activities and Institutional Social Responsibility (ISR)

3.6.1   How does the institution promote institution-neighborhood-community network and student engagement, contributing to good citizenship, service orientation and holistic development of students?

a)   CMRIT encourages students to provide engineering solutions to socio-economic problems and contribute to the local community. In context to the above, students have taken up projects which address the day-to-day concerns of the neighborhood community in the field of traffic engineering, environmental engineering and green or eco-friendly design concepts.

b)   CMRIT involves faculty and students in community network. This helps the students to learn ethical values and understand their responsibilities, and develop as good citizens, in service orientation and their holistic development.

c)   CMRIT has a well established NSS department in which the faculty and students regularly take part in activities such as blood donation camp, tree planting, service to nearest old age home, orphanages, government schools and various NGO's etc. are organized by the students.

d)   CMRIT has formed a Rotaract Club with assistants of rotary club Ramamurthy Nagar for students, had been engaged in visiting Orphanage for donating clothes, teaching poor students and organizing blood donation camps.

e)   Every Year students and faculties of CMRIT conduct social welfare programme where they visit schools, bring school students to campus and provide one day training on computer fundamentals. Under "Sahyog" we were

organizing 'Shramdaan' and Donation of Groceries and other essentials at Old Age Homes and Orphanages.

f) On 19th November 2014, Blood donation camp was organized in the memory of Late Chikka Muniyappa Reddy more than 300 NSS members as volunteers, faculty of CMRIT took part in this camp.

g) On 16th October 2013, CMRIT students & faculty visited Karunashraya-advanced stage cancer care ashram at Kundalahalli, Bangalore. Donated clothes, food, school books and other stationary materials to inmates.

h) Aadhar enrollment campaign was organized for 10 days inside the campus students, parents, faculty and general public utilized the facility and more than 1000 members have enrolled for the same.

i) Helmet awareness program was held by students & faculty of CMRIT to educate public in mandatory use of helmet while riding two wheelers.

j) CMRIT has a well established National Social Service department which is involved in Cleanliness with Respect to the Environmental Hazards through its "Clean Sweep Abhiyan" and regularly conducts blood donation camps.

k) CMRIT faculty and students participated in Blood Donation Camp organized in Whitefield Area Commerce and Industries Association (WACIA) on Friday 10th April 2015 in Association with Rotary TTK.

Sl No	Date	Organization	Activity
1	08/11/2013	Govt Higher Primary School, Attibele, Bangalore	Brought 50 students of this school to our campus and gave them lunch, sweaters and free training on computer fundamentals.
2	15/12/2012	Sishu Griha School, Near GCC, Bangalore	Donated clothes, Stationeries, Food items and spent time by playing with children.
3	29/10/2011	Nava Jeevana Nilaya, Kundalahalli Gate, Bangalore	Donated clothes, food items and other provisions for cancer patients.

Sl	Date	Organization	Participants	Activity
1	02.10.2016	CMRIT	-	Swachh Bharat Mission
2	27.08.16	Sankara Eye Hospital Bangalore	100	Seminar (A brief Talk) on Eye Donation
3	31.03.16	Rotaract Club of CMRIT Indian Red Cross Society	100	Blood Donation Camp
4	12.01.16	Sujith C. Pani Department of Basic Science	100	National Youth Day
5	26.03.15 27.03.15	Indian Dental World	200	Dental Camp
6	19.03.15	Indian Cancer Society	100	Cancer Awareness Camp
7	01.03.15	CMRIT	-	H1N1 Awareness Camp
8	26.08.15	Vydehi Hospital & Sanjay Gandhi Hospital and Research Centre	372	Blood Donation Camp
9	19.08.15	Karnataka Teacher Welfare Association	-	Teacher Day Stamp Distribution
10	26.11.15	Sujith C. Pani Department of Basic Science	100	Constitution Day Celebration
11	11.01.14	Government School Kundalahalli	75	Health Awareness Camp
12	02.04.14	Sankara Eye Hospital Bangalore	150	Eye &Dental Camp
13	30.10.14	Bangalore Medical Services Trust, Rotary Bangalore	252	Blood Donation Camp
14	05.11.13	Bangalore Medical Services Trust, Rotary Bangalore	252	Blood Donation camp
15	17.08.12	Prof. Raveesha Department of Basic Science, CMRIT	100	Sadbhavana Diwas Celebration in Govt. School
16	10.11.12	Bangalore Medical Services Trust, Rotary Bangalore	252	Blood Donation camp
17	09.03.11	Bangalore Medical	252	Blood Donation camp

		Services Trust, Rotary Bangalore		
18	05.03.11	CMRIT	150	Green Camp in CMRIT
19	09.10.10	Narayana Hrudayalaya Hospital	372	Blood Donation camp
20	01.09.10	Ramurthy Nagar,Bangalore	-	Eye Pledging Camp
21	29.10.10	Ramurthy Nagar,Bangalore	-	Rotaract Medical Camp
22	29.10.10	Ramurthy Nagar,Bangalore	-	Planting Camp
23	19.11.09	Narayana Hrudayalaya Hospital	152	Blood Donation camp
24	15.05.09	Satya Sai ,Hospital	100	Social Service
25	27.11.09	Deccan Herald & Prahavani Relief Trust	-	Contribution of Flood Relief fund
26	29.04.09	Narayana Hrudayalaya Hospital	152	Blood Donation camp
27	28.02.09	Satya Sai, Hospital	100	Social Service
28	26th Jan.	CMRIT	100	Republic Day Celebration
29	15th Aug.	CMRIT	100	Independence Day Celebration
30	1st Nov.	CMRIT	200	Kannada Rajyotsava Celebration

3.6.2   What is the Institutional mechanism to track students' involvement in various social movements / activities which promote citizenship roles?

College encourages students for participation in NSS/Extra-Curricular/Co-Curricular activities. Here record has been developed how students are participating in the activities and monitoring improvement among the recipient of the service.

3.6.3   How does the institution solicit stakeholder perception on the overall performance and quality of the institution?

- Parent Teacher Meetings are regularly being conducted to know about academic performance and quality of their wards and to provide constructive

suggestions to improve their overall performance and academic quality of Institution.

- Periodically performance reports are being sent to the stake holders through SMS, e-mails and also through hardcopies.

- The student attendance record is send to parents on daily basis through SMS.

- Special attention is given to low performers by conducting ICP (intensive coaching program) classes, remedial classes (for failed students). Periodic mentoring & counseling is given to students to make them perform well in the internal tests and university exams.

- The stake holders are invited to visit the campus and various infrastructural facilities, interact with the members of faculty to obtain necessary information on the overall performance and quality of Institution.

- Institution Industry cell gives feedback and suggestions for performance improvement

- Alumni are invited to visit the Institution and participate in academic processes. Students have done in house projects, from CMRJT funds. The project (Electronic score board) was developed and implemented at the basketball court of CMRIT. The institute also felicitate University Rank Holders and Class Toppers every year with certificate and memento.

- Employers are encouraged to give their feedback about the alumina

- Employers are involved in day to day activities and administration making them members in academic advisory/department advisory boards/ Governing council members/ Research committee members etc.

- Industry heads are involved in training the students in latest developments in the industry.

3.6.4   How does the institution plan and organize its extension and outreach programmes? Providing the budgetary details for last four years, list the major extension and outreach programmes and their impact on the overall development of students.

Institution carries out survey of the areas where the society and academic community need the extension and outreach Programmes. It also identifies the resource persons and faculty exercise. This helps to plan the Programmes. Institution has its own budget for the Programmes. Apart from this Institution applies for funding to University to carry out the Programmes. Institution invites industry personnel and other interested persons to attend the Programmes. Students

are also trained on non-academic activities like pre-placement training prepare program, carrier guidance Programmes. Students from civil engineering were sponsored with Rs 30,000 on bridge modeling work shop conducted by IITMumbai which is India' biggest civil championship in the year 2014-15.

3.6.5   How does the institution promote the participation of students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International agencies?

a)   On 19th November 2014, Blood donation camp was organised in the memory of Late Chikka Muniyappa Reddy more than 300 NSS members as volunteers, faculty of CMRIT took part in this camp.

b)   On 16th October 2013, CMRIT students & faculty visited Karunashraya-advanced stage cancer care ashram at Kundalahalli, Bangalore. Donated clothes, food, school books and other stationary materials to inmates.

c)   Aadhar enrollment campaign was organized for 10 days inside the campus students, parents, faculty and general public utilized the facility and more than 1000 members have enrolled for the same.

d)   Helmet awareness program was held by students & faculty of CMRIT to educate public in mandatory use of helmet while riding two wheelers.

e)   CMRIT has a well-established National Social Service department which is involved in Cleanliness with Respect to the Environmental Hazards through its "Clean Sweep Abhiyan" and regularly conducts blood donation camps.

f)   CMRIT faculty and students participated in Blood Donation Camp organised in Whitefield Area Commerce and Industries Association (WACIA) on Friday 10th April 2015 in Association with Rotary TTK.

3.6.6   Give details on social surveys, research or extension work (if any) undertaken by the college to ensure social justice and empower students from under-privileged and vulnerable sections of society?

The Institution offers opportunities to students to participate in social activities like blood donation camps, poster presentations to create awareness about pollution, e-waste, non-conventional sources of energy, teaching English communication skills to government primary schools.

Institution gives relaxation in fees and prizes to the students from under privileged and vulnerable sections of the society.

3.6.7   Reflecting on objectives and expected outcomes of the extension activities organized by the institution, comment on how they complement students' academic learning experience and specify the values and skills inculcated.

The objective of the extension activities is to provide quality and value skills and leadership qualities in the students. Many students of CMRIT have been placed in different core company interviews conducted in on campus & off campus. The pre-placement mock interviews and training Programmes have helped students for better placements every year. The career guidance activities conducted in the department has enabled the students to take up higher studies in foreign and Indian universities.

3.6.8   How does the institution ensure the involvement of the community in its reach out activities and contribute to the community development? Detail on the initiatives of the institution that encourage community participation in its activities?

CMR institute of technology is responsible for organizing awareness campaigns for the benefit of the society at large. CMRIT project exhibition by students, environment awareness campaigns for general public and school students and computer training to the students studying in government schools. CMRIT has encouraged students to enroll for membership in ABVP and activities are planned and conducted in college campus involving eminent people and members from ABVP. Kannada Sanga activities are conducted every year to emphasis and enrich the culture of our state. Student Committee is formed to organize the community development program throughout the year.

3.6.9   Give details on the constructive relationships forged (if any) with other institutions of the locality for working on various outreach and extension activities.

Every year CULTURA, Technical and Cultural events are conducted and co-ordinated by students and faculty of CMRIT. Students from various Institutions have participated to showcase their talents. This event has proved to be a platform for interacting with fellow students from other institutions. Students of CMRIT are also encouraged to participate in Technical and Cultural events conducted by other institutions. Faculties and students of CMRIT are encouraged to participate in Inter-College Sports Tournaments. Faculties are encouraged to attend workshops,

Faculty development programmes and seminars conducted by various institutions and companies. CMRIT is having constructive relationship with its sister concerned institutions in the same premises and other campuses as well. Good number of programmes is organized jointly with CMRIMS, CMR University and other institutes.

A joint consortium has been formed with 6 colleges (CMRIT, RVCE, SVCE, MSRIT, PESSIT and Jain University) with Prof. Dwarakadasa (Retired Professor, IISC Bangalore) as the President of the consortium. The consortium aims at coming up with collaborative research work between the different institutions mentioned above.

A collaborative work on "Heavy metal detection in water" is being carried out by Prof. Giridhar and Prof. Chaitanya (CMRIT), in association with Prof. Dwarakadasa.

Prof. Chaitanya has an ongoing DST project jointly with Prof. Sabu Thomas and Prof. Nandakumar K of International and Interuniversity Center for Nano science and Nanotechnology (IIUCNN) affiliated to M. G University (Kottayam).

Prof. Chaitanya has an ongoing collaboration on electromagnetic materials with NAL, Bangalore

Prof. Chaitanya has an ongoing collaboration with IISC Bangalore for magnet tunnel structures for fundamental studies and device applications.

3.6.10   Give details of awards received by the institution for extension activities and/contributions to the social/community development during the last four years.

- Blood donation camps organized on 10/11/2012, 5/11/2013, 30/10/14 at CMRIT in association with TTK Blood bank, Rotary Club Bangalore.
- Blood donation camp organized on 26/8/2015 at CMRIT in association with Veidehi Hospital and Sanjay Gandhi Hospital, Bangalore.
- 2 days dental camp organized at CMRIT (26/3/2015-27/3/2015) by India Dental World.
- Cancer awareness camp organized at CMRIT on 19/3/2015 by India Cancer Society.
- NSS free eye checkup and dental screening organized at CMRIT in association with Sankara Eye Hospital.

- Prof. Sanjay Chitnis (Principal, CMRIT) has received National Education Leadership Award, "Outstanding Engineering Institutes South", on behalf of CMRIT from Mohan Group.
- Certificates Blood donation.
- Etc., check in departments.

3.7 Collaboration

3.7.1 How does the institution collaborate and interact with research laboratories, institutes and industry for research activities. Cite examples and benefits accrued of the initiatives – collaborative research, staff exchange, sharing facilities and equipment, research scholarships etc.

CMRIT focuses on recruiting faculty with industrial background and who also possess good teaching skills to empower students with both theoretical and practical knowledge and also to bring in the Institute- Industry Interaction. This facilitates the institution in collaboration with industries to share the resources such as laboratories, staff exchange, utilization of students by providing internship, updating through FDPs etc.

One of the CMRIT faculty has received research chemicals worth of one crore and equipment worth of thirty lakhs to establish a research facility (three year collaboration) focusing on sensors. As far as our knowledge goes, this kind of collaboration is a rarity in engineering colleges with only reputed institutes obtains similar arrangements with industries based on faculty's caliber (An NDA is on file for the same).

CMIRT have signed an MOU with an analytical company to focus on polluted water treatment and analysis and the intellectual property will be jointly owned and CMRIT will also receive 10% of the income generated from the joint effort. CMRIT is aware that industries offer a maximum of 8% royalty to the academics for joint product development and in that direction we set a new norm by encouraging faculty to perform a meaningful industrial research.

CMRIT gives special emphasis on multi-institute collaboration. One such example is initiative started by our board member Prof. Dwarakadasa. This program is meant to create joint working projects with efforts utilize the research resources and bring the faculty with special research focus together. The 7-college consortium has already identified sensors, nanocomposites and alternate energy as the focus areas for the first round.

CMRIT Civil Engineering department has signed MOU with Autodesk. They have sponsored a faculty to attend FDP conducted in Mumbai on August 6th and 7th 2015.

3.7.2   Provide details on the MoUs/collaborative arrangements (if any) with institutions of national importance/other universities/ industries/Corporate (Corporate entities) etc. And how they have contributed to the development of the institution.

Sl. No.	Department	Collaborative agreements/ MOUs signed with Academic/ Industry	Details
1	Electronics & Communications	Texas Instruments	Academic Projects are undertaken
2	CSE/ MCA	IBM Excellence Centre	Provide Intensive training to student on the latest technology used in Industry and excel to take certification Exam and make them ready for placement. Set Up IBM –CoE Lab &Prometric Center
3	ECE/CSE/ISE	EMC^{2}Academics Alliance	Provide training to faculties at EMC2 campus, so that they can train students in the college on the same. To excel students to take certification Exam and make them ready for placement.
4	Mechanical Engineering	Enlivening Technologies Pvt. L	T rain industry professional on new technology through PG Programmes. 2. Internship opportunity for our students 3. Collaborative research once Mechanical Engg Dept, CMRIT attains Research Center status
5	Civil Engineering	Autodesk	Sponsoring a faculty to attend a FDP in Mumbai
6	Chemistry	Bigtec labs, Bangalore	Helped to builda sensor worth Rs. 1.3crore
		Robust materials, Bangalore	Developed and submitted a SBIRI research proposal for treatment of polluted water using advanced oxidation

			process and a BIPP proposal for instant assay of contaminants in water
		Sreeni labs, Hyderabad	Development of nanomaterial catalysts for organic reaction catalysis and a grant proposal in that direction is submitted to SBIRI
7	EEE	Concord United Products Private Limited	Development of Software and Controller Board for WEDM Machine
8	CSE/ISE	Infosys	1.Provide training to faculties at Infosys campus, so that they can train students in the college on the same. 2.4 – 5 selected students from department will be sent to Infosys campus to get real time project exposure.
9	Civil	Medini	Consultancy Work
10	Civil Mechanical Chemistry	Shell Apparels	Consultancy Work
11	Civil Mechanical Chemistry	iSquareD	Consultancy Work

3.7.3   Give details (if any) on the industry-institution-community interactions that have contributed to the establishment /creation/up-gradation of academic facilities, student and staff support, infrastructure facilities of the institution viz. laboratories / library/ new technology /placement services etc.

As the institutes primarily focuses on technological knowledge due to presently there is a significant and urgent challenge in the bridging the gap between the technological knowledge and the transformation of knowledge in industry. To forge this transformation, CMRIT encourages the faculties and students to involve in industry-institute-interaction. This interaction occurs across a broad spectrum of industries and research centres.

Sl. No.	Department	Collaborative agreements/ MOUs signed with Academic/ Industry	Details
1	Electronics & Communications	Texas Instruments	Academic Projects are undertaken
2	CSE/ISE	Huawei Technologies Pvt. Ltd	Internship projects. Support for numerous real-time Industry projects.
3	CSE/ISE	IIT Madras and Blue Print IT	To provide online training for database design course.
4	Mechanical engineering	SKF Bearings	Internship for PG students. Enhance know-how of faculties about type of industrial problem. Faculties get to work on the
5	Civil Engineering	Autodesk	Sponsoring a faculty to attend a FDP in Mumbai
6	Chemistry	Bigtec labs, Bangalore	Helped to build a sensor worth Rs. 1.3crore
		Robust materials, Bangalore	Developed and submitted a SBIRI research proposal for treatment of polluted water using advanced oxidation process and a BIPP proposal for instant assay of contaminants in water
		Sreeni labs, Hyderabad	Development of nanomaterial catalysts for organic reaction catalysis and a grant proposal in that direction is submitted to SBIRI
7	Physics	Collaboration with IISc	Many faculties are doing research in IISc
8	CSE/ISE	Delphi Automotive Systems Pvt. Ltd.	To provide research and technical project work.
9	Civil	Medini	
10	Civil Mechanical Chemistry	Shell Apparels	
11	Civil Mechanical Chemistry	iSquareD	

3.7.4   Highlighting the names of eminent scientists/participants who contributed to the events, provide details of national and international conferences organized by the college during the last four years.

EVENTS Conducted by eminent personalities	Date
Dr.Jayant Harista,Chairman,CSA,IISC	Feb 12th 2016
Mr.Srikanth Naidu,Group Engineering Manager,Microsoft	Feb 12th 2016
Mr.Shankar Shastri,Principal Software Engineer,Microsoft	Feb 12th 2016
Dr.Nishant Chandra,Associate Director,24/7 innovation labs	Feb 12th 2016
Dr.T.S Mohan,Founder of pragnan datalabs	Feb 13th 2016
Dr. Venketash Waralu Principal Scientist N.A.L	24/2/2012
Mr. Ramaprasana Challa Muthu Developer Evangelist Microsoft India	17/3/2012
Mr. Ramdas Patil General manager SSL business, Noida	29/4/2011
Mr. Vinay Malekal MS student, University of south California	15/4/2010
T.N. Ruckmongathan Scientist, Raman Research Institute Bangalore	23/2/2010
Technical talk by, Prof. HS Bhatia, Hon. Secretary, IETE Bangalore Centre held at IETE Bangalore	28thFeb 2014
'Cyber Security', by Prof. Bernard L Menezes and Prof. G. Sivakumar Department of Computer Science and Engineering, IIT Bombay held at IIT-Bombay	July 10th, 2014 to July 20th, 2014.
brainstorming session @ IETE to enhance the ISF activities for the benefit of student members in various engineering colleges associated with IETE Bangalore Centre, by Prof. HS Bhatia, Hon. Secretary IETE Bangalore Centre	05th Nov 2013
Guest Lecture on "Wireless Communication" by Prof H S Kori, IETE	Sep, 10-2013
16th State Level ISTE Faculty Convention and L. S. Chandrakanth Memorial 24th Lecture series, at AMC Engineering College	11th and 12th October 2013
Mr. Abhinav Agrawal, Project. Manager, Tata Consultancy Services, Bangalore	25-04-15, 14-02-15
Mr. PG Bhat, President, Pluma Knowledge 4.Solutions	20-12-14

Dr. Nishanth Chandra, Director, [254]7 Inc., Bangalore.	09-12-14
Mr. Sachin Kumar, Project Manager, IBM India, Bangalore	05-11-14
Shailendra Mahapatra, Senior Lead, CSR India, Bangalore	11-09-14
Ms. Zehana Chagani, Technical Instructor, EMC2, Bangalore	14-07-14
Mr. Deepak Nadig, Director, Technology & Research, Solutt Corporation, Bangalore	27-06-14
Mr. Prabodh, Asst. Professor, Siddhaganga Institute of Technology, Tumakuru	04-04-14
Mr. Vignesh, Java Developer, Intel Corporation India, Bangalore	04-04-14
Mr. Karthik K, Project Manager, EC Cube, Bangalore	11-11-13
Prof. Bhabatosh Chanda, Professor, ISI Kolkata	24-04-13
Mr. Sahas Shivaling Sakhare, Software Engineer, AMD India Pvt Ltd	06-04-13
Dr. N.M. Bhatta, Global Program Director, Tata Consultancy Services, Bangalore	12-03-13
Mr. Madan Srinivas, Member of Education & Research Division, Infosys Ltd., Mysore	30-01-13
Mr. Shridhar Pandey, Founder, Electro Technologies, Pune.	05-10-12
Mr. Mahesh Gidwani, Senior Solution Architect, DELL Services, India, Bangalore	22-09-12
Manjunatha Swamy M, System Engineer, Infosys, Bangalore	25-08-12
Mr. Vikram Patil, Asst. Manager, CISCO Technogies	14-02-12
Mr. Vikram Singh, Software Developer, JP Morgan, Bangalore	11-02-12
Mr. Phani Kumar Rao, Project Manager, Infinite Computer Solution Ltd, Bangalore.	01-10-11
Mr. N Deepak Kumar, Director of CADD Centre	2013-2014
Hemanth Reddy, CEO of Madhusiri group of Company	2013-2014
Mr. RaghuRaj, Manger Operations, Sunsoft Technologies, Bangalore	2014-2015

Mr. Raj Pillai Managing Director, Sobha Developers	2014-2015
Mrs. Sarala, DGM, SECON	2014-2015
Dr Gajbir Singh & Dr Venkateshwarulu, MD & CEO Enlivening Technologies Bangalore	25/02/2015
Mr.Ravi Jangir ,Co-Founder Jangir Designs & Analytics LLP Pune	27/02/2015
Mr.Amardeep Singh, Consultant Fourth Master Design's Bangalore	12/03/2015
Mr Kiran Hebbar, Consultant Akar Training Bangalore	18/03/2015
Mr Chintoo Kumar, Technical Lead Srushti Education Systems Bangalore	27/03/2015
Mr Venkatramu, Associate Director(LPSC) ISRO Bangalore	16/04/2015
Mr Santhosh M.S, Manager Drive & Control Academy Rexroth Bosch Group Bangalore	20/04/2015
Dr Suresh MVJJ, Chief Engineer John.F.Welch Technology Centre,GE Bangalore	27/04/2015
Mr. Bhanu Prakash Dixith B N, Centre Manager EDS Technologies Pvt Ltd Bangalore	11/8/2015
Ms. Nabaneeta Mitra, Manager CMS Pvt Ltd Bangalore	26/08/2015
Mr Alok Kumar, Chief Engineer (Boeing) UTC Aero space systems Bangalore	05/09/2015
Mr Abhinay Kalburgi, Infidof	10/09/2015
Mr Srinath Rao, ELS Bangalore	23/09/2015
Mr Ebin Thomas, Product Head Of CADD Centre	04/11/2015
Dr. Bijay Sultanian,m Founder & Managing Member of Takaniki Communications	18-22/1/2016
Mr. Mahadeva Nagaral, Design Engineer, Aircraft Research and Design Centre (ARDC), HAL	15/02/2016
Dr. Krishna Lok Singh, Senior scientist, NAL	23/02/2016
Dr. Khemraj Emrith, Lecturer in Engineering, Centre for Machine Vision, Bristol Robotics Lab, University of the West of England, Bristol, United Kingdom	02/03/2016

3.7.5   How many of the linkages/collaborations have actually resulted in formal MoUs and agreements? List out the activities and beneficiaries and cite examples (if any) of the established linkages that enhanced and/or facilitated

a)   Curriculum development/enrichment

Successful enrichment programmes enhance students' life at college and increase motivation, achievements and retention. Such programmes are one way in which colleges respond to the demands of employers' organisations and higher education providers for people who are flexible, responsive and resourceful. They also provide valuable links with the local community, promote the college to potential students and their parents and foster a sense of community and cohesion within the college. Below are the some of the initiatives' taken by CMRIT.

- CMRIT offers a variety of student-centric service that complement classroom learning to prepare students for careers in industry, entrepreneurship, research or further study. With a Vision of "Career Guidance and Placement Bureau serves students and external organizations in line with the goals of CMR Group of Institutions to foster centers of excellence in training, research and consultancy."
- Every year CMRIT conducts "CULTURA" cultural and technical fest during the even semester. This helps students to identify and learn various skill sets such as leadership, organizing an event, team player etc
- CMRIT has made Industrial visits as mandatory part of engineering curriculum. For example Electrical engineering students visit core electrical engineering companies, hydro-electric power generation station etc to see the impact of electrical engineering creations. Similarly Civil engineering students were taken to Sobha developers pre-cast industries, Institute of Wood Science, hydraulic structures etc.
- CMRIT also encourages guest lectures as a part of Institute Industry Interaction. Various eminent speakers have been invited to motivate, update the students on current trends etc.

b)   Internship/ On-the-job training

Internship has become an integral part engineering curriculum. Students can use an internship to determine if they have an interest in a particular career, create a network of contacts or gain school credit. Some interns find permanent, paid employment with the organizations for which they worked. This can be a significant benefit to the employer as experienced interns often need little or no

training when they begin regular employment. Below listed are companies where students have undergone Internship,

Sl. No	Department	Company
1	ECE/TCE/EEE	HAL, ISRO, ADA, BSNL, NAL, Capio Data Solution, Tata Tele Service, SION Semiconductors, Chipware Technologies, CVC Pvt Ltd
2	CSE/ ISE	TATA Elx, Hp, Nokia, Emaker solution, Yatis telmatic, Tiger Innovation, Squadm Technologies Technology Port Software, Empower Security Pvt. Ltd., Iprimitus
3	Mechanical/Civil	HAL, AIR COMFORT ENHINEERS Pvt. Ltd., Larsen & Toubro, STUP consultants Pvt. Ltd., Gammon India Ltd, Embassy Developers Ltd SKF Bearings Ltd, Infidof, Susol Technologies, BEML, Enlivening Technologies, Tyco Pvt Ltd, Group of Engineers Pvt Ltd, Allegis Group Pvt Ltd.

c) Faculty exchange and professional development –

- CMRIT has partnered with Avanti Learning Centres, which has devised a teaching approach that we believe, is best designed to maximize academic gains. Here the classes focus mainly on 'Peer Learning' as an educational technique. This has been extensively researched by our advisor Professor Dr. Eric Mazur, Dean of Applied Physics at Harvard University.
- Faculties of CMRIT are extensively trained on the various pedagogy methodologies to provide a better classroom teaching –learning experience.
- English training workshops were conducted to emphasis the spoken English in order to improve the faculties' delivery in the classroom environment.

Student Placement

Career Guidance and Placement Bureau serves students and external organizations in line with the goals of CMR Group of Institutions to foster centers of excellence in training, research and consultancy.

Year	2011	2012	2013	2014	2015	2016
No of Students placed	231	321	246	378	404	555

3.7.6   Detail on the systemic efforts of the institution in planning, establishing and implementing the initiatives of the linkages/ collaborations.

Any other relevant information regarding Research, Consultancy and Extension which the college would like to include.

CMRIT has established a Research Committee. Research committee assesses progress towards achieving its stated goals and makes decisions regarding improvement through an ongoing and systematic cycle of evaluation, integrated planning, resource allocation, implementation, and re-evaluation.

Some of the long term goals are:

- To forge win-win tie-ups with reputed organizations in order to boost research collaborations, mutual training needs and placement opportunities
- To establish Centres of Excellence (COE) to provide students with the latest skill-based industry training.
- To strengthen the Entrepreneurship Development Cell for the support and promotion of students' innovative projects and entrepreneurial ventures.

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1 Physical Facilities

4.1.1 What is the policy of the Institution for creation and enhancement of infrastructure that facilitate effective teaching and learning?

The infrastructure of the CMR Institute of Technology (CMRIT) is world-class, Well-ventilated, spacious classrooms, state-of-the-art Computer, Mechanical, Civil and Electronics labs, digital library, transport facilities, hostel, sports stadium (indoor & outdoor) and other amenities make CMRIT the perfect academic setting within India's Silicon Valley.

The institution's infrastructure meets the rapidly growing need for technology professionals by nurturing young minds in an innovative and progressive learning environment. A custom-designed Enterprise Resource Planning (ERP) system is used to monitor curriculum delivery and teaching-learning methodologies. The college has a Wi-Fi enabled campus with auditoriums, libraries, sports facilities, hostels, state of the art laboratories, and academic blocks, a Career Guidance, Placement Cell and an Entrepreneurship Development Cell. Most of the students work on major or minor research projects. College has well equipped labs in all departments including nine research labs.

CMRIT is designed to function as a pedestrian campus with unique gathering spaces for student's activities. The tree plaza and the new library cafe with a coffee day outlet host regular concerts and talks in an informal atmosphere. The flood lit basketball, volley ball have hosted VTU and JAM tournaments successfully. The large open ground serves as a mini football/cricket ground which is visible from all surrounding buildings.

The CMRIT central library has a comprehensive collection of books, national & international journals, educational CDs, and online database subscriptions that cover over 8611 full text online journals & conference proceedings,13235 e-books annual reports and project reports. The library holds the resources in an organized, systematic, digitized way to fulfil the needs of users and to promote information. The institution interacts frequently with parents, students, alumni, teachers, academicians and industry experts and students for creation and enhancement of its infrastructure. The College aims to provide a distinctive learning experience for all students through provision of an intensively supported learning environment making maximum use of new technology to

support learning. Exploring and exploiting the potential of the use of Information Communication Technology (ICT) is a key underpinning element in enhancing learning.

College has formed Lab refinement committee (LRC) with the sole aim of bridging the gap between industrial and academic practices. Students require communication skills, confidence, and subject knowledge, and practical experience, exposure to tools, techniques & practices used in industry. Industry expectations are high and they look for candidates who are employable and immediately be able to fit-in and work with minimal training. Through the LRC we organize lectures, lab instruction classes for the development of the students. Throughout emphasis is put on current industrial trends and expectation of industry, open research problems & challenges.

4.1.2 Detail the facilities available for

a) Curricular and co-curricular activities – classrooms, technology enabled learning spaces, seminar halls, tutorial spaces, laboratories, botanical garden, Animal house, specialized facilities and equipment for teaching, learning and research etc.

Details of infrastructure facilities for Curricular and co-curricular activities

Description	Nos	Area in Sq. Mts.	Remarks
Classrooms	90	7095	Over head /trolley Projector, Wi-Fi connectivity
Seminar halls	7	960	LCD projector , Wi-Fi connectivity, Video conference system
Tutorial space	11	495	
Computer Center	05	600	LAN connectivity
Laboratories	80	9035	Well equipped infrastructure
Workshop	2	500	
Drawing Hall	2	300	
Administrative Rooms+	9	462	

Department Office			
Principal / Directors Office	5	380	
HOD & Staff Rooms	62	4082	
Auditorium	1	1400	700 seats Bose Sound Under floor Air conditioning System
	1	600	
Library &Information centre and Department Library	11	3310	
Girls Hostel	1block	8500	Has Recreation Room, Power Backup, Library And Internet and wifi facilities
Boys Hostel	1 block	8000	Has Recreation Room, Power Backup, Library And Internet and wifi facilities
International Hostel(Boys & Girls)	1		Has Recreation Room, Power Backup, Library And Internet and wifi facilities
Career guidance & Placement Bureau	1	250	
Physical Education Department and canteen	1	3965	
Examination cell	1	150	
Alumni Cell	1	60	
First aid Cum Medical room	1	60	
Cafeteria	1	800	
Sports club	1	100	
Stationery Store	1	200	
Student Activity center	5	2150	
Boy's Common Room	3	350	
Girls Common Room	3	260	
Panty for Staff	1	120	
Toilet	22	765	

Corridors	6	5900	
Other Common Area	6	6605	
UPS R1,R2,R3	3	45	
Central Store	1	100	
Housekeeping	1	100	
Reception	1	180	
Gym Facilities	1	100	
Security	2	25	
Maintenance	2	400	
Maker Space	1	1500	3D Printer, Laser Machine, CNC Router, Electronics division: Arduinos, Raspberry Pi(s), Oscilloscope with some basic soldering stations, Hand Tools and Power Tools

Classrooms

All classrooms are designed to provide better learning experience. The 60 seat classroom gives each student an excellent view of the lecture as well as peers, thus making the class more interactive. All classrooms are bright, well ventilated, equipped with an LCD and OHP system with wi-fi access. Elective rooms are more intimate catering to small focus group discussion.

Seminar Halls

The campus is equipped with state-of-the-artfully air-conditioned, audio-visual rooms that regularly host guest speakers and national seminars. The dedicated AV rooms is acoustically treated and equipped top screen DVDs, record proceeding and help deliver an immersive learning experience. Seminar halls are equipped with video conference lecture system.

Tutorial space

All Tutorial rooms are equipped with adequate resources. The Tutorial rooms give each student an excellent view of the lecture as well as peers, thus making the class more interactive. All Tutorial rooms are bright, well ventilated, equipped with an LCD and OHP system with wi-fi access. Elective rooms are more intimate catering to small focus group discussion.

Laboratories

Students have access to high-tech networked Computers, Electronics, Mechanical and Civil labs equipped with the latest hardware and software. Students have full access to networked printers to print the projects reports, courseware and research material. With 1:4 ratio for lab computers, students have access to dedicated projects and business simulation labs. Each lab has 2GB RAM, 17" TFT monitors connected to windows7, Linux servers and SQL server 2000. All nodes have LCD projectors, scanners, printers and other selected peripherals. Authorised versions of all software are available. The college has campus agreement with several MNC's such as Microsoft, IBM, Acenture..

Computer Science & Engineering		
Sl. No.	Name of laboratory	Major equipment
1	Data Structures Lab	26-HP d290,Intel Pentium 4 Processor, 2 GB RAM,80 GB HDD,18" TFT DELL Monitor, Projector, Network Facility
	Project Lab	26-HP d290,Intel Pentium 4 Processor, 2 GB RAM,80 GB HDD,18" TFT DELL Monitor, Projector, Network Facility
2	Networks Laboratory	26- Lenovo Think Centre, Intel Pentium Dual Core Processor, 3 GB RAM, 160 GB HDD, 17" TFT Monitor Printer, Network Facility
	Unix System Programming Lab	26- Lenovo Think Centre, Intel Pentium Dual Core Processor,3 GB RAM, 160 GB HDD,17" TFT Monitor , Printer, Network Facility
3	Web Programming Laboratory	25- Lenovo Think Centre, Intel i3 Processor 3 GB RAM,5000 GB HDD, 18" TFT Monitor, Printer, Network Facility
	Computer Graphics & Visualization Lab	25- Lenovo Think Centre, Intel i3 Processor 3 GB RAM,5000 GB HDD, 18" TFT Monitor, Printer, Network

		Facility
4	Electronics circuits	24-Computer System 18- Lenovo Think Centre, Intel Core 2 Duo Processor,4 GB RAM,320 GB HDD, 18.5" TFT Monitor 6-HP d290, Intel Pentium 4 Processor, 2 GB RAM, 80 GB HDD, 17" TFT Monitor. 14-Oscilloscope (CRO), 24-Digital Trainer Kit, 14-Signal Generator, 7-Digital Multimeter ,1- Rack, Network Facility
5	DBMS Laboratory	25-Lenovo Think Centre, Intel Core 2 Duo processor,4 GB RAM,320 GB HDD, 18.5" TFT Monitor, Printer, Projector Network Facility
	Microprocessor Laboratory	18- Lenovo Think Centre, Intel Core Duo Processor,4 GB RAM,320 GB HDD, 18.5" TFT Monitor 6-HP d290,Intel Pentium 4 Processor, 2 GB RAM,80 GB HDD,17" TFT Monitor PCI Cards, I/F Card - Dual Dac , Elevator, Logic control ,Matrix Keyboard, Seven Segment Display ,Stepper Motor, Network Facility.
6	Algorithms Laboratory	25-Lenovo Think Centre, Intel Core 2 Duo Processor, 4 GB RAM, 320 GB HDD, 18.5" TFT Monitor, Printer, Network Facility.
	System Software & Operating Systems Lab	25-Lenovo Think Centre, Intel Core 2 Duo Processor, 4 GB RAM, 320 GB HDD, 18.5" TFT Monitor, Printer, Network Facility.
7	M.Tech Computer Science	Total: 18 Computer System 2-HP d290,Intel Pentium 4 Processor, 2 GB RAM,80 GB HDD,

		18" TFT DELL Monitor 16- HP Dx2480,Intel Core 2 Duo Processor, 3 GB RAM ,160 GB HDD, 17" TFT Monitor, Network Facility
8	M.Tech Computer Networks	12- HP d290,Intel Pentium 4 Processor, 2 GB RAM,80 GB HDD, 18" TFT DELL Monitor, Network Facility
9	R & D Lab	DELL Server, Network Rack, Printer

Information Science & Engineering		
Sl. No.	**Name of laboratory**	**Major equipment**
1	Electronics Circuit & Logic Design Lab	LENOVO Think Centre M70,Intel Pentium Core 2 Duo Processor,2GB RAM,300GB HDD,HP Intel Core (TM)2 Duo CPU E4600@2.4 GHz, 1GB RAM,160 GB HDD, 18.5" TFT, & Acer Desktop, Pentium (R) Dual-core CPU ,E5400 @ 270GHz, Ethernet Card, 2GB RAM, 320 GB HDD , Digital IC Trainer kit, DC Power Supply(Dual & Single),DC Regulated Power supply(fixed),1- Analog & Digital IC Tester, Oscilloscope(CRO),Signal Generator
2	Design & Analysis of Algorithms Lab	Lenovo Think Centre, Intel Pentium CPU, G630@2.7GHz,2GB RAM, 300GB HDD, Lenovo 18.5" TFT Monitor, HP LaserJet Pro Printer M202dw.Lab has been virtualized using a high end, high availability centralized server.
	System Software & Operating Systems Lab	Lenovo Think Centre, Intel Pentium CPU, G630@2.7GHz,2GB RAM,300GB HDD, Lenovo 18.5" TFT Monitor, HP LaserJet Pro Printer M202dw.

3	Data Structure Lab	Lenovo Think Centre, Intel Pentium CPU, G630@2.7GHz,2GB RAM, 300GB HDD, Lenovo 18.5" TFT Monitor.
	Software testing	Lenovo Think Centre, Intel Pentium CPU, G630@2.7GHz,2GB RAM, 300GB HDD, Lenovo 18.5" TFT Monitor. Lab has been virtualized using a high end, high availability centralized server.
4	Project Lab	Acer System Intel Pentium CPU G630@2.7Ghz, 2GB RAM, 300GB HDD, HP LaserJet Pro Printer M202dw. Lab has been virtualized using a high end, high availability centralized server.
	Web Programming lab	Acer System Intel Pentium CPU G630@2.7Ghz, 2GB RAM, 300GB HDD, HP LaserJet Pro Printer M202dw.
5	Microprocessors Lab	Acer Desktop, Pentium (R) Dual-core CPU ,E5400 @ 270GHz, Ethernet Card, 2GB RAM, 320 GB HDD, Logic Controller I/F ,Elevator I/F ,Stepper Motor I/F ,Dual DAC I/F ,Multiplexed Seven Segment I/F ,Matrix Keyboard I/F,ALS PCI-07 Cards,ALS-SDA-ARM7-9 ARM2148 Evaluation board.
	Database Applications Lab	Acer Desktop, Pentium (R) Dual-core CPU ,E5400 @ 270GHz, Ethernet Card, 2GB RAM, 320 GB HDD
6	File structure	HP DX-2480 , Intel Core 2 Duo Processor, Ethernet Card, HP keyboard, HP Optical Mouse, HP 17" TFT,3GB RAM,160 GB HDD, HP LaserJet Pro Printer M202dw.
	Networks Lab	HP DX-2480 , Intel Core 2 Duo Processor, Ethernet Card, HP keyboard, HP Optical Mouse, HP 17" TFT,3GB RAM,160 GB HDD, HP LaserJet Pro Printer M202dw.

Electronics and communication Engineering

Sl. No.	Name of laboratory	Major equipment
1	Hdl-1	Dell computers systems a, Universal VLSI development board, XILINX XC

		9572, daughter board XC 3S50, PGLA, DSO, Signal generators
	DSP Lab	DSP starter kits (10 Nos.), DSP starter kits with user interface card module, Speakers, Mike, DSO, Signal Generator, Printer
2	Microcontroller Lab-1	HP Computer systems, Micro controller, all in one single board 10 Nos. Micro controller trainer kit, Tachometer
	Logic Design Lab -I	Digital IC Trainer Kits Oscillope-DTO-20, regulated power supply (0-30v/2A), Dual IC tester
3	VLSI Lab	Computer systems with Network, analog and mixed mode signal EDA tool from cadence design system, RHEL
	Advanced Microprocessor	8085- Interfacing Kits, 8086- Interfacing kits, Column printer, PCI cards
4	Advanced Communication L	Oscilloscope-DTO-30MHz (5 nos), DSO (12 nos), Signal Generators (15 nos) QPSK, DPSK Modulation/ Demodulation Kit, Link-B Advanced fiber optic communication, Microwave Test bench, VSWR Meter, Microwave Source, LabView,
	Analog Communication Lab	Audio signal generator (20 nos) oscilloscope-DTO-30MHz (5 nos) regulated power supply (12)
5	Microcontroller Lab 2	HP Computer systems, Micro controller trainer kit, all in one single board 15 Nos. Micro controller Trainer Kits
	Logic Design Lab –Ii	Digital IC Trainer Kits (14 nos) Oscillope-DTO-20MHz (5 nos) Dual IC Tester (1 no)

6	Power Electronics Lab	Servo Control stabilizer (1), CRO (6) ,DSO(7) ,Power Electronics Modules(8)
7	Analog Electronic Lab –I	CRO (17 nos) signal generators (27 nos), Power supply (15 nos)
8	Analog Electronics lab-II	CRO(10 nos), signal generators(12 nos), Power supply (10 nos)
9	HDL Lab-Ii	Dell computers systems a, Universal VLSI Development Board, XILINUX XC 9572, daughter board XC 2S30, CPLD /FPGA
10	M Tech Digital Elec. LAB	HP Computer systems, ARM CORTEX M3 Evaluation Board (8), Cadence Orcad university PCB design bundle (10)
11	M Tech VLSI LAB	Lenovo computer systems, FPGA, Image Processing Board, Cadence Design PG Bundle

Telecommunication Engineering		
Sl. No.	Name of laboratory	Major equipment
1	Microcontroller lab	Microcontroller kits with peripherals, Dell computers with dual core
	DSP lab	Dell computer with Dual core, DSP starter kit , DSO, Signal Generator, Projector, Printer
2	HDL lab	DELL COMPUTER, CPLD kits, FPGA kits, Logic Analyzer, Projector
	CCN lab	DELL computer, CCN trainer kit
3	Analog Electronics Lab	CRO, signal generators, POWER SUPPLY
	Microwave lab	KLYSTRON test bench with accessories with gun bunch, DSO, CRO, signal generators, POWER SUPPLY

4	Logic Design Lab	Digital trainer kit, IC tester
5	Microprocessor Lab	Dell computer with Dual core, Interfacing Kit
6	Advanced Communication Lab	KLYSTRON test bench with accessories with gun bunch, DSO, CRO, signal generators, Power Supply, Optical Fiber Kit, Communication Kit, QPSK Kit, DPSK Kit
	AC+LIC lab	DSO, Signal generators, CRO
7	M.Tech lab - Digital Communication	FEKO simulation software, DELL computer with dual core

	Civil Engineering	
Sl. No.	**Name of laboratory**	**Major equipment**
1	Survey Lab	Pentax Total Station, Digital Planimeter
2	Geo- technical Lab	Tri-axial Test Set Up, Direct Shear Test Set Up, Unconfined Compression Test Set Up, California Bearing Ratio Test Set Up, Permeability Test Set Up, Consolidation Test Set Up, Soil Penetration Test Set Up, Cone Penetration Test Set Up
3	Concrete & Highway Engineering Lab	Compression Testing Machine, Los-Angeles Abrasion Testing Machine, Marshal Stability Test Apparatus, Concrete Permeability Test Set Up, Blaine's Air Permeability Test Set Up, Autoclave
4	Basic Material Testing Lab	Tile Testing Machine
5	Hydraulics & Hydraulic Machines Lab	Vertical Orifice Set-up, Tilting Flume with V, Rectangular, Trapezoidal Notch, Broad and Sharp crested Weir and Venturiflume.
6	Geology Lab	Rocks & Minerals, Models & Charts

7	Environmental Engineering Lab	BOD Incubator, Muffle Furnace, COD Digestor, Spectrophotometer, Flame Photometer, Flocculator
8	CAD Lab	Staad Pro Software

Mechanical Engineering		
Sl. No.	**Name of laboratory**	**Major equipment**
1	Metallography and Material Testing Lab	Trinocular metrallurgical microscope (make-Metzer) - 3 nos, Single disc polishing machine(make-metzer),Wear and friction monitor(make-ducom),Rotating beam fatigue testing machine(Ducom),Rockwell Hardness tester(make-FIE Model-RASN),Universal Testing Machine(make-FIE, capacity 60 ton), Vicker's Hardness tester(make-FIE, Model-VM50),Impact testing machine(Make-FIE , model-IT30), Mechanical Extensometer(for UTM)(make-MITUTOYO), Brinell hardness tester(make-Saroj, model-3000h), Torsion testing machine (make-FIE, model TT10)
2	Foundry and forging Lab	Universal sand testing machine (make- Versatile), model-VUN, Sand Rammer (make-Versatile, model-VR),Clay content tester(make-versatile, model-VCW),Rapid moisture tester(make-versatile, model-VM),Permeability meter (make-versatile, model-VP), Seive Shaker with 10nos of sieves (power pack), Mould hardness tester(make-versatile, model-VMHB)Core Hardness tester(make-versatile, model-VCH),Specimen driver with digital temp. indicator (hot air)
3	Machine Shop	Surface grinding machine (make-Bhurji) with all accessories and 8X12"magnetic chuck, Shaping machine Size-18" stroke(make Sagar) - Hand Drilling machine (make-Bosch),Universal machine (make- BFW model UF1),Lathe 5' 3" bed length (make-sabari) - 14 Nos, Pedestal grinding

5		machine(make-swagath), Granite surface plate (make-mmt) 630X630X80mm,MS stand for granite, Cast iron surface plate (mmt) 630X630
4	Metrology & Measurements	Mechanical comparator (dial gauge(make-mitutoyo)) Sine bar, Gear tooth Vernier calipers (make-Aditya), Micrometer (make-Mitutoyo) Thermocouple (make-Digitrack), Monochromatic checklight (make-Prisms india), Autocollimeter (make-Prisms India Ltd), Pitch gauge (make-Mitutoyo), Floating carriage micrometer(make-Aditya),Pressure measuring system ,Force (load) measuring system, Displacement measuring system, Strain measuring system, UPS B100 DC input-24v,26Ah SMF rocket, Granite surface plate (630X630X80mm), MS stand for the granite surface plate, Toolmaker's microscope(make-mitutoyo), Profile projector (make-mitutoyo, model pJ-A3000ser),Drill Tool dynamometer(make-IUSTROL DEVICES),Universal bevel protractor (make-mitutoyo)
5	Energy conversion	Redwood Viscometer, Saybolt Viscometer, Cleave land flash point apparatus, Abels flash point apparatus, Bomb calorimeter, Pressure Gauge, Single Cylinder 4 stroke Desil engine test rig, Four Stroke Multi cylinder Petrol engine test rig, Variable Compression ratio Petrol Engine test rig, Torsion Viscometer, Cleave land Flash and fire point apparatus, Junkers gas calorimeter, Valve timing diagram, Port timing diagram, Planimeter
6	Fluid Mechanics	Flow through nozzle, Impact of jet of vanes, Pelton Wheel turbine with multi stage centrifugal pump, Francis Turbine, Kaplan Turbine,2 stage reciprocating air compressor, Centrifugal blower, Determination of coefficient of friction of flow in pipe, Determination of minor losses in flow through pipes, Calibration of Venturi meter, Calibrations of v-notch, Performance test on single

		stage centrifugal pump, Performance test on reciprocating pump
7	Heat & Mass Transfer	Natural convection apparatus, Surface emissivity apparatus, Pin Fin apparatus, Composite Wall apparatus, Transient Heat Conduction apparatus, Forced convection apparatus, Critical Heat Flux apparatus, Stefan Boltzmann apparatus, Heat Exchanger apparatus, Metal Rod apparatus, Condensation Apparatus, Air Conditioning apparatus, Refrigeration apparatus
8	Computer Aided Modeling and Analysis Lab	24 Systems Processor: Intel Core 2 Duo, 80 GB Hard Disk, 17" Monitor, RAM 2 GB Ansys 14.0 (software) – 25 user licence
9	CIM & Automation Lab	Cadem 12 Software, 30 Softwares
10	Design Lab	Journel Bearing, Photo elastic Bench, Vibration Experiment Setup, Critical speed of Shafts

Electrical & Electronics Engineering		
Sl. No.	**Name of laboratory**	**Major equipment**
1	Analog Electronics	Signal Generator, CRO,DC regulated power supply, transformers ,isolation transformer, LCR meter
	Power Electronics	Cathode Ray Oscilloscope, DC Power Supply, Isolation Transformer, MOSFET Chopper Control Circuit, LCR Meter, Signal Generator
2	Logic Design	Digital IC Trainer Kits, Dual IC Tester
3	Power System Simulation	Desktop PCs, Mipower simulation package, ,Kaspersky antivirus software
	Microcontrollers Lab	Desktop PCs,Micro Controller Trainer Kit, Kaspersky antivirus software, DC servomotors, mother boards
	CAD Lab	Desktop PCs, printers

4	Measurements and Circuit	Wattmeter, Autotransformer, Computers, Kelvins Double Bridge, Desautys Bridge,Maxwells bridge, Digital Storage Oscilloscope, Isolation Transformer, Megger, Phase Angle Meter, Phase Sequence Meter, Phase Shifting Transformer, Regulated Power Supply, Signal Generator, Energy Meter, Current Transformer, Potential Transformer, Variable lamp load.
	Control Systems	AC Servo motor, DC servomotors, Desktop PCs, Network printer, Kaspersky antivirus software, Signal generators,DSOs
5	Transformers and Induction	Transformers,Auto Transformers(single phase and 3 phase), 1-Phase Induction motor-Mechanical Load Test Rig, 3-Phase Squirrel Cage Induction Motor Test Rig, 3-Phase Slip Ring Induction Motor-Mechanical Load Test Rig,3 phase wattmeters,Lamp load(single and 3 phase)
	DC Machines and Synchronization	Dc shunt motor, 3 Phase IM shunt generator, dc shunt motor generator set, ac 3 phase ,dc shunt motor 3 phase alternator, rheostat, DC shunt motor-alternator test rigs (salient and non-salient poles), single phase variac, 3 phase variable pure inductive load
6	Relay and High Voltage L	Motor protection relay, Circuit Breaker Switch, Control Relay, Current Protection Relay, Dimmmerstat, Hand Winding Machine, Hooter, HV Transformer, Microprocessor based over voltage/under voltage relay, Directional over current relay, Sphere gap Assembly.

MCA		
S.No	Name of laboratory	Major equipment
1	Systems Programming Laboratory	33 PCs HP D290, Intel Pentium, Keyboard, 5 - HP Dx2000, Intel Pentium, Keyboard, Network Facility
2	Web Application Laboratory	33 PCs HP D290, Intel Pentium, Keyboard, 5 - HP Dx2000, Intel Pentium, Keyboard, Network Facility, 1 Projector

3	Algorithm Design Laboratory	33 PCs HP D290, Intel Pentium, Keyboard, 5 - HP Dx2000, Intel Pentium, Keyboard, Network Facility, 1 Projector
4	Project Laboratory	26 PCs HP D290, Intel Pentium, Keyboard, 5 - HP Dx2000, Intel Pentium, Keyboard, Network Facility

First year common laboratories		
Sl. No.	**Name of laboratory**	**Major equipment**
1	Engineering Physics Lab 1	Spectrometers, Ultrasonic interferometer, Four probe apparatus , Digital storage oscilloscope etc.
	Engineering Physics Lab 2	
2	Engineering Chemistry Lab 1	Flame Photometer, Hot air Oven, Conductometer, Potentiometer, Colorimeter, pH meter, UV- Visible Spectrometer, Weighing Balance.
	Engineering Chemistry Lab 2	
3	Computer Programming Lab1	60 Computers Lenovo Edge 72 Hero, Intel Core 2 Duo, 4GB RAM, 320 GB HDD, Network Facility, Projector.
	Computer Programming Lab2	
4	CAED Lab -1	30 Computers Lenovo, Intel Core 2 Duo, Network Facility, Solid edge ST5
	CAED Lab -2	30 Computers Lenovo Edge 72 Hero, Intel Core 2 Duo, Network Facility, Solid edge ST5
	CAD Lab -3	Staad Pro Software
5	Workshop	Grinding machine, Bench drilling machine, Power hacksaw machine, Electric arc welding machine, Bench vice, Hand tools, Abrasive cutting machine, Surface plate

Various Laboratories:

Auditorium

A sophisticated auditorium with 700 seating capacity caters to all the needs of our institution. It is considered to be only of its kind amongst the engineering colleges with Bose Sound, Under floor Air conditioning system, 60' wide main stage & Two annex stages, Indirect reflective lighting from Germany, VIP & General lounges and Professional stage lighting. It offers wide opportunities to hold national and International conferences, extracurricular activities and it has been a platform for all our students to unleash their process.

SALIENT FEATURES – AUDITORIUM

- 700 seats
- Bose Sound
- Under floor Air Conditioning System
- 60 ft. wide main stage & Two annex stages
- Indirect reflective lighting from Germany
- VIP & General lounges
- Professional stage lighting

Library &Information centre and Department Library

The CMRIT central library has a comprehensive collection of books, national & international journals, educational CDs, and online database subscriptions that cover over 8611 full text online journals & conference proceedings, 13235 e-books annual reports and project reports. The library holds the resources in an organized, systematic, digitized way to fulfil the needs of users and to promote information. The library makes use of advanced tracking software to reserve and source any book a student might need. Students can use the digital library access. The library is open from 7.30am to 10.30pm on all regular days and up to 12pm during examinations. Efforts are underway to keep the library open 24 hours a day.

Digital Library

Hostel

Well designed campus hostel, that houses boy and girls separately, are well furnished with spacious comfortable rooms, lounges, TV, magazines and recreational facilities. The hygienic, nutritionally balanced food is served. The students form food committees that decide the weekly menu. Resident warden strengthens the student sense of security and helps them feel at home. Counselling and medical facilities are available. Exclusive International hostel caters to foreign students from over 20 countries.

Boys Hostel   **Girls Hostel**

Hostel Dining Area   **Hostel Room - Single Occupancy**

Hostel Room - double Occupancy

Canteen

The cafeteria complex is designed to provide students with a wide range of dining and entertainment options. The complex sits at the heart of the campus and consists of a Cafe Coffee Day, a 150 seater covered amphitheatre, full fledge canteen facility for 300 students and an exclusive dining area for staff. The cafeteria is the major hub of student activities and a centre for study, discussion and interaction. Here students also have access to 30Mbps broadband internet. The cafe area is also equipped with a mini stage and two 42" LCD screens. Student's organization regularly host talks and cultural performances at the venue. In-house kitchens serve nutritious, wholesome food. Food and beverages is available to students at subsidized prices. The ground floor features three food kiosks, a 50 seat cafeteria, college truck shop along with a 30m wide stage and green rooms.

Physical Education Department

The Department offers good facilities for indoor and outdoor games like Cricket, Football, Volleyball, Basketball, Tennis, Kabaddi, Hockey, Handball and Kho-Kho. The Department has a good out-door stadium with cinder track. The students will be able to watch sports events from cafeteria complex that encompasses two covered Basketball courts, table tennis, volley ball, throw ball and other events.

Gym Facilities

Hi-tech gymnasium caters to the needs of the students and staff. A fully equipped gym with a qualified fitness instructor is located in the central student canteen building.

 Maker Space is a dedicated space for students and staff, where opportunities abound to explore new technologies and fresh methodologies, to become ideators, tinkerers, makers and innovators of current times. Students are engaged intellectually, emotionally, socially, soulfully and physically 'making' your idea a reality. Students experience success, failure, adventure, risk-taking and uncertainty and evolve as a self-directed learner to take charge of their learning and life. Students actively engage in projects by being curious, experimenting, solving problems, assuming responsibility, being creative and innovative .The Makerspace is located in the Workshop and Lab area, in the basement of the First Year Block.

Career guidance & Placement Bureau (CG & PB)

CMRIT Career guidance & Placement Bureau is a professionally and independently run single window centre which promotes academia -industry interaction and facilitates internships and placements for all B.E., MCA, MBA students & M.Tech. CG & PB guides

and counsels students on their career choice and helps them to prepare for recruitment. The bureau highlights the visibility of students in the employment market and showcases them as premium brand.

The Placement Bureau is constantly at work networking with sectors relatively unaffected by recession like pharmaceutical and healthcare, hospital chain, infrastructure, shipping and logistical companies, public sector and government organisations apart from our regular IT services and products company recruiters. The Placement Bureau regularly organises value-added Programmes for students to bridge the gap between industry expectations and classrooms learning. Industry-Academia-Interface initiatives are a great way to get an idea of industry expectations while still in college.

Workshop

Drawing Hall   **Faculty staff room**

                    b.

Extracurricular activities – sports, outdoor and indoor games, gymnasium, auditorium, NSS, NCC, cultural activities, Public speaking, communication skills development, yoga, health and hygiene etc.

The Primary objective of CMRIT is to provide an environment conducive for the overall growth of students. In an attempt to realize this noble vision, the institution has created the perfect ambience to nurture every facet of the students' personality. Along with regular academics, participation in seminars, inter-collegiate and intra-collegiate competitions, research talks and paper presentations are some of the important academic activities, which are appreciated and entertained in the institution, Equal importance and credit is given to extra-curricular activities like NCC, NSS, Sports, Cultural and extension activities. These activities provide students with an opportunity to widen their horizons beyond academics, thus creating a niche for themselves in today's fast-changing, competitive world.

Importance to college-community interaction Programmes is given by conducting

* Computer literacy Programmes
* Adult literacy Programmes
* Plastic free movement and awareness campaign in the residential localities around the college.
* Blood Donation Camp.
* AIDS awareness campaign with the help of NGOs.
* CANCER awareness program.
* Free eye check-up with the help of Sankara Eye Hospital
* SWACHH BHARAT activities in the campus.
* Two-day free Dental Camp in association with India Dental World.
* Awareness program on how to protect ourselves from Influenza A(H1N1)

In order to inculcate and encourage the student's interests in extracurricular activities, a floor space of 4649 square meters is available within the campus. The different auditoria are designed to accommodate diverse Programmes.

Cultural Activities:

Important cultural activities in the college are:

CULTURA

The Inter collegiate cultural, Technical and Management fest - CMR Cultura is held in second week of February every year. This fest sees the participation of more than 2000 students from across the country. It is a perfect blend of creativity and managerial skills. Exciting ecents such as Battle of Bands, Beat Boxing, and Quiz besides the usual competitions like western Dance, Fashion Show etc are organized to motivate help students to build their personality unleashing the best talent among them.

Graduation day

KANNADA RAJYOTSAVA celebration

Chief guest Sri. Chakravarty Sulibele inspired the students of CMRIT with his talk on the importance of Kannada language and the contribution of Kannada language towards the national development. Eminent scientist Sri. Sudhindra Haaldodderi narrated the contribution of Karnataka in the field of technology. He paid tributes to Sir M Vishveshwaraya, a true Kannadiga and inspired the budding engineers present to follow his footsteps.

Founder's Day

CMR Group of Institutions celebrates Founder's Day on November 19th every year. The prestigious CMR Seva Puraskara Award along with the CMR Memorial and CMR Sports Scholarships amounting to 20 lakhs was given away to over 130 deserving students on the occasion of Founders Day. There was also felicitation to Ph.D. awardees and distribution of distinguishing service awards to the faculty. Mementoes were presented to newly married couples from the faculty. A key highlight of the Founders Day was also the presentation of the CMR Leadership Award. The CMR Leadership award was instituted in 2009 to acknowledge exemplary students from each institution under the CMR umbrella based on their consistent contribution towards academics, sports, co-curricular activities as well as contribution towards the society.

Awarding of CMR Seva Puraskara to Smt. Shobha H Reddy

Sports activities:
Hi-tech gymnasium caters to the needs of the students and staff. A fully equipped gym with a qualified fitness instructor is also located in the central student canteen building. Sports equipment for cricket, football and table tennis are available for the students. Visweswaraya Technological University has been organizing tournaments at our campus. Our students have won awards at state and national level and also are selected to represent the university.

Annual Sports days are organized in the college for both staffs and students.

Health and Hygiene facilities:

The Institution has a medical centre located at central place in the campus. We have tie up five local medical practitioners and two nursing staff (in shifts) to provide first-aid and medical help in emergency. A van/ambulance is stationed in the campus to provide urgent medical assistance.

Buildings are well designed to provide adequate ventilation. Regular cleaning of workplaces, equipment and devices are carried out to ensure an adequate level of workplace hygiene. Designated housekeeping personnel are assigned the responsibility to oversee such operations. The conditions of housekeeping are assessed by visual observations.

Suitable and sufficient sanitary conveniences and wash basins are provided in all floors for students and all staff rooms have adjacent restrooms for faculties. The conditions of cleanliness of the sanitary facilities are inspected regularly by campus manager. Water purifiers with RO are provided in all floors to ensure clean drinking water to staff as well as students.

Communication skill development

CMR life skills institute conducts training Programmes in the campus to improve communication, life and soft skills. Training will be conducted based on the screening test organized to the faculty and students to undergo training in FDP.

Sample schedule

| Day / Date	Sessions	Groups	09:30 - 11:30 Topic & Trainer	13:00 - 15:00 Topic & Trainer
Monday 06-07-2015	Session-1	G1	(1) What's in a name? (2) The art of conversing (3) Lexical categories - Ms Aditi	(1) Introduction and Greeting (2) Intonation and Word Stress - Mr Shlok
	Session-2	G2	(1) Introduction and Greeting (2) Intonation and Word Stress - Mr Shlok	(1) What's in the name? (2) The art of conversing (3) Lexical categories - Ms Aditi
Tuesday 07-07-2015	Session-1	G1	(1) Spell Bee and Word Spin (2) Time and travel - Ms Aditi	(1) Phonetic transcription of words and sentences (2) Sound distinctions - Mr Shlok
	Session-2	G2	(1) Phonetic transcription of words and sentences (2) Sound distinctions - Mr Shlok	(1) Spell bee and word spin (2) Time and travel - Ms Aditi
Wednesday 08-07-2015	Session-1	G1	(1) Leisure activities - recreation and freetime (2) Collocations – Ms Aditi	(1) Syllables and CVC pattern (2) Accent patterns in connected speech (3) Interacting and Mentoring - Mr Shlok
	Session-2	G2	(1) Syllables and CVC pattern (2) Accent patterns in connected speech (3) Interacting and Mentoring - Mr Shlok	(1) Leisure activities - recreation and freetime (2) Collocations – Ms Aditi
Thursday 09-07-2015	Session-1	G1	(1) Grammatical categories - Nouns, Pronouns and Articles (2) Common errors and Indianisms – Ms Aditi	Descriptive Writing; Argumentative Writing - Mr Shlok
	Session-2	G2	Descriptive Writing; Argumentative Writing - Mr Shlok	(1) Grammatical categories - Nouns, Pronouns and Articles (2) Common errors and Indianisms - Ms Aditi
Friday 10-07-2015	Session-1	G1	BEC Preliminary - Vocabulary and Grammar - Ms Aditi	(1) Narrative Writing (2) Group discussion on contemporary issues - Mr Shlok
	Session-2	G2	(1) Narrative Writing (2) Group discussion on contemporary issues - Mr Shlok	BEC Preliminary - Vocabulary & Grammar - Ms Aditi
Saturday 11-07-2015	Session-1	G1	Teach Back / Extempore	Final Assessment
	Session-2	G2	Teach Back / Extempore	Final Assessment

4.1.3 How does the Institution plan and ensure that the available infrastructure is in line with its academic growth and is optimally utilized? Give specific examples of the facilities developed/augmented and the amount spent during the last four years (Enclose the Master Plan of the Institution/ campus and indicate the existing physical infrastructure and the future planned expansions if any).

The institute always emphasizes on proper utilization of infrastructure. Hence infrastructural facilities which are highly essential for the modern-day teaching learning process are provided and utilized optimally. The use of the highly sophisticated instruments in research has resulted in good academic projects and mini projects.

The institution constantly augments its infrastructure to keep pace with its academic growth and changing scenario in the industry. E-class rooms, sophisticated AV halls with modern audio video conferencing facilities are established to meet international standards. An exclusive research wing has been planned to expand the existing interdisciplinary research activities.

Campus layout Plan
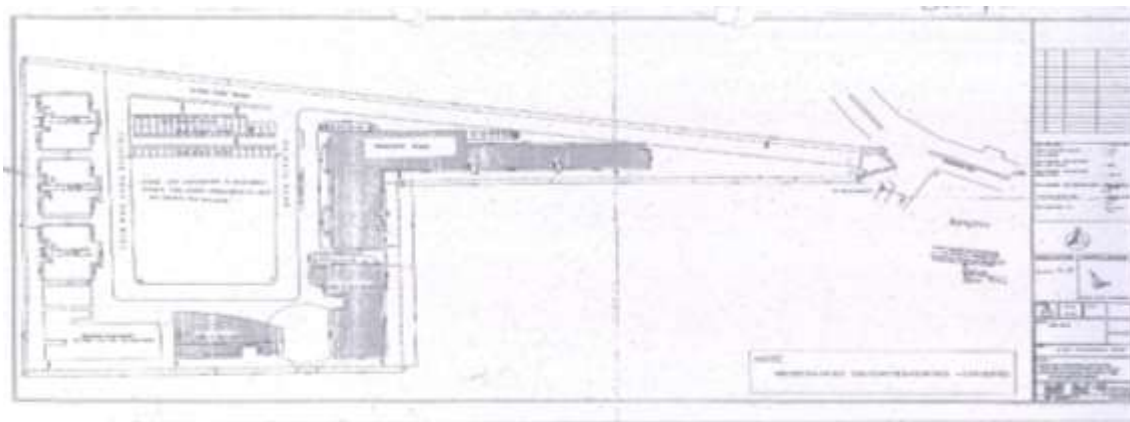
4.1.4   How does the Institution ensure that the infrastructure facilities meet the requirements of students with physical disabilities?

The institution supports the active academic participation of physically disabled students by providing necessary facilities such as ramps, elevator and classrooms in the ground floor and disabled friendly rest rooms. Physically disabled student are allowed to write exams in the ground floor. The library provides documents delivery service to class rooms.

4.1.5   Give details on the residential facility and various provisions available within them:

Hostel Facility

Campus hostel, that house boy and girls separately, are well furnished with spacious comfortable rooms, lounges, TV, magazines and recreational facilities. The hostels are provided with 24 hour security, automated kitchens overseen by student bodies and high speed Wi-Fi broadband access. New International Hostel and staff housing is added to the facilities. Along with the new Library complex and the state-of-the-art convention centre, the campus is lush green with a variety of flora and sprawling lawns creating a congenial campus atmosphere. Arrangements for provision of water purifiers with cooler and bathrooms with solar water heaters are made in hostel building. The food served is hygienic, nutritionally balanced. The students form food committees that decide the weekly menu. Resident warden strengthens the student sense of security and helps them feel at home. Counselling and medical facilities are available.

Boys Hostel

Girls Hostel

HOSTEL	No. of Rooms	No. of Students
Boys	88	255
Girls	97	207
International Hotel	124	145
Total	309	607

Facilities in the hostel

No.	Facility	Unit	Capacity
1	Solar water heaters	20	1000L/each
2	Diesel water heater	02	5000L/each
3	Water Coolers	05	250L/Each
4	Mineral water plant	01	200L/Hour
5	Recreation rooms	04	
6.	Bakery rotary Oven	01	
7.	Generator	01	125 kva
8.	Kitchen and Dining	Separate service to Girls and Boys	

Wind Solar Hybrid System Power Generation

The students set up a wind solar hybrid system and generated about 70-100 watts from the entire device (including a 50 MW Solar panel). The functional wind turbine was also tested to produce up to 100W of power. The wind turbine was self starting at about 4mph and can maintain its rotation at low speeds.
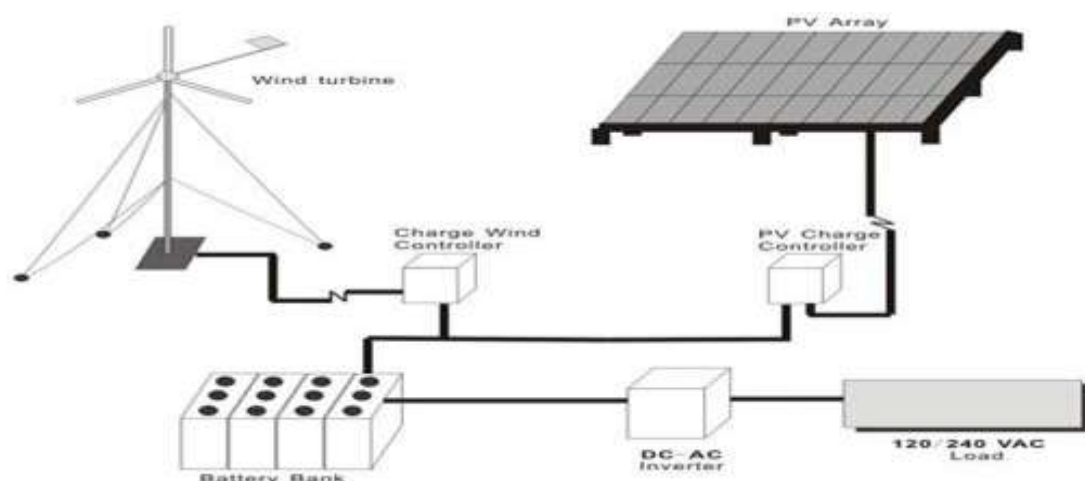
Recreation facilities, gymnasium, yoga center etc.

Recreational facilities like sports /games, both indoor and outdoor are available for the residents of the Hostel. There is a playground, basketball & Volley ball court available within the campus. For in-door recreation games carom board, chess etc... are provided by the institution. Gymnasium is available within the campus with excellent gym equipments.

Computer facility including Internet access in hostel

The college has Internet connectivity of 10Mbps broadband(BSNL), 30 Mbps broadband (Bell Tele services) Leased line connectivity and 35 access points for Wireless connectivity. Internet facility is provided for both students and staff. Wi-Fi facility is provided both the boys and girls hostel. They are provided with Internet access.

Internet Facilities

Service Provider	Product flavor	Port Speed
Bell Tele Services + Bell Tele Services	Leased line1:1	55Mbps
BSNL	Leased line	10Mbps

Facilities for Medical emergencies

The Institution has a medical centre located at central place in the campus. We have tie up five local medical practitioners and two nursing staff (in shifts) to provide first-aid and medical help in emergency. The Institution has arrangement for students in need of medical assistance. There is a provision of first aid/medical room with all the facilities required for medical assistance. The Institution has a Doctor who is available on call at all times. First aid box is available in the hostel and in each department.

Library facility in the hostel

The hostel buildings have reading rooms where students have access to magazines, newspapers, periodicals etc. Main library is available for hostel students even after college hours.

Working Days	7.30a.m. – 10.30p.m.
Holidays	7.30a.m. – 4.30p.m.
During Examination	7.30a.m. – 12midnight
During Vacation	7.30a.m. – 6.00p.m.

Internet and Wi-Fi facility

The college has Internet connectivity of 10Mbps broadband (BSNL), 30 Mbps broadband (Bell Tele services) Leased line connectivity and 35 access points for Wireless connectivity. Internet facility is provided for both students and staff. Staffs are provided with CMRIT login credentials to access their account. The Institution has Wi-Fi connectivity.

Recreational facility – common room with audio-visual equipments

Available residential facility for staff and occupancy constant supply of safe drinking water

Security
- 24 X 7 Security
- CCTV facility is being installed to strengthen security.

4.1.6 What are the provisions made available to students and staff in terms of health care on the campus and off the campus?

The Institution has a medical centre located at central place in the campus. We have tie up five local medical practitioners and two nursing staff (in shifts) to provide first-aid and medical help in emergency. This facility is available round the clock. For the benefit of hostel students, one van is stationed in the hostel with the facilities of bed, first-aid kit, B.P checkup kit. In addition to the van sanctioned in the hostel, we also have ambulance services from outside multispecialty hospitals like Brookfield Hospital, Vydehi Hospital and Yasomathi Hospital which takes a response time of 5 minutes. Off campus medical care for students and staff is provided through agreement with Aayug's Health Care and Raju clinic, Laboratory & Nursing Home.

Medical Facilities within the college –

- B.P Checking kit
- First-Aid kit
- Bed
- Diagnosing Kit
- Thermometer
- Weight machine
- Consulting Doctors –
    o Dr. K.C. Raju Reddy, MD
    o Dr. Gopala Krishna, MD. Ayug Clinic, AECS layout
    o Dr.(Mrs.) Kalavthy, MBBS
    o Dr.(Mrs.) Mangala Devi, MD. (O&G)
    o Dr. Krishna Reddy, Ortho

4.1.7 Give details of the Common Facilities available on the campus - spaces for special units like IQAC, Grievance Redressed unit, Women's Cell, Counselling and Career Guidance, Placement Unit, Health Centre, Canteen, recreational spaces for staff and students, safe drinking water facility, auditorium etc.

Sl. No.	Special Units in the Campus	Location
1	IQAC	Ground floor, UG Block
2	Grievance Redressed Unit	Ground floor, next to Examination centre, UG Block
3	Women's Cell	Ground floor, next to Examination centre, UG Block

4	Counselling	Ground floor, next to Examination centre, UG Block
5	Placement	Ground Floor, Basic science block
6	Health Centre	Ground floor,
7	Canteen	Canteen block
8	Coffee day	Second floor, canteen block
9	Recreational-spaces	Basketball court, Sports ground, Tennis court and table tennis court in the sports block
10	Safe drinking water	All floors
11	Auditorium	1. Third floor, Basic science block 2. Ground floor, Mechanical block

4.2 Library as a Learning Resource

4.2.1   Does the library have an Advisory Committee? Specify the composition of such a committee. What significant initiatives have been implemented by the committee to render the library, student/user friendly?

Yes.

The Advisory Committee meets periodically to discuss various issues related to the facilities and services in the library. To render the library user friendly, the committee finalizes proposed policies, budget, discusses specific issues and provides suggestions for better functioning. The committee also studies the requirements of the library and issues regarding its maintenance.

Library Advisory committee consists of Principal, Vice Principal, Librarian, and Heads from various department. Along with central library, each department also has its own library which houses books pertaining to the needs of the specific department to facilitate the students.

Library Advisory Committee

NAME	DESIGNATION	ROLE
Dr. Sanjay Chitnis	Principal	Chairman
Dr. B. Narasimha Murthy	Vice Principal	Member
Mrs.Pappa	Coordinator UG Programs ECE	Member
Mr.Rajendraprasad Reddy	Coordinator UG Programs ECE MECH	Member
Mr. Kartheek	Coordinator UG Programs CIVIL	Member
Mrs. Sujatha	Coordinator UG Programs TCE	Member
Ms. Sanitha Michail. C	Coordinator UG Programs EEE	Member
Mrs. Swathi Y	Coordinator UG Programs CSE	Member
Mr. Manoj Challa	Coordinator UG Programs ISE	Member
Mr. Raveesha K H	HOD-Physics	Member
Dr. Girish C	HOD – MBA	Member
Ms. Medha Seth	Student (UG)	Member
Mr. Shahajan Mulla	Student (PG)	Member
Mrs. Nagarathna S R	Librarian	Secretary

The major responsibilities of the committee are to:

- Maintain adequate library facilities for optimum use.
- Lay down the rules & regulations.
- Plan annual library budget.
- Procure relevant books & subscribe related periodicals/journals and electronic resources.
- Make provision for adequate library services.
- Employ competent library staff as per the requirement.
- Conduct orientation program.

- Implement ICT in library services.
- Ensure user satisfaction and adherence of library timings.
- Organize other activities like book exhibition etc.

4.2.2   Provide details of the following
Total area of the library (in Sq. Mts.) :   2400 Sq.Mts
Total seating capacity   :   200
Working hours (on working days, on holidays, before examination days, during examination days, during vacation)

Working Days	7.30a.m. – 10.30p.m.
Holidays	7.30a.m. – 4.30p.m.
During Examination	7.30a.m. – 12midnight
During Vacation	7.30a.m. – 6.00p.m.

Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources)
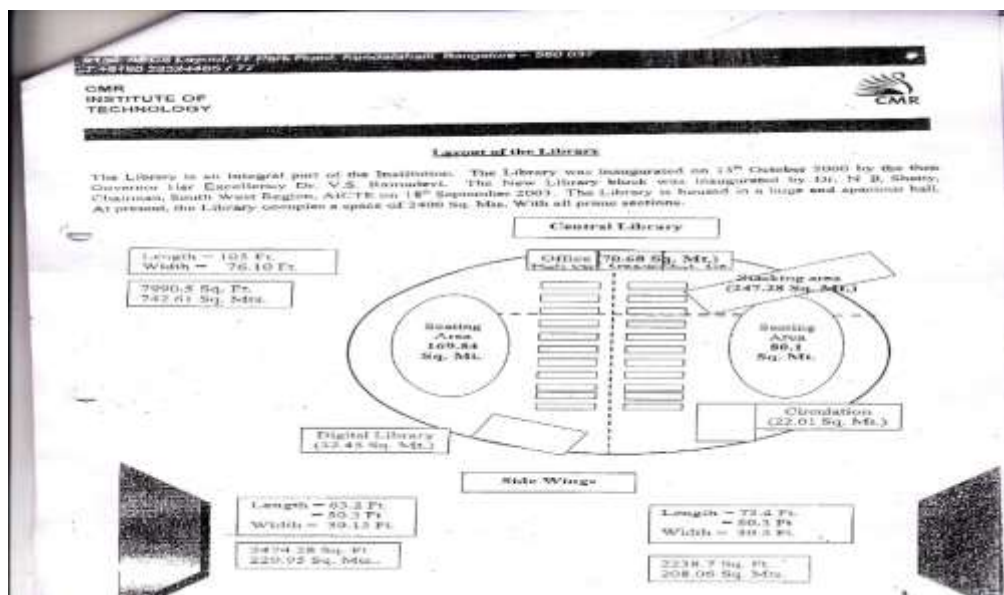
Individual reading carrels	- 249.94 Sq.Mts.
Lounge area for browsing	- 752.79 Sq.Mts.
Relaxed reading	- 438.01 Sq.Mts
IT zone for accessing e-resources	- 32.45 Sq.Mts.

Facilities in the Library:

Circulation section, OPAC, Periodicals, Newspaper and Magazines section, Notice Board, reading hall for staff and students, Book issuing section, Office of the Librarian, Photocopying section, Scanning and printing section and Acquisition Section.

Side Wings;

The main library has two side wings of Reference books Sections.

4.2.3   How does the library ensure purchase and use of current titles, print and E-journals and other reading materials? Specify the amount spent on procuring new books, journals and e -resources during the last four years.

New books and journals are added every year as per the requirements received from the various departments and purchases are made according to the AICTE norms.

Procurement of books, reports etc. is a routine and continuous process throughout the year. Books and other reading materials are procured on the recommendations of faculty members and the Librarian. Students/Research Scholars may also recommend the books for procurement provided their recommendation is endorsed by their Faculty advisor / Head of the Department (HOD). All faculty indents will be forwarded by HOD of respective departments. Indents from all the departments along with price quotations from different vendors and the comparative of the prices will be forwarded to the principal for approval. Purchase orders will be issued by the Librarian/ In-charge Library.

Library holdings	Year -2016-17		Year – 2015-16		Year – 2014-15		Year – 2013-14	
	Number	Total Cost	Number	Total Cost	Number	Total Cost	Number	Total Cost
Text books	1553	827992/-	1031	118619/-	1915	651964/-	1936	802189/-
Reference Books	347	414610/-	216	254819/-	182	235752/-	188	115587/-
Journals/ Periodicals	69	152616/-	31	37781/-	30	18263/-	79	97708/-
e-resources	8611	1767000/-	10088	1632500/-	5627	1308022/-	19469	1452825/-
Any other (specify)	DELNET	11,500/-	DELNET	11,500/-	DELNET	11,500/-	DELNET	7,500/-

Particulars	Resources	Numbers
Print	Books	36732
	Journals & Magazines	30
	Bound Volumes	930

	Project Reports	6544
Non-Print	CDs and DVDs	2770
Electronics Resources	**IEEE IEL Digital Library– IEEE Journals** Conference Proceedings Standards **Back titles from 1872 to till date**	273 6514 3043
	Springer e-Journals Electrical & Electronics – 58 Mechanical - 44 Civil - 13 Computer Science - 93 Engineering (Allied Subject) - 39 Chemistry and Material Science - 162 Mathematics - 167 Physics - 104 **Back titles from 1997 to till date**	680
	Science Direct – Elsevier Electrical & Electronics – 38 Mechanical - 73 Civil - 35 Computer Science - 83 Engineering (Allied Subject) - 61 **(Back titles from 2000 to 31st Dec 2015)**	288
	ASCE – Journals **(Back titles from 1983 to till date)**	35
	Taylor & Francis Mechanical -34 Electrical – 17 Computer Science – 27 Civil – 30 Engineering & Technology – 69 Allied Science – 357 **(Back titles from 1997 to 2015)**	535
	ProQuest – Engineering & Technology – Full Text, Indexed. ProQuest – Master of Business Administration – Full Text, Indexed.	3900 7800 2900 10300
	K-Nimbus Digital Library Platform: OA resources; Journals; e-books; e-Theses; Educational Videos	12K+
	E-Books (Springer and Taylor & Francis)	13235

4.2.4   Provide details on the ICT and other tools deployed to provide maximum access to the library collection?

OPAC - Yes

The information pertaining to the bibliographic references and the descriptions of books are entered in the library management package `LIBSOFT` which is used by the readers to check the availability and status of books in the library

Electronic Resource Management package for e-journals – Yes

Mandatory Subscription of VTU E-Resource Consortium

Federated searching tools to search articles in multiple databases – Yes, Knimbus

Library Website–Yes, **http://10.201.3.4/library**

In-house/remote access to e-publications – Yes, https://www.knimbus.com

Library automation – Yes

- Libsoft: Library Software
- Libsoft is an absolute user - friendly software that requires minimum training.
- It is a simplified package, which requires minimum user interaction and features interactive data handling for storing backup etc.
- Libsoft is an easy and effective maintenance system for books, members etc. It contains the best circulation system wherein the user needs very few interactions with the system. The system finds the status of books or members automatically and allows the circulation process accordingly.
- It contains enhanced but simplified search facility and can locate books and members quickly.
- Libsoft contains enhanced documentation facility for preparing detailed reports the way the user prefers.
- It generates financial report for any given period, ID card for members / users with Barcode, automatic barcode for access numbers of items (Books).
- It eliminates card system to ensure complete automation. It contains extensive online help facility to guide the user.
- Total number of computers for public access - 70
- Total numbers of printers for public access - 02
- Internet band width/ speed - 65Mbps
- Institutional Repository - Yes, **http://10.201.3.4:8080/jspui/**

List of the services available in CMRIT digital library

- Previous year VTU question papers in PDF format which is accessible to all faculty and students. Question papers solved by the faculty are also made available to the students.

- Library has purchased e-resources and has subscribed for many online journals, e-books, conference proceedings, articles (IEEE-IEL, Springer, J-Gate, Ebsco, ASCE etc).

- E-News Paper Clipping Service - This is a kind of Current Awareness Service (CAS), where the news clippings related to CMRIT are updated on a daily basis.

- Library also collects the research articles published by faculty on monthly basis.

Content management system for e-learning - Yes

Provided through the Knimbus platform for accessing various publishers at one place.

Participation in resource sharing networks/consortia (like Infibnet)

VTU consortium for e- resources and Delnet for inter library loan.

4.2.5 Provide details on the following items

Average number of walk-ins   -   300/day

Average number of books issued/returned   -   350/day

Ratio of library books to students enrolled   -   1:8

(UG students are issued – Two books, PG students are issued - Three Books,

Additional One book for Category Students)

Average number of books added during last three years   -   4400

Average number of login to OPAC   -   50/day

Average number of login to e-resources   -   150/day

Average number of e-resources downloaded/printed   -   75-100/day

Number of information literacy trainings organized -Information literacy training

is given to the new students at the beginning of the academic year and all students

are periodically informed about the existing and new facilities and services offered at the library for maximum usage of library resources.

Details of "weeding out" of books and other materials -

We withdraw books based on three parameters.

- Old edition books (Change in syllabus)
- Mutilated books   (Damaged Books)
- Newspapers and magazines

4.2.6   Give details of the specialized services provided by the library

NPTEL Lectures Access @ CMRIT (In-house collection): Library has a good collection of NPTEL video lectures in all subjects. It has 70 multimedia systems with server LAN and internet connection. The server has around 13,000 NPTEL video lecture collections and has a local LAN based website to share the resources throughout the campus for effective utilization. The users can access these lectures from anywhere in the campus through our local website http://10.201.3.4/nptel/. The center has a facility of headphones.

Manuscripts: The Library maintains the newspaper clippings and photo albums of the events of the institution. On request by faculties the required manuscripts are issued through DELNET services.

Reference – Yes

The Reference Section is housed in the side wings with excellent ventilation and lighting. Comfortable seating facility is provided to enable the users to sit for longer hours. One Library Assistant is deployed to meet the requirements of the users.

Reprography – Yes

Copy of journal articles or a topic from the reference book is provided at nominal price. This service is for faculty, students and staff members only. The photocopy machines are located in the library.

ILL (Inter Library Loan Service) – Yes

Inter-Library Loan and photocopies of articles are available through Delnet. The non available books / articles in the library are borrowed through Delnet.

Information deployment and notification (Information Deployment and Notification): Information pertaining to the search engines and site address is displayed in the library notice board. Circulars related to general information, current affairs, competitive examinations, new arrivals of books and journals are also displayed in the notice board and also on the webpage.

OPAC – This facilitates the reader to check the availability and status of books in the library.

Internet Access- is used for accessing online e-resources.

Download: Adobe Reader, Google Chrome, Internet Explorer etc. are available. Some important articles from free e-journals and e-books are downloaded and stacked for readers.

Printing: Printouts of articles are provided to the readers upon request.

Reading list/ Bibliography compilation: The Bibliographic data is compiled subject wise for text books, reference books, project reports and the reading list on specific topic is provided to the users with the help of OPAC.

In-house/remote access to e-resources: is provided for accessing online journals, e-books , old question papers, teaching notes, faculty publications and important articles through campus LAN. **http://10.201.3.4:8080/jspui/**

User Orientation and awareness: Orientation is given to the new students at the beginning of the academic year about the facilities and services provided by the library.

Assistance in searching databases: Library staff assistance is provided to access the printed resources through OPAC. They guide students in accessing online resources through Knimbus.

INFLIBNET/IUC facilities: All subscribed databases are IP based. Staff and students are allowed to use e-resources through Wi-Fi or digital library. Inter-Library Loan and photocopies of articles are available through Delnet.

4.2.7 Enumerate on the support provided by the Library staff to the Students and the Teachers of the College.

Issue/Returns: Circulation section handles the front desk operations of the library and is very important as it is the prime contact point for the users to the library. Efficient functioning of Circulation Desk leaves a lasting impression on the user. Major Activities of the Section are:

i. Issue and return of reading materials (Primarily Books)
ii. Attending the Users query for effective interpretation of library rules and regulations
iii. Registration of new Library Members
iv. Inter Library Loan Services
v. Operation of "Circulation Module" of Library Management Software.
vi. Maintaining and updating all data related to users at circulation desk.
vii. Sending reminders to users for overdue documents.
viii. Issuing Correspondence / No Dues
ix. Library orientations/Information literacy
x. Assisting the users to access OPAC

Issue/Return protocol: Issue/Return of library materials is a routine operation of the Library.

While Issuing books:

- Quickly glance the book for any damage
- Scan the barcode to capture the details of issuing books in circulation module of Library Management Software.

While receiving the books:

- Quickly glance the book for any damage
- Check due dates for necessary action
- Return the book from user account (Scan the barcode to capture the details of returned books in Circulation module of Library Management Software)
- Send them to stack for shelving

Reference Service

Library houses all important reference sources like encyclopedias, dictionaries, statistics, yearbooks, handbooks and manuals. The collection ranges from general to subject specific sources. Users avail guidance from staff for any assistance. Library has access to online reference sources which may be accessed from the library website.

Information Literacy/Library Orientation

Library conducts information literacy/user education/ orientation programmes for all the students in the beginning of the academic year. Besides this, these awareness programmes are also conducted when requested by users from time to time.

Inter Library Loan

Library arranges to borrow documents that are not available in its collection, on Inter Library Loan through DELNET for academic and research purpose. These materials have to be handled with utmost care and returned to the Library well on time. Members are requested to send a formal request to the Library with complete bibliographic details of documents required. To make a request, user needs to send an email to <librarian@cmrit.ac.in>.

All possible efforts are made to make the learning resources available for the faculty and students.

Photocopy Services: Copy of journal articles or a topic from the reference book is provided at nominal price. This service is for faculty, students and staff members only. The photocopy machines are located in the library.

4.2.8   What are the special facilities offered by the library to the visually / physically challenged persons? Give details.

The library staff are trained to assist the physically challenged people in obtaining the materials / documents. They are usually given priority during the issuing of books. The library provides documents delivery service to class rooms.

4.2.9   Does the library get the feedback from its users? If yes, how is it analyzed and used for improving the library services. (What strategies are deployed by the Library to collect feedback from users? How is the feedback analyzed and used for further improvement of the library services?).

In addition to the oral feedback, a questionnaire is distributed among students and staff members. The data is analyzed and further recommendations are given for strengthening and improving the library services. Suggestion box is kept at the library. Suggestion from staff and students are scrutinized periodically and necessary actions are taken by the library committee.

4.3 IT INFRASTRUCTURE

4.3.1   Give details on the computing facility available (hardware and software) at the Institution.

Number of computers with Configuration (provide actual number with exact configuration of each available system)

Sl. No.	Company	Configuration	Quantity
1	HP DX2480	Intel Dual core Processors 2.50GHz, 3 GB RAM, 160 GB Hard disk, LG Flatiron 17" TFT Monitor, keyboard & mouse	230

2	Lenovo M70	Processor Intel Core 2Duo e7500 (2.9GHZ) cache: 3mb memory2GB DDR3Ram Intel g41graphics: Intel express, 320GB SATA HDD integrated 10/100/1000,18.5inch wide, keyboard and mouse	360
3	HP D290mt	Pentium IV 2.8Ghz,80GB HDD,256 DDR Ram,17" Monitor, Key Board, Mouse	86
4	Dell Opt flex	Pentium Dual Core 3.0Ghz, 80GB HDD,1Gb DDR2 RAM,17" Monitor, Key board, Mouse	60
5	HP DX200MT	Pentium IV 2.8Ghz,40GB HDD,256 DDR Ram,17" Monitor, Key Board, Mouse	30
6	ACER	Pentium® Dual-Core Processor, E5400@2.70GHz,2GP RAM, 320 GB HDD, R/W- DVD,18.5" TFT Color Monitor, Keyboard, Optical Mouse	90
7	Lenovo Edge	intel Tower form factor /Intel H61/Intel g640 2 GB DDR3 RAM, 500 GB HDD, 18.5" TFT Monitor, Keyboard, Optical Mouse	60
8	Lenovo 72 Le	**tiny Form Factor with Intel H61 chipset Ci3 2120T SANDY BRIDGE Stepping Q0 3MB 2c FCLGA 2.6GHZ 35W Pentium G630T SANDY BRIDGE Stepping Q0 3MB 2GB RAM**	215
9	Assembled	Core 2 duo with 2GB RAM 500 GB HARD DISK	26
10	Lenovo M70	Processor Intel Core 2Duo e7500 (2.9GHZ) cache: 3mb memory2GB DDR3Ram Intel g41graphics: Intel express, 320GB SATA HDD integrated 10/100/1000,18.5inch wide, keyboard and mouse	370
11	HP DX2480	Intel Dual core Processors 2.50GHz, 3 GB RAM, 160 GB Hard disk, LG Flatiron 17" TFT Monitor, keyboard & mouse	330

Computer – student ratio

UG – 1:4
PG – 1:2

Standalone facility – Yes
LAN facility – Yes

All the computers in the campus are networked using CAT-5 / CAT-6 cables between blocks OFC cable has been laid**.**

Wi-fi facility

Campus is Wi-Fi enabled. The college has Internet connectivity of 10Mbps broadband (BSNL), 30 Mbps broadband (Bell Tele services) Leased line connectivity and 35 access

points for Wireless connectivity. Internet facility is provided for both students and staff. The Institution hostels are connectivity with Wi-Fi facility for both the boys and girls hostel. They are provided with Internet access.

Internet facilities

Service Provider	Product flavor	Port Speed
Bell Tele Services	Leased line1:1	55Mbps
BSNL	Leased line	10Mbps

Licensed Software

Department	Licensed software details
Mechanical	Ansys 14.0 (software) – 25 user license 2) CADEM software – 30 user license 3) Solid edge ST 5 software- 90 user License
Computer Science Engineering	Xilinx, Oracle 8.3, Microsoft Windows
Electrical & Electronics Engineering	Mi Power Version 8.0 10 User License
MCA	RSA, RAD, RFT, DB2
TCE	Modelsim 10.1g(Mentor Graphics) FEKO, Lab View
ISE	Xilinx ISE System Edition-25 users
ECE	Cadence orcad PCB design, Cadence PG Bundle Analog and Mixed mode VLSI design package, Cadence UG Bundle Analog and Digital VLSI design package, Labview, Keil, flash magic, cc
Civil	1. Stadd Pro v8i Provider: Bentley Installed in Year 2013-2014 Total no.: 5 Type: Analysis and Designing 2. Auto Cadd 2015 Provider: Auto Desk Installed in the year 2014-15 Serial no. :54506153095 Total no.: 5

Number of nodes/ computers with Internet facility

The college has Internet connectivity of 10Mbps broadband (BSNL), 30 Mbps broadband (Bell Tele services) Leased line connectivity and 35 access points for Wireless connectivity. Internet facility is provided for both students and staff. The hostels are provided with Wi-Fi facility for both the boys and girls hostel.

INTERNET FACILITIES

Service Provider	Product flavor	Port Speed
Bell Tele Services	Leased line1:1	55Mbps
BSNL	Leased line	10Mbps

Any others – WACOM tablets are notable for their use of a patented cordless, battery-free, and pressure-sensitive stylus or digital pen is used as smart board equipment in class room training.

4.3.2   Detail on the computer and internet facility made available to the faculty and students on the campus and off-campus?

The college has Internet connectivity of 10Mbps broadband(BSNL), 30 Mbps broadband (Bell Tele services) Leased line connectivity and 35 access points for Wireless connectivity Internet facility is provided for both students and staff. Staffs are provided with CMRIT login credentials to access their account. Campus is Wi-Fi enabled with 24 hours access.

Well-equipped laboratories with the latest configuration are provided in all departments. Internet facility (BSNL & Bell Tele services leased line and Wi-Fi) is made available to students both in Institution and Hostel premises. The computer and internet labs are open from 8.00 a.m. to 8.00 p.m. The students use the labs after the college hours apart from the scheduled working hours.

4.3.3   What are the Institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

Stock verification is done by LRC to identify the non-working equipment and suggestions for necessary replacements are presented. The Institution always depicts its alacrity in the infrastructural up-gradation. The Institution upgrades the PCs with latest configuration available. Owing to the technological changes and the role of ICT in transfer of such knowledge to the student community, the Institution is advanced in its

initiatives to develop the IT infrastructure by increasing the bandwidth of Internet facility.

Maximum utilization of E-learning facilities. Procuring and installing industry specific software's and to enable the students to become industry ready products.

WACOM tablets

The instrumentation and control cell intends to replace the non -functional parts with new parts. Nonworking computer hardware components are used as models to demonstrate in classes.

4.3.4   Provide details on the provision made in the annual budget for procurement, upgradation, deployment and maintenance of the computers and their accessories in the Institution (Year wise for last four years).

Description	2016	2015	2014	2013	2012
Procurement	1400000	-	7072510	49035383	8736505
Up gradation	-	142900	-	-	186520
Maintenance	2000000	1355000	55250	157128	252657

4.3.5   How does the Institution facilitate extensive use of ICT resources including development and use of computer-aided teaching/learning materials by its staff and students?

The Institution provides adequate computer facility for faculties and students. Individual Faculty members are provided computers with internet facility for preparation of teaching and learning materials. All faculties are encouraged to use PowerPoint presentations for better classroom delivery. Internet access to all faculty and students help them to access journal-learning material available in other universities and make use of the same for knowledge enhancement. Edusat and other-learning resources afford a self-paced learning that supplements regular lectures.

Individual faculty web pages are created where the faculties circulate scheme of evaluation for the internal tests, tutorial problems, assignments, lecture notes and other relevant materials to the students**.** The faculty before the commencement of semester prepares the lesson plan, Question bank, Assignments indicating the topics to be covered lecture wise including the evaluation process for each subject and it is duly reviewed by the one of the senior faculty in the department and approved by the Head of the department. It is then, made available to the students. Time- table in-charge of each department prepares the timetable as per the guidelines of respective statutory

bodies for the number of credit hours for each subject prior to the commencement of the semester. Time-table is uploaded on the institute web site and displayed in the respective department notice boards.

Video Conferencing sessions.

4.3.6 Elaborate giving suitable examples on how the learning activities and technologies deployed (access to on-line teaching-learning resources, independent learning, ICT enabled classrooms/learning spaces etc.) by the Institution place the student at the centre of teaching-learning process and render the role of a facilitator for the teacher.

ICT facilities serve as a good visual aid and empower teachers to transform the traditional black board, chalk and talk method into interactive sessions. Student is the centre of teaching learning process. Audio and video halls with projectors are used to teach the complex topics. Students are encouraged to take up projects .ERP system in the institution provides all the materials related to each subjects.

The faculty members of the college aim to deliver their lectures in an effective manner to enrich the knowledge of the student's community. They continuously do research to evolve innovative teaching methodologies. Some of the innovative teaching methodologies adopted are:

Power point presentations

Lab Instruction sessions for the practical experience with respect to Lab oriented subjects. It helps in the following –

- Identify process (efficiency), outcome (effectiveness)of the practical session
- Justify the need for studying practical sessions.
- Ask the students to identify the most appropriate Techniques for the problem statement.
- enable the students to inculcate equipment handling skill.
- Students should be involved in group practical Activities in coding.

Lab Refinement Committee (LRC) has been formed with the aim of monitoring the quality of lab conduction. Faculties themselves prepare the lab record and observation before beginning the lab classes. Lab internal exams are conducted in the same way as university exams, with external examiner from other departments. These methods helped in improving the pass percentage and also in imbibing problem solving skills.

Additional projects and publications based on the projects

'Programming Lab' has been introduced in order to improve the technical competency and logical thinking for further placement process. To expand their minds, students learn languages from different language paradigms, whether it be object-oriented languages (e.g., C++/Java), functional languages (e.g., ML and Haskell), scripting languages (e.g., Lisp and Python), logic-based languages (e.g., Prolog), or low-level languages (like C, the Java Virtual Machine or a machine language). The point is not necessarily fluency, but gaining a conceptual vocabulary to attack problems in new ways. Good programmers don't just learn how to code—learning core concepts teaches them how to wrap their brain around a problem and produce efficient code to solve it**.**

Expert lectures and workshops

Individual faculty web pages are created where the faculties circulate scheme of evaluation for the internal tests, tutorial problems, assignments, lecture notes and other relevant materials to the student**s.** The faculty before the commencement of semester prepares the lesson plan, Question bank, Assignments indicating the topics to be covered lecture wise including the evaluation process for each subject and it is duly reviewed by the one of the senior faculty in the department and approved by the Head of the department. It is then, made available to the students. Time- table in-charge of each department prepares the timetable as per the guidelines of respective statutory bodies for the number of credit hours for each subject prior to the commencement of the semester. Time-table is uploaded on the institute web site and displayed in the respective department notice boards.

Intensive coaching Programme (ICP) classes are being conducted for the weaker students w h o are identified through their Internal Assessment test performance. Based on their marks on various subject, Intensive Coaching classes are scheduled. Additional exercises , one to one interaction, problem solving activities have helped in improving the pass percentage by the end of the semester.

Tutorial classes are provided for analytical courses in every semester as per the scheme. These are included in the academic planning and scheduled in the weekly time table announced by the department. Tutorials are conducted in smaller batches to provide opportunities for the students to clarify the concept and raise the doubts and queries in the subjects. The regular teaching hours allocated in the time table as per the curriculum, are insufficient to effectively solve all types of design and analytical problems. Additional tutorial classes help the students to understand the design concepts and analysis procedures in a better manner.

The curriculum offers course components like seminars, mini projects and major project taken as per their supervisor.

4.3.7   Does the Institution avail of the National Knowledge Network connectivity directly or through the affiliating university? If so, what are the services availed of?

No

4.4 Maintenance of Campus Facilities

4.4.1   How does the Institution ensure optimal allocation and utilization of the available financial resources for maintenance and upkeep of the following facilities (substantiate your statements by providing details of budget allocated during last four years)?

Academic Year	2016-17		2015-16		2014-15		2013-14		2012-13	
	Alloted Budget	Actual Expenditure	Alloted Budget	Actual Expenditure	Alloted Budget	Actual Expenditure	Alloted Budget	Actual Expenditure	Alloted Budget	Actual Expenditure
Building	2500000	2294425	3000000	2826333	1,75,00,000	1,79,75,839	10,00,000	10,16,34,073	6,50,00,000	6,70,06,555
Furniture	1500000	1481444	3500000	3164082	35,00,000	39,28,969	1,00,00,000	1,13,17,762	30,00,000	29,41,541
Equipment	4200000	1719505	12500000	11268454	1,50,00,000	1,56,96,132	1,40,00,000	1,42,90,980	75,00,000	77,36,936
Computers	2000000	1993950	6500000	6239323	35,00,000	38,10,585	75,00,000	75,28,331	49,00,000	49,03,583
Vehicles		---		---			10,00,000	10,85,499		29,456
Any other	2500000	2160061	5000000	4527527	8,00,000	8,87,716	9,00,000	9,17,776	15,00,000	15,81,424

4.4.2   What are the Institutional mechanisms for maintenance and upkeep of the infrastructure, facilities and equipment of the college?

The System admin with the team of trained staff attend the computer hardware/software and network connectivity related issues. The estate office consists of people under estate officer, maintenance engineer, electrical supervisor, electricians, civil supervisor, civil labours, gardener, gardening ladies, carpenter, campus cleaning supervisor, sweeper, scavengers, plumber, electrical maintenance, housekeeping etc. All sophisticated instruments are also under AMC. All the computers, printers, scanners, projectors and networking facilities are under AMC with different agencies. Other laboratory instruments are serviced on a regular basis. In addition to these technical people designated as lab assistants are available in all departments to attend to laboratory maintenance, repair and upgradation.

Some of the staff members are given the responsibility for supervision of maintenance works. Carpenter is available for making and repairing furniture.

The college has one permanent staff member for general electrical maintenance and maintenance of the generator on a regular basis.

Permanent house keeping staff ensure the cleanliness of college premises.

One gardener is employed for the upkeep of the garden around the college building.

4.4.3 How and with what frequency does the Institution take up calibration and other precision measures for the equipment/ instruments?

The institution has authorized the LRC / HODs to take up the calibration of precision equipments/instruments as per the standards of the instruments.

The laboratory equipment are maintained and calibrated as per the budget allotted to the concerned department from the Institution Development Fund.

The Institution's team of qualified technical staff takes care of the maintenance of the computers and networking facilities. Certain members are identified for the same purpose and are available to attend to any issues at a very short notice.

4.4.4 What are the major steps taken for location, upkeep and maintenance of sensitive equipment (voltage fluctuations, constant supply of water etc.)?

Uninterrupted power supply is provided with the generator facility. Utmost care and precautions are taken to protect the precision equipment through the provision of voltage stabilizers and individual MCBs. The sensitive equipment are covered to ensure a dust-free environment.USB is connected for all equipments in the lab. RO Plant Systems are installed in the campus to ensure hygiene drinking water supply.

The Institution has an in-house electrician and other supporting staff to take care of the electrical equipment and for other regular maintenance.

CRITERION V: STUDENT SUPPORT AND PROGRESSION

5.1 Student Mentoring and Support

5.1.1 Does the institution publish its updated prospectus/handbook annually? If 'yes', what is the information provided to students through these documents and how does the institution ensure its commitment and accountability?

A prospectus containing the Vision, Mission and Goals of the institution is published every year and distributed to the prospective students along with the application form. This gives details about the UG, PG and Doctoral Programmes run by the institution. It also provides salient features of the each programme, the campus and facilities availed in the campus along with a master plan. It even contains details about library (number of books, journal, e-books, e-journals, and memberships in various information centers), soft skills training available to the students, career guidance, placement statistics, recreation facilities available in the college, sports, cafeteria etc . The infrastructure facilities include auditorium, sports and games, hostel facilities and department infrastructure.

The soft copy of the prospectus also available at
http://www.cmrit.ac.in/admissions/undergraduate

The details published in prospectus are facts and we regularly review and ensure that whatever promised in the prospectus are met.

5.1.2 Specify the type, number and amount of institutional scholarships / free ships given to the students during the last four years and whether the financial aid was available and disbursed on time?

Students of CMRIT are not only benefitted from government scholarship schemes but also from the scholarship offered by 'CMR JNANADHARA' trust. The details are given below.

CMR JNANADHARA Scholarship and Free ships

Sl. No.	Details	2016-17		2015-16		2014-15		2013-14		2012-13	
		No	Amount	No	Amount	No	Amount	No	Amount	No	Amount
1	Merit cum means	57	5,10,000	68	6,80,000	68	6,80,000	46	4,60,000	46	4,60,000
2	Sports	2	13,000	01	10,000	02	20,000	02	20,000	03	30,000
3	Leadership	3	30,000	02	20,000	02	20,000	02	20,000	01	10,000
4	Free ships (SNQ)	44	20,68,000	51	22,95,000	50	19,00,000	45	14,85,000	38	12,54,000
	Total	106	26,21.000	122	30,05,000	121	26,20,000	95	19,85,000	88	17,54,000

5.1.3   What percentage of students receives financial assistance from state government, central government and other national agencies?

Sl. No.	Academic Year	Percentage of students benefitted
1	2016-17	33
2	2015-16	10
3	2014-15	24.63
4	2013-14	21.22
5	2012-13	16.50
6	2011-12	12.96

5.1.4   What are the specific support services/facilities available for

i. Students from SC/ST, OBC and economically weaker sections

- A dedicated section in the library has been allocated to the students from the above said category. Books from this section will be issued exclusively to these students.
- Meritorious students will be awarded scholarship from the institution.
- SC/ST students benefit fee waiver.
- Preference will be given to SC/ST candidates during admission among all the applicants.

ii. Students with physical disabilities

- Students with physical disabilities are given preference over others for the usage of library.
- Also, elevator is provided in each building and floors are interconnected for easy accessibility.
- Library book are issued to the handicapped students in the classroom.
- Physical assistance will be given to students.

iii. Overseas Students

- Special classes will be conducted for the benefit of foreign students.
- Hostel has a separate wing for foreign students.
- A faculty has been dedicated for welfare of foreign students.
- Assistance in obtaining visa, residential permit, police verification, FRRO and AIU certification is provided.
- Financial assistance, transportation fees will also be borne by the institution.
- Special English coaching classes are conducted regularly.
- Separate life skill programme is conducted.

iv. Students to participate in various competitions/National and International

Information pertaining to upcoming National and International conferences, seminars, industry sponsored project competitions, model making competitions etc. is circulated among students and is also made available on the departmental notice boards. Students interested in participating in any of these activities are provided support and guidance by experienced faculty. If needed a special training also has been provided. All financial commitments are born by the college. Students who are participating in these events are provided free transportation.

v. Medical assistance to students: health centre, health insurance etc.

Health centre with all facilities provided in the campus. Medical assistance is available in the campus round the clock, in emergency the college provides ambulance vehicle and also we have MOU with Aayug Nursing home.

vi. Skill development (spoken English, computer literacy, etc.)

Economically backward, rural and foreign national students have been provided with special English coaching classes. Those who are interested to learn computer a 24x7 lab is provided. Round the clock the faculty are available to assist the students.

A program called **PREPARE** is organized every year to enable CMRIT students to face competitive examinations, aptitude test, group discussions and personal interview through specialized and tailored training programs conducted by experts from training agencies and senior faculty of CMRIT.

vii. Support for 'slow learners'

- Intensive Coaching Program (ICP) is organized for slow learners.
- In this program the faculty conducts additional classes and tests for the slow learners to improve their understanding of the subject.

viii. Exposures of students to other institution of higher Learning/ corporate/business house etc.

At least two industrial visits are arranged in every semester to enable students to understand and obtain first-hand information about industrial environment and the way industries operate. Students are also advised to take up industrial projects, business simulation programs (MBAQ and MCA).

Apart from the university syllabus we have introduced mini projects which invariably student has to complete in any organizations like higher learning/ Corporate/business house etc.

ix. Publication of student magazines

The college publishes a magazine called **JNANADHARA** every year to showcase the talent of the students. Faculty regularly guides the students to publish the articles and papers in various journals.

5.1.5   Describe the efforts made by the institution to facilitate entrepreneurial skills, among the students and the impact of the efforts.

We constantly guide the students to become entrepreneurs. We regularly conducts guest lecture, workshops, on how to become a success full entrepreneur. We also provide assistance in making documentations to start any business and also to avail loan from commercial banks and financial institutions. As a result few of our students have launched their own business they have become a successful entrepreneurs. Mr. Sidduponnappa started a company C42 engineering, Mr. Varun Agarwal is co-founder of Alma mater, India's biggest college apparel/memorabilia company, film maker and bestselling author.

They also regularly visit the campus and share their experiences with other students, not only guiding the students, they also recruit students.

5.1.6   Enumerate the policies and strategies of the institution which promote participation of students in extracurricular and co-curricular activities such as sports, games, Quiz competitions, debate and discussions, cultural activities etc.

* Additional academic support, flexibility in examinations

* Special dietary requirements, sports uniform and materials

* Any other

The students are encouraged to participate in various extracurricular activities. Adequate funds and the necessary support are provided by the institution. The extracurricular activities are monitored and supervised by the sports and cultural committees.

The institution encourages and provides full support to the students for their active participation in extracurricular and co-curricular activities like sports, games, quiz competitions, group discussions etc. The facilities provided by the institution are:

* Sports equipment.
* Excellent coaching.
* Well-maintained playing arena.
* Team jersey.

The students are allowed to write assessment test if they fail to attend the scheduled Internal Assessment Test due to any extracurricular activities. Special classes and additional coaching are conducted to such students in order to cover up the syllabus adequately.

Hostel facility and medical facility are provided to the students participating in the events. Travel expenses, food and refreshment expenses are borne by the institution. The students are accompanied by teachers to ensure their safety.

Some of the extracurricular and co-curricular activities that the institution organizes include the following:

CULTURA

Cultura is a state level cultural and academic meet held in CMRIT. It is well known across Karnataka and participants from all around the state enroll for the meet.

Eminent personalities from the fields of sports, entertainment, politics, etc., are invited as chief guests for the event.

Cultura comprises of cultural events such as street play, movie making, Battle of the bands, Fashion show, etc. It also included academic events such as paper presentation, JAM, Quiz, etc. The main attraction of Cultura 2015 was the performance by Sunburn.

Sunburn

Cultura 16

Institute's most awaited event was organized on 19th -20th February 2016. Main attraction of Cultura'16 was Raghu Dixit's performance, Fashion Show & B-boying Dance.

Face Painting

Painting

Battle of the Bands

Pencil Sketching

Classical Dance

Puzzle

5.1.7   Enumerating on the support and guidance provided to the students in preparing for the competitive exams, give details on the number of students appeared and qualified in various competitive exams such as UGC-CSIR- NET, UGC-NET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central /State services, Defence, CivilServices, etc.

The institution offers support to students appearing for various competitive examinations. Such students are guided by the teachers with the required study materials and also counsel them on right strategies. Students are further allowed to have access to library and refer books related to the competitive exams. The institution also provides exam specific training to aspiring students. The number of students who have been successful in clearing various exams is mentioned below.

Examination	Year	No. of students
NET/ GATE	2016	33
	2015	42
	2014	38
	2013	44
	2012	32

5.1.8   What type of counselling services are made available to the students (academic, personal, career, psycho-social etc.

As a policy of the institution, every faculty has been assigned to council regularly students with reference to academic, personnel, professional problems or otherwise. These faculty are counselling regularly, They mainly concentrate on :

- The student progress reports generated after every Internal Assessment Test in ERP. These reports contain details of their attendance and performance in the tests.
- After writing the suitable remarks/advice, the mentors either call or send a message to the parents.
- The students will be counselled by the mentors and corrective suggestions will be given to weak students.
- The students are also encouraged to share their personal problems, if any so that the mentor could take necessary steps (only if in his/her hands) to solve the same.
- A psychometric test is given to some of the students.

5.1.9   Does the institution have a structured mechanism for career guidance and placement of its students? If 'yes', detail on the services provided to help students identify job opportunities and prepare themselves for interview and the percentage of students selected during campus interviews by different employers (list the employers and the programmes).

The Placement and Career Guidance cell is actively involved in guiding the students about the opportunities available, how to approach the opportunity and how to be successful at the time of grabbing the opportunity and afterwards. The career guidance and placement department prepare the students as mentioned below.

The Placement and Career Guidance cell conducts a special training program called **PREPARE** which provides necessary support to students through personality development programs, soft-skill development programs, foreign language teaching program, aptitude and morality development program. It also organizes various computer programming skill development programs on languages like C, C++, and JAVA and hands-on training programs on popular CAD tools such as Unigraphics, CATIA, MATLAB, etc. so as to keep the students abreast with the industry trends and requirements.

Through a soft skill programme students are groomed to write resume, educates them to face interview and post interview formalities.

Campus Placements

The placement department of CMRIT invites reputed companies for campus recruitment. Some selected students are even sent to off-campus interviews. The details of the placement are as follows:

Year	No. of companies visited	No. of Students selected	Highest salary offered per annum	Lowest Salary offered per annum	Average salary
2016	60	555	Rs 15,00,000	Rs 2,20,000	Rs 3,76,000
2015	77	404	Rs 10,25,000	Rs 2,40,000	Rs 4,75,000
2014	66	347	Rs 11,00,000	Rs 2,40,000	Rs 5,00,000
2013	35	283	Rs 7,00,000	Rs 1,80,000	Rs 3,50,000

Training and Placements-2016

Sl. No	Name of the Company	Branch	No. of offers	Annual salary package
1.	Deloitte	CS/IS/EC/EE/TC/M.tech-CSE	14	6.21 Lacs PA
2.	SAP LABS	CSE/ISE/ECE/EEE	2	3.0 Lac PA
3.	TCS	CSE, ISE, ECE, TCE, EEE, CV, ME, MCA, M.Tech	202	3.34 Lacs PA
4.	Indian Navy	CSE, ISE, ECE, TCE, EEE, CV, ME	40 for SSB	8.75 Lacs PA
5.	L&T Infotech	CSE, ISE, ECE, TCE, MCA &M.Tech	24	3.00 Lacs PA
6.	Sony	CSE, ISE, ECE	5	5.24 Lacs PA
7.	IBM - GTS	CSE, ISE, ECE, TCE & EEE	40	3.15 Lacs PA
8.	Asian Paints	MBA - Sales and Marketing	0	4.75 Lacs PA
9.	Maventic Solutions	MCA only	2	2.5 Lacs PA
10.	Analytics Quotient	CSE, ISE, ECE, TCE, EEE, CV, ME & MCA	8	4.0 Lacs PA
11.	TE Connectivity	CSE & ISE	2	4.2 Lacs PA
12.	DeltaX	CSE & ISE	3	4.8 Lacs PA
13.	Aptean	CSE, ISE EEE, ECE & MCA	1	3.8 Lacs PA
14.	Fractal Analytics		3	4.0 Lacs PA
15.	L&T Infotech (repeat)	CSE, ISE, ECE, TCE	1	3.25 Lacs PA
16.	IBM - GBS	CSE, ISE EEE, ECE, TCS, CV, ME, MCA	18	2.55 Lacs PA
17.	Trianz	CSE, ISE EEE, ECE, TCE, CV, ME, MCA	14	3.60 Lacs PA
18.	Mindtree	CSE, ISE, EEE, ECE & TCE	6	3.5 Lacs PA
19.	Just Dial Ltd	CSE, ISE & MCA	10	4.0 Lacs PA
20.	ITC Infotech	MCA	0	1) 2.00 Lacs PA for B.Sc 2) 3.00 Lacs PA

				for MCA/M.Sc
21.	CouldThat Technologies	CSE, ISE	1	3.00 Lacs PA
22.	Berger Paints	MBA - Sales and Marketing, HR	0	1) 6.06 Lacs PA 2) 3.12 Lacs PA
23.	Neudesic	All branches	9	3.50 Lacs PA
24.	Capgemini	BE - All Branches	3	3.35 Lacs PA
25.	Wipro Technologies	MCA	2	2.2 Lacs PA
26.	Epsilon	MCA	0	3.75 Lacs PA
27.	Just Dial	MBA - All Branches	9	3.6 Lacs PA
28.	SocieteGenerale Global Solution	CSE, ISE, ECE, EEE, TCE	0	4.17 Lacs PA
29.	HDFC Bank	MBA - All Branches	4	2.7 Lacs + City allowance of Rs,10,000 to Rs, 24,000
30.	Huawei Technologies	CSE and ISE	1	6.87 Lacs PA
31.	Wipro Technologies	MCA	1	2.2 Lacs PA
32.	HP Enterprise	CSE, ISE, ECE, EEE, TCE	7	4.50 Lacs PA
33.	Brigade Group	BE - ME, EEE & Civil	1	2.7 Lacs PA
34.	Continental Automotive Components	BE - ME, CSE, ECE & EEE	3	3.8 Lacs PA & 4.2 Lacs PA
35.	AMAZON	All streams	4	3.0 LPA
36.	Ellucian	BE - CSE, ME, ISE & ECE	7	5.6 LPA
37.	XL Dynamics	MBA - Finance	0	3.75 LPA
38.	Nokia Networks Hackerearth	BE - CSE, ISE, ECE, EEE	1	6+ LPA
39.	Kyrah Technologies	1) Business Development Executives - BE/M.Tech/MBA(All streams) 2) Pre-Sales Engineer - BE/MCA/M.Tech	5	
40.	Dell	BE - CSE & ISE	2	3.0 Lacs PA

41.	Cease Fire	BE - Mechanical	1	2.5 Lacs PA
42.	HP Inc.	BE - CSE, ISE, EEE & TCE & ECE	12	2.40 Lacs PA
43.	CTS	BE - CSE, ISE, ECE, EEE	1	3.3 Lacs PA
44.	Ericsson	BE - CSE, ISE, ECE, EEE & TCE	11	2.7 Lacs PA
45.	Anora Labs	BE - ECE, EEE & TCE	2	2.8-3.5 LPA
46.	Manhattan Associates	BE - CSE & ISE	8	
47.	Microland	BE - CSE, ISE, ECE, EEE & TCE	13	3.0 LPA
48.	Nokia Solution & Networks	BE - CSE, ISE, ECE, EEE. M.Tech - CSE, ECE & TCE	5	6.0 LPA
49.	SAN Engineering and Locomotives Pvt. Ltd.	BE - ME & EEE	1	2.61 - 3.00 Lacs PA
50.	Bajaj Corporation @ AIMS	MBA - Finance and Marketing	1	3.0 LPA
51.	Winjit	BE - All Branches	3	
52.	TCS - Off campus		5	3.34 Lacs PA
53.	Robert Bosch - RNSIT	BE - EEE & ECE	8	3.34 Lacs PA
54.	CareerNet Consulting	MBA-HR	1	3.0 LPA
55.	ICICI Securities	MBA-HR	1	3.0 LPA
56.	Healthifyme	BE - All Branches	18	3.50 LPA
57.	Penna Cements	BE - Civil	2	3.0 LPA
58.	AIG	BE - All Branches	32	3.50 LPA
59.	ACT	BE - All Branches	3	4.0 LPA
60.	HSBC	MBA	8	2.6 LPA

Training andPlacements-2015

Sl. No	Name of the Company	Branch	No. of offers	Annual salary package
1	Deloitte	B.E(IS,TC,CS,EC)	17	3.75Lacs
2	TE Connectivity	B.E(CS,IS)	5	3Lacs
3	Successfactor	B.E(CS)	1	8Lacs
4	Tata Consultancy Services	B.E(CS, IS, TC, EE, EC, ME)	117	3.2Lacs
5	Mu Sigma - Pool Campus	B.E(IS)	1	6Lacs
6	Sony	B.E(CS,IS)	4	4.5Lacs
7	Mphasis - Pool Campus @ SJBIT	B.E(EC)	8	5Lacs
8	L&T Infotech Ltd.	B.E(CS,IS,EC,EE,TC, ME,CIV)	73	4.5Lacs
9	IBM - Technical Support	B.E(CS,IS,TC,EC,ME)	14	2.5Lacs
10	IBM - GTS SO	B.E(CS,IS)	40	2.35Lacs
11	SUBEX	B.E(CS,IS,EC)	3	3Lacs
12	Alpha Nine Marine services	B.E (TC,EC)	6	3.6Lacs
13	Mindtree - Pool Drive	B.E (CS,IS,EC)	12	4Lacs
14	YodleeInfotech Pvt. Ltd.	B.E (IS)	2	4.2Lacs
15	Skyfi Labs	M.Tech(CS)	6	5.5Lacs
16	Wipro (off campus at SJBIT) - Exclusive for MCA	MCA	1	2.6Lacs
17	Amazon (@ CMRIT) – Eng	B.E (TC,EC,ME,CV)	15	3Lacs
18	HP - Pool Campus @ CMRIT	B.E (CS,TC,ME)	3	3.6Lacs
19	L&T Technology Services	B.E (IS,TC,EC)	4	3.8Lacs
20	Microland - ECE, EEE, TCE, CSE, ISE	B.E (CS)	1	4Lacs
21	LAM Research – CareerNet	B.E (EC)	2	3.5Lacs
22	Ellucian - CSE, ISE, ECE, EEE, TCE – Internship	B.E (IS,EC,EEE)	5	4lacs
23	Aricent Technologies - CSE, ISE, ECE, EEE, TCE	B.E (IS,EC)	9	3Lacs
24	Wipro (off campus at NHCE) - Exclusive for MCA	MCA	1	3.25Lacs
25	Continue Serve Softec India Pvt. Ltd.(AMCAT)	B.E (IS,EC)	2	3.5Lacs
26	Bajaj Corporation Ltd.	MBA	1	4.5lacs
27	Tata Elxsi (Crane Software - Exclusive for ECE)	B.E (TC,EC)	6	2.8Lacs
28	Robert Bosch (Exculsive drive for MCA)	(MCA)	1	5.5Lacs

29	HP - Pool Campus @ Oxford Engineering College	B.E (CS,IS,EEE)	3	2.8Lacs
30	HealthifyMe	B.E (CS,EEE)	4	4.5Lacs
31	Sonata Software @ Atria CoE	B.E (CS,EEE)	2	3.8Lacs
32	Dell	B.E (IS,EC)	2	4Lacs
33	Carwale.com (off campus at Koshy's group of Institution) - MBA Marketing	MBA	1	2.8Lacs
34	Aricent Technologies - CSE, ISE, ECE, EEE, TCE Off Campus at Sapthigiri College	B.E (IS,EC)	5	2.9Lacs
35	Tredence	B.E (CS)	1	3.4Lacs
36	Atria Convergence Technologies Pvt. Ltd.	B.E (IS,TC)	4	3.2Lacs
37	Robert Bosch @ RNSIT	B.E (CS,IS,EC,TC)	22	3.5Lacs

Training and Placements - 2014

Sl. No	Name of the Company	Branch	No. of offers	Annual salary package
1	Success Factors	B.E(CS)	1	8Lacs
2	Deloitte	B.E (CS,IS, TC,EC,EE)	19	4.6Lacs
3	Sony	B.E (CS,IS,MECH)	3	4.5Lacs
4	Tyco (TE connectivity)	B.E (CS,IS)	4	4.2La0cs
5	TCS	B.E(CS,IS,TC,EC,EEE, MECH)	89	3.5Lacs
6	HP	B.E (CS,IS,EC,EEE)	11	3.6Lacs
7	HP - Off campus	B.E (CS,EC)	2	3.2Lacs
8	Mphasis	B.E (IS)	4	4.0Lacs
9	Mphasis - Off campus	B.E (CS)	3	4.2Lacs
10	AIG	B.E (CS,IS,EC)	10	3Lacs
11	Ernst & Young	MBA	3	5Lacs
12	Amazon	B.E (TC, EC, EEE,MECH)	24	3.2Lacs
13	Razor Think	B.E (CS,IS)	2	3Lacs
14	Maventic Innovations Soln.	MCA	3	3.6lacs
15	Purple Hue Technosoft Ltd.	MCA	3	4.2Lacs
16	Ekam Sports Arena	MBA	3	4.3Lacs
17	L&T Infotech - Off	B.E (TC)	1	3.8Lacs

	Campus			
18	ICICI Securities	MBA	2	3.6Lacs
19	Softway Solutions Pvt. Ltd.	B.E (CS)	2	3.5Lacs
20	Synergy Universal	MBA	2	3.8Lacs
21	Turisys	B.E (CS,IS), M.Tech, MCA	6	4.0Lacs
22	IBM Womens - Off Campus	B.E (IS,TC,EC)	5	3Lacs
23	ICMG	MBA	3	4Lacs
24	Cognizant - Off Campus	B.E (CS,IS,EC,EEE)	11	3.8Lacs
25	IBM - Tech Support	B.E (IS,EC,EEE,TC)	9	4.3Lacs
26	Federal Capital	MBA	7	4.6Lacs
27	Tech Mahindra	B.E (CS,IS,EC)	17	4.5Lacs
28	Infotech Enterprise	B.E (EEE,MECH)	6	4.2Lacs
29	Infosys	B.E(CS,IS,EC,EEE, MECH)	22	4.5Lacs
30	Kelvolt	B.E (EEE,MECH)	4	4.1Lacs
31	KPMG - Off Campus	MBA	8	3.6Lacs
32	Fusion Chart	MCA	1	5Lacs
33	Promantia	MCA	1	5.5Lacs
34	Mind Matrix	MCA	1	4.6Lacs
35	Mphasis	MCA	5	3.8Lacs
36	Robert Bosch Pool Campus @ RNSIT	B.E (EC,EEE)	7	4.2Lacs
37	Meltronics Pvt. Ltd.	B.E (EC)	10	4.5Lacs
38	AlackrityConsol Pvt. Ltd.	B.E (EEE)	1	4.1Lacs
39	Stag Software	MCA	4	3.8Lacs
40	Aptean - Off Campus	B.E (CS)	1	3.2Lacs
41	Infinite Computers	B.E (CS)	3	3.4Lacs
42	Just Dial	B.E (CS)	4	2.8Lacs
43	Continental	B.E (EC)	1	4.5Lacs
44	Oracle	B.E (CS)	1	3.8lacs
45	Flipkart - Jed i	B.E (CS)	1	11Lacs
46	Flipkart - Pool campus @ Sapthagiri	B.E (TC)	5	6Lacs
47	Venbow Technologies	MBA	1	4Lacs
48	CareerNet	B.E (CS)	5	3Lacs
49	Unisys - Pool Drive @ Atria Institute of Tech.	MCA	1	3.5Lacs
50	LaurusInfosystems	B.E (CS,EC)	1	4Lacs

| 51 | HP - Pool Drive @ Atria Institute of Tech. | B.E (EC) | 3 | 4.8Lacs |
| 52 | Bigtec - Off Campus | B.E (EC) | 1 | 4Lacs |

Training and Placements-2013

Sl. No	Name of the Company	Branch	No. of offers	Annual salary package
1	DELOITTE	BE(IS,TC,EC,CS)	9	3.75Lacs
2	SONY	BE(IS,CS)	5	4.53Lacs
3	SUBEX	BE(IS,CS)	6	4.75Lacs
4	SASKEN	BE(EC,CS,TC)	7	3.6Lacs
5	TCS	BE(TC,CS,EC,EEE, IS, ME)	73	3.15lacs
6	DELL	BE(CS,IS)	42	4Lacs
7	EXETER	BE(CS,EC)	2	7Lacs
8	ATKINS	BE(EC)	2	4.3Lacs
9	VIRTUSA	BE(EC,IS,CS)	4	3.3Lacs
10	TE	BE (CS)	1	4Lacs
11	MU-SIGMA	BE (MECH,EC,CS)	4	4Lacs
12	TARAMS	BE (EC,CS,TE)	3	3Lacs
13	YOKOGAVA	BE (CS,IS)	5	4Lacs
14	KELVOLT	BE (MECH,EEE)	5	3Lacs
15	SUCCESS FACTOR	BE (CS)	1	8lacs
16	TREND ANALYTICS	BE (CS)	2	1.8Lacs
17	AIG ANALYTICS	BE (EC,IS)	2	4.25Lacs
18	MPHASIS	BE (EC,IS,EEE,CS)	41	2.75Lacs
19	NOKIA SIEMENS	BE (EC,CS,TE,IS)	11	3.75Lacs
20	HP	BE (IS)	1	2.5Lacs
21	NURTURE SOFTWARE	BE (EC,TC)	4	2.5Lacs
22	MPHASIS	BE (EC,IS,CS,EEE,TC)	27	2.75Lacs
23	McD BERL	BE (MECH,EEE)	4	3.6Lacs
24	CMRS INFRA	BE (EEE),MBA	9	1.8Lacs
25	INDIA MART	BE (IS)	5	2.6Lacs
26	DIMENTION DATA	BE (CS,IS)	4	3Lacs
27	CABLE & WIRELESS	BE(CS)	1	3.5Lacs
28	INFOTECH	BE (ME)	1	2.8Lacs
29	INFORTECORP SOLUTIONS	MBA	1	3Lacs
30	INOLYST	BE (TC,MECH,CS,IS)	3	3.2Lacs

5.1.10   Does the institution have a student grievance redressal cell? If yes, list (if any) the grievances reported and redressed during the last four years.

The institution has a Grievance Redressal Cell (GRC) which actively interacts with the students to resolve their problems. It attends to both registered and unregistered grievances of the students. CMRIT's Grievance Redressal cell is convened by Prof. Rajendra Prasad Reddy. The students have the facility to drop their grievances in the complaint box. The students are given freedom to anonymously lodge their complaints. Students can also lodge the complaints through email grievances@cmrit.ac.in. The necessary actions, if any, are taken after issues are discussed by the members of the committee.

Sl. No.	Members name	Designation	Role
1	Dr. Sanjay Chitnis	Principal	Chairman
2	Justice M.Srinivasa Reddy	Retd. Judge	Ombudsman
3	Dr B Narasimhamurthy	Vice- Principal	Group A member
4	Mr. Rajendra Prasad	Professor	Chief Co-ordinator
5	Heads of Department	HODs	Group A members
6	Mr.Raveesha	HOD Physics	Group A members
7	Azhaginiyal	Asst. Professor	Group B member
8	Dr.Vineeta Rupani	Assoc. Professor	Group B member
9	Ms.Uma	Asst. Professor	Group B member
10	Ms.Pushpa	Asst. Professor	Group B member
11	Mr.MaheshkumarJha	Asst. Professor	Group B member
12	Mrs.Shanthi	Assoc. Professor	Group B member
13	Ms.Anisha	Asst. Professor	Group B member
14	Mr.Cyril	Asst. Professor	Group B member
15	Mrs.Keka M	Asst. Professor	Group B member
16	Mr.Surya V	Asst. Professor	Group B member
17	Mr.Ruchir A J	Asst. Professor	Group B member

Working of the Committee

- Minor issues will be resolved by group B members.
- In case of major issues, Group B members will seek the help of group A members and the chairman to resolve the issues.

Some of the instances where the problems have been solved by the committee are:

- There was scarcity of drinking water in one of the departments. The drinking water facility was only at the canteen. This was brought to the notice of GRC and they in-turn instructed the campus manager to install the water cooler in that department.
- There was also a request for installation of projector in a classroom of CSE Dept. The GRC facilitated the installation of the projector through the campus manager.

However, the institution did not receive any major or serious grievance with reference to students and staff.

5.1.11 What are the institutional provisions for resolving issues pertaining to sexual harassment?

The Institution has a **Women Empowerment Cell** which monitors the well-being of women in the Institution. The main objective of this cell is to prevent sexual harassment in the campus. It also organizes motivating talks on being self-reliant in the society. The members of the cell are as follows:

Sl. No.	Members' Name	Designation	Role
1	Dr. Sanjay R Chitnis	Principal	Chairman
2	Dr. K. Meenakshi	Head of Department	Chief coordinator
3	Dr. Priti Gupta	Assoc. Professor	Member
4	Dr. Asha N. Nair	Assoc. Professor	Member
5	Dr. Jhansi Rani	Professor	Member
6	Dr. Manjunath	Associate Professor	Member
7	Dr. Fazlur Rahman	Assistant Professor	Member
8	Ms. Kavitha	Hostel Coordinator	Member
9	Mrs. Revathi	Administrative Coordinator	Member
10	Mr. Nikhil SS	MECH dept.	Member
11	Mr. Neha Bhardwaj	ISE dept.	Member

5.1.12   Is there an anti-ragging committee? How many instances (if any) have been reported during the last four years and what action has been taken on these?

Yes, there is an active anti-ragging committee under the leadership of Dr. Fazlur Rehman. Though, the campus is zero ragging zone, the institution has taken few preventive measures and constituted a committee, details and activities of anti-ragging committee for the current academic year are listed below:

- Selected faculty members are assigned to stay over-night in the hostel block, to make sure that the hostel is free from ragging.
- Students are warned to not indulge in any kind of ragging whatsoever and they are made aware of the consequences.
- The faculties who are assigned to stay at the hostel have to patrol the campus premises till nightfall.
- Boards and hoardings are put up at various places in the campus displaying Anti-ragging rules and regulations.
- Consequences of ragging are also displayed on the above said boards.
- Anti-ragging committee visits all classes and educates the students about the punishments that they will face for ragging.
- Due to these stringent measures, CMRIT campus is ragging free and no issue of ragging has been reported till date.

Members of anti-ragging committee:

Sl. No.	Members' Name	Designation	Role
1	Dr. FazlurRahaman	Head of Department	Chief coordinator
2	Mr Karthik M	Head of Department	Member
3	Dr. S. Hegde	Professor	Member
4	Mr. Anand	Assoc. Professor	Member
5	Mr DivyaTejaraju	Asst. Professor	Member
6	Mr. JosephSajan	Asst. Professor	Member
7	Mr. Sunil Kumar	Asst. Professor	Member
8	Mr.Mahesh	Asst. Professor	Member
9	Mrs. Poonam	Asst. Professor	Member
10	Mr. Karthik	Asst. Professor	Member
11	Mrs .Sreelakshmi	Asst. Professor	Member
12	Ms. Tulsi	Asst. Professor	Member
13	Ms. Ramya	Asst. Professor	Member

5.1.13 Enumerate the welfare schemes made available to students by the institution

The institution works to ensure social justice through various students' welfare schemes. The induction program clearly presents the welfare schemes available to the students. The following welfare schemes are available for the students.

Scholarships & Free ships

Details of the scholarships, free ships are displayed in the institution notice boards. The mentor guides the students to get the benefit of the various welfare schemes which includes various central, state government and other agencies.

The institution has student welfare fund which is utilized to support economically weaker students and also in case of medical emergency.

Health Services

The health centre in the institution takes care of the basic health issues of the students. The institution has made arrangements for a doctor to visit the campus every evening and to be on call for any emergencies during the day and night.

Transportation Facilities

The Institution provides transport facility for students and staff.

In addition to the above welfare schemes institution provides loan facility to the deserving students, fee waiver to the economically backward and single girl children. Financial assistance has been provided to the needy staff apart from ESI, EPF etc.

5.1.14 Does the institution have a registered Alumni Association? If 'yes', what are its activities and major contributions for institutional, academic and infrastructure development?

Yes, the institution has an Alumni Association which plays a vital role. The Alumni Association helps in building a network of the alumni and helps the institute to be in constant touch with the corporate world.

The alumni meets once a year, helps in conducting interactive sessions to motivate current students about the employability in Indian industries, and also educational opportunities within India and abroad. They share their opinions in social networks, blogs and forums. The alumni participate and share through seminars and panel discussions on the competencies they have gained during their course of professional

work and provide valuable information to the institute in an attempt to improve curriculum.

Alumni Committee Members					
Sl. No.	Name	Branch	Mobile	Email	Company
1	Ramesh Babu N	CSE	9449402910	rameshbaabu.n@gmail.com	Dimensions Data
2	SagarDatta	CSE	9916234118	sgrdat@gmail.com	Yokogawa
3	KavyaLakshminarayanan	CSE	9742120850	kavyaln2k@gmail.com	Exeter Softwares
4	AkhilUchil	CSE	9743285949	akhil23uchil193@yahoo.com	Flipkart
5	Sushmitha Reddy	CSE	9916970169	msush06@gmail.com	TCS
6	Priyadarshin J	ISE	9663678808	priyaa.phoenix@gmail.com	Nokia Networks
7	C VenkatSuhas	ECE	9480224208	suhas13c1@gmail.com	Aricent
8	Parshwanath	ECE	9008353129	aparshwanath@gmail.com	Nokia Networks
9	SandeshNandre	TCE	9739035282	sandeshnandre@gmail.com	Accenture
10	Rizwana Khan	TCE	9945749028	rizwanakhan1805@gmail.com	Tata AIG
11	Swaroop S M	MCA	9945139749	swaroop.sethumadhavan@gmail.com	Cybrilla Technologies
12	VeniPranavnanda	MCA	9620655754	pranavav08@gmail.com	Maventic Innovative Soln.
13	Ritesh Kumar	ISE	7760200551	ritesh.kr.159@gmail.com	Yokogawa
14	Shama Singh	ISE	8880545491	shamasingh20@gmail.com	AIG DS
15	PranithaBhat	ISE	8861089243	pranithajb@gmail.com	Hewlett Packard

This committee is responsible for recruitment and retention of alumni members. One of the primary roles of this committee is recruiting and retaining members. It should also develop new strategies for ongoing means for nurturing past, current, and future contributors.

The fundamental purpose of Alumni committee is to organize graduates and former students, who reside in a city or in close proximity, into a unified body affiliated with the College Alumni Association. It is the vehicle which fosters the advancement of the college and programs which directly influence higher education.

5.2 Student Progression

5.2.1 Provide the percentage of students progressing to higher education or employment (for the last four batches) highlight the trends observed.

Batch 2012 – 2016

Student Progression	Departments								
	ME	Civil	CSE	ISE	EEE	ECE	TCE	MBA	MCA
UG to PG	4.72%	25.4 %	2.64%	2.43%	1.18%	0.08	11.21 %	NIL	NIL
PG to M.Phil	NIL	NIL	NIL	NIL	NIL	NIL	NIL	---	NIL
PG to Ph.D	NIL	NIL	--	---	---	NIL	NIL	---	---
Employed Campus Selection	22.83%	12%	83.44 %	80.48 %	59.35 %	68.125 %	72%	42%	24%
Other than campus recruitment	NIL	15.25 %	2.64%	10.08 %	43%	---	10%	18%	70%

Batch 2011 – 2015

Student Progression	Departments								
	ME	Civil	CSE	ISE	EEE	ECE	TCE	MBA	MCA
UG to PG	10.67 %	21%	6.62 %	8.06%	5%	6.06%	10.28 %	NIL	NIL
PG to M.Phil	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
PG to Ph.D	NIL	NIL	--	NIL	NIL	NIL	NIL	NIL	NIL
Employed Campus Selection	23.24 %	3%	38.33 %	48.83 %	54.5%	22.91 %	25%	14%	32%
Other than campus recruitment	NIL	14%	---	40.32 %	40%	---	31%	30%	63%

Batch 2010-2014

Student Progression	Departments								
	ME	**Civil**	**CSE**	**ISE**	**EEE**	**ECE**	**TCE**	**MBA**	**MCA**
UG to PG	17.91%	NIL	7.4%	3.33%	12%	7.6%	8.92%	NIL	NIL
PG to M.Phil	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
PG to Ph.D	NIL	NIL	4	NIL	NIL	NIL	NIL	3	NIL
Employed • Campus Selection	23.88%	NIL	44.11%	40.83%	60%	57.3%	27.4%	36%	3%
• Other than campus recruitment	22.38%	NIL	50%	46.66%	27%	31%	70.3%	30%	22%

Batch 2009-2013

Student Progression	Departments							
	ME	**Civil**	**CSE**	**ISE**	**EEE**	**ECE**	**TCE**	**PG Studies**
UG to PG	13.55%	---	9.6%	2.4%	5%	8.1%	7.69%	--
PG to M.Phil	--	--	---		--		---	--
PG to Ph.D	--	--	---	---	--	1%	---	2%
Employed • Campus Selection	20.33%	--	56.8%	74.66%	50%	69.7%	21.2%	51%
• Other than campus recruitment	60.89%	--	32%	---	44%	20.2%	65%	45%

Batch 2008-2012

Student Progression	Departments								
	ME	**Civil**	**CSE**	**ISE**	**EEE**	**ECE**	**TCE**	**MBA**	**MCA**
UG to PG	11.67%	--	7.8%	6%	5%	8.1%	7.59%	--	--
PG to M.Phil	--	---	---	---	---		---	---	---
PG to Ph.D	--	--	---	---	--	1%	---	--	--

Employed • Campus Selection	18.26%	--	68%	65.51%	35%	68.14%	43.67%	32%	37%
• Other than campus recruitment	26.72%	--	23.6%	-	59%	21.76%	39.32%	34%	63%

5.2.2 Provide details of the programme wise pass percentage and completion rate for the last four years (course wise/batch wise as stipulated by the university)? Furnish programme-wise details in comparison with that of the previous performance of the same institution and that of the Colleges of the affiliating university within the city/district.

Year of Passing 2016

#	Branch	Batch	No. of students joining the course in first year	No. of students passing the final sem exam	FCD (%)	FC (%)	SC (%)	Completion rate (%)	Completion rate of previous year (%)	Completion rate of VTU (%)
				UG COURSES Year of Passing 2016						
1	Mech	2012-16	140	124	67.74	25.82	6.44	82.85	88.73	78.23
2	Civil	2012-16	73	59	59.32	23.72	16.94	80.82	80.28	NA
3	C.S.E	2012-16	151	128	63.28	32.81	3.9	84.76	97.97	NA
4	I.S.E.	2012-16	123	108	27	41	32	87.8	92.24	NA
5	E.E.E	2012-16	119	82	36.58	50	13.4	68.9	84.7	94.7
6	E.C.E	2012-16	124	111	82.88	171	---	90	98.5	91

| 7 | T.C.E | 2012-16 | 106 | 82 | 34.14 | 52.43 | 13.41 | 77.35 | 89.38 | NA |

PG COURSES										
1	MBA	2014-16	69	64	14	76.56	9.38	92.75	90	80%
2	MCA	2013-16	79	69	49.27	47.82	2.89	87	87	79.35
3	CSE	2014-16	18	15	100	---	---	83.33	95.45	NA
4	DE	2014-16	10	6	83.33	16.67	---	60	100	NA
5	VLSI	2014-16	16	15	86.66	13.33	---	93.7	100	NA
6	CNE	2014-16	15	13	100	---	---	86.66	93.75	NA
7	DCE	2014-16	12	7	100	---	---	58.33	100	NA
8	MMD	2014-16	14	14	100	---	---	100	100	NA

Year of Passing 2015

#	Branch	Batch	No. of students joining the course in first year	No. of students passing the final sem exam	FCD (%)	FC (%)	SC (%)	Completion rate (%)	Completion rate of previous year (%)	Completion rate of VTU (%)
UG COURSES										
1	Mech	2011-15	75	66	23	38	5	88	90	79.23
2	Civil	2011-15	60	55	23	14	18	91	NA	78.98

3	C.S.E	2011-15	148	145	86	48	11	97.97	82.55	72.63
4	I.S.E.	2011-15	133	125	77	43	05	93.98	87.59	77.87
5	E.E.E	2011-15	52	30	13	13	4	57.6	84.7	72.6
6	E.C.E	2011-15	128	126	65	30	2	98.4	96.2	86.92
7	T.C.E	2011-15	127	87	47	39	1	68.5	71.9	63.14
PG COURSES										
1	MBA	2013-15	103	96	36	48	12	84.32	87	77.32
2	MCA	2012-15	104	91	29	45	17	81.36	86	78.95
3	CSE	2013-15	19	18	18	0	0	94.73	95.45	96.6
4	DE	2013-15	11	11	10	1	0	100	100	98
5	VLSI	2013-15	23	23	23	0	0	100	100	97
6	CNE	2013-15	13	13	13	0	0	100	93.75	94
7	DCE	2013-15	16	16	15	1	0	100	100	98
8	MMD	2013-15	14	11	7	3	1	74	NA	NA

Year of Passing 2014

#	Branch	Batch	No. of students joining the course in first year	No. of students passing the final sem exam	FCD (%)	FC (%)	SC (%)	Completion rate (%)	Completion rate of previous year (%)	Completion rate of VTU (%)
UG COURSES										
1	Mech	2010-14	70	63	34	27	2	90	85.50	77.23
2	Civil	2010-14	NA	NA	NA	NA	NA	NA	NA	NA
3	C.S.E	2010-14	149	123	76	42	5	82.55	94.77	88.65
4	I.S.E.	2010-14	129	113	76	35	2	87.59	93.7	88.13
5	E.E.E	2010-14	59	50	27	18	5	84.7	77.9	80.9
6	E.C.E	2010-14	135	130	55	33	10	96.2	91.8	79.72
7	T.C.E	2010-14	128	92	45	47	0	71.9	84.30	75.82
PG COURSES										
1	MBA	2012-14	101	87	16	62	9	87	92	84.28
2	MCA	2011-14	106	98	23	56	19	86	88	73.98
3	CSE	2012-14	22	21	21	0	0	95.45	94.44	96
4	DE	2012-14	17	17	17	0	0	100	100	98
5	VLSI	2012-14	24	24	23	1	0	100	94.4	97

6	CNE	2012-14	16	15	15	0	0	93.75	100	96
7	DCE	2012-14	17	17	16	01	0	100	100	98
8	MMD	2012-14	NA	NA	NA	NA	NA	NA	NA	NA

Year of Passing 2013

#	Branch	Batch	No. of students joining the course in first year	No. of students passing the final sem exam	FCD (%)	FC (%)	SC (%)	Completion rate (%)	Completion rate of previous year (%)	Completion rate of VTU (%)
UG COURSES										
1	Mech	2009-13	69	59	35	21	3	85.50	NA	NA
2	Civil	2009-13	NA	NA	NA	NA	NA	NA	NA	NA
3	C.S.E	2009-13	134	127	102	25	00	94.77	86.23	NA
4	I.S.E.	2009-13	125	119	91	27	01	93.7	93.75	NA
5	E.E.E	2009-13	60	49	15	21	13	77.9	79.36	NA
6	E.C.E	2009-13	135	124	62	22	02	91.8	98.4	NA
7	T.C.E	2009-13	127	107	84	22	01	84.3	82	NA
PG COURSES										
1	MBA	2011-13	87	80	18	56	06	92	NA	NA

2	MCA	2010-13	91	87	33	46	08	88	NA	NA
3	CSE	2011-13	18	17	17	0	0	94.44	94.44	NA
4	DE	2011-13	16	16	13	03	0	100	100	NA
5	VLSI	2011-13	18	17	16	01	0	94.4	100	NA
6	CNE	2011-13	18	18	18	0	0	100	88.89	NA
7	DCE	2011-13	16	16	12	03	01	100	100	NA
8	MMD	2011-13	NA	NA	NA	NA	NA	NA	NA	NA

Year of Passing 2012

S I#	Branch	Batch	No. of students joining the course in first year	No. of students passing the final sem exam	FCD (%)	FC (%)	SC (%)	Completion rate (%)	Completion rate of previous year (%)	Completion rate of VTU (%)
UG COURSES										
1	Mech	2008-12	NA	NA	NA	NA	NA	NA	NA	NA
2	Civil	2008-12	NA	NA	NA	NA	NA	NA	NA	NA
3	C.S.E	2008-12	138	119	93	25	1	86.23	100	NA
4	I.S.E.	2008-12	60	57	38	15	04	93.75	94	NA

5	E.E.E	2008-12	60	58	36	16	06	79.36	100	NA
6	E.C.E	2008-12	127	125	67	26	3	98.4	98.2	NA
7	T.C.E	2008-12	95	78	75	3	0	82	98.8	NA
PG COURSES										
1	MBA	2010-12	95	84	30	54	0	88	NA	NA
2	MCA	2009-12	91	83	26	37	20	83	NA	NA
3	CSE	2010-12	18	17	17	0	0	94.44	100	NA
4	DE	2010-12	18	18	12	06	0	100	93.33	NA
5	VLSI	2010-12	17	17	16	01	0	100	100	NA
6	CNE	2010-12	18	16	16	0	0	88.89	NA	NA
7	DCE	2010-12	12	12	06	06	0	100	NA	NA
8	MMD	2010-12	NA	NA	NA	NA	NA	NA	NA	NA

5.2.3 How does the institution facilitate student progression to higher level of education and/or towards employment?

The institution motivates students for their higher study and research by providing adequate support and extra training for the preparation for GATE, CAT, GRE, GMAT and Ph.D. entrance examination & other competitive exams. Special arithmetic, verbal, aptitude, soft skill and technical skill classes are conducted by the institution to groom the students in accordance to the exam requirements. The institution also arranges guest lectures and seminars by eminent and experienced industrial personnel to develop competitive spirit among the students. The training programs, motivational talks, discussions and lecturers improve confidence of the students, enabling them to grab

good jobs. Providing training for the employment by carrier guidance and placement cell is a regular feature at CMRIT.

5.2.4   Enumerate the special support provided to students who are at risk of failure and drop out?

The institute provides special support and guidance to the students who are at the risk of failing. Intensive Coaching Programme (ICP) is conducted for critical subjects by the respective faculty to boost the confidence of students, and thereby be at par with better performing peers. In this programme the students who fail to score above 40% are identified and special coaching classes are conducted. At the end of the coaching programme, a test will be conducted. The parents of these students are called for a meeting to have positive discussion about their ward with the HOD, senior professors, concerned faculty advisor and the Principal.

The remedial classes are conducted for the year back students apart from personal counselling by experts and mentors.

The moral support and suggestions offered to the students will help to put such students back on track of studies. Regular counselling, attending students' emotional and health needs ensure that the students enrolled will complete the course with ease.

5.3 Student Participation and Activities

5.3.1   List the range of sports, games, cultural and other extracurricular activities available to students. Provide details of participation and program calendar.

Equal importance is given to sports and games along with academics. Students are encouraged to participate and excel in sports. The institution has appointed a well-qualified and experienced Physical Education Director under whose constant guidance and effort the institution has been winning laurels in sports and games in various competitions. Playground and equipment for outdoor and indoor games facilities are available. Boys and girls vie with each other to participate in games like Cricket, Football, Basketball, Volleyball, Tennis, Table Tennis, Ball-Badminton, Badminton, Chess, Throw Ball, kabaddi etc. and in various athletic events.

Volley ball court

Basketball arena

Table Tennis

Students of CMRIT have achieved great heights as winners and runners in various athletic events. Good number of students of CMRIT have won medals and cash prizes at VTU Zonal tournaments and State level tournaments. Those students are honored during valedictory function on "Sports Day".

Sl. No	Name of the Student	Event	Nationals/ International	Prize Won
1	S H Prajwal	Hockey	Nationals-SGFI	4th
2	K Sai Hari Priya	Table-Tennis	Nationals-TTFI	4th
3	Priyanka B	Basketball	Nationals-VTU	-
4	RatnadeepVatsa	Volleyball	Nationals-SGFI	Gold
5	Sowmya V	Athletics	Nationals- IAAI	Bronze
6	Siddharthes	Badminton	Nationals-SGFI	Bronze
7	Vikas S D	Volleyball	Nationals-VFI&SGFI	-

PARTICIPATION OF STUDENTS IN OPEN TOURNAMENTS FOR THE YEAR 2016

➢ CMRIT Foot Ball, Hockey And Table –Tennis Teams Participated in National Level Sports Fest Conducted by St John Medical College 16th to 18th September-2016. and reached up to the Semi – Final.

➢ CMRIT Foot Ball, Cricket, Volley Ball, Badminton, Table- Tennis, Throw Ball Team Participated in inter CMR Sports Tournament and most of the teams got first place and won the Over All Championship of the Tournament.

➢ CMRIT Cricket Team Participated in state Level Cricket Tournament Conducted by MSRIT 22 - 25 September 2016. .

➢ CMRIT Cricket, Kabbadi and Badminton teams participated in International Sports Fest Infini-2016 Conducted by PESIT Bangalore 4th to 6th October – 2016.

➢ Sravani of First year Participated in State level Dushara Sports Hockey tournament and got 3rd place at Mysore.

CMRIT Women Hockey Participated in VTU Hockey Tournament on 20th and 21st April 2016 at Bellary and Secured 3rd Place

CMRIT Cricket Team Participated in state level intercollegiate Cricket tournament in UVCE and secured 1st place (18th to21st April-2016)

CMRIT Conducted VTU Bangalore Central Zone Throw Ball tournament 8th & 9th October 2016.

CMRIT Throw Ball Team Winner of Bangalore Central Zone Throw Ball Tournament 2016-17

CMRIT Cricket Team Participated in state level intercollegiate Cricket tournament Organized By Ghoushia College of Engineering and secured 2nd place (24th to28th October-2016)

Harsha A. of ECE Dept Won Silver Medal in 19th VTU Athletic Meet 2016-17 at Dr. T. Thimmaiah Institute of Technology, Kolar Gold Fields Event-(Triple Jump)

Shravani B. Won Silver Medal in 19th VTU Athletic Meet 2016-17 at Dr. T. Thimmaiah Institute of Technology, Kolar Gold Fields. Event- (Shot-Put)

Program calendar of sports:

Calendar of Events (Sports) 2016- 17 (Odd Semester)

August 2016		
DATE	**DAY**	**ACTIVITY**
01.08.16 Monday	1	Inaugural Program for Academic year 2015-16 batch
02.08.16 Tuesday	**2**	
03.08.16 Wednesday	**3**	**Formation of new sports committee**
04.08.16 Thursday	**4**	CSR's meeting
05.08.16 Friday	**5**	
06.08.16 Saturday	6	**Sports Committee meeting with V.P sir.(3pm**
07.08.16 **Sunday**	**HOLIDAY**	
08.08.16 Monday	1	**College Badminton Team Selection (4pm to 6 pm)**
09.08.16 Tuesday	**2**	**College Chess, Yoga Team Selection (4pm to 6 pm)**
10.08.16 Wednesday	**3**	**College Table tennis ,Tennis Team Selection (4pm to 6 pm)**
11.08.16 Thursday	**4**	**College Cricket Team Selection (1pm to 6 pm)**
12.08.16 Friday	5	**College Throw ball Team Selection (4pm to 6 pm)**
13.08.16 Saturday	**HOLIDAY**	
14.08.16 **Sunday**	**HOLIDAY**	
15.08.16 Monday	**HOLIDAY – INDEPENDENCE DAY**	
16.08.16 Tuesday	**6**	**College Hockey Team Selection (4pm to 6 pm)**
17.08.16 Wednesday	**1**	**College Gymnastics, Taekwondo Team Selection (4pm to 6 pm)**
18.08.16 Thursday	**2**	**College Boxing, Swimming Team Selection (4pm to 6 pm)**
19.08.16 Friday	**3**	**College Athletics Team Selection (4pm to 6 pm)**
20.08.16 Saturday	4	**College Foot-ball Team Selection (1pm to 6 pm)**
21.08.16 **Sunday**	**HOLIDAY**	
22.08.16 Monday	**5**	**College Wt./power Lifting Team Selection (1pm to 6 pm)**
23.08.16 Tuesday	**6**	**College Wrestling, Judo Team Selection (4pm to 6 pm)**
24.08.16 Wednesday	**1**	**College Hand ball Team Selection (4pm to 6 pm)**
25.08.16 Thursday	2	Team Captains Meeting 4 pm

26.08.16 Friday	3	
27.08.16 Saturday	4	**College Youth Festival Team Selection (1pm to 6 pm)**
28.08.16 **Sunday**	**HOLIDAY**	
29.08.16 Monday	5	Syllabus coverage report – 2 HODs meeting
30.08.16 Tuesday	6	
31.08.16 Wednesday	1	Display of Attendance Shortage list – 2

September 2016		
DATE	**DAY**	**ACTIVITY**
01.09.16 Thursday	2	Announcement of ineligible students list for IAT-1
02.09.16 Friday	3	
03.09.16 Saturday	HOLIDAY	
04.09.16 **Sunday**	**HOLIDAY**	
05.09.16 Monday	**HOLIDAY - VARASIDDI VINAYAKA VRATHA**	
06.09.16 Tuesday		**INTERNAL ASSESSMENT TEST - 1**
07.09.16 Wednesday		**INTERNAL ASSESSMENT TEST - 1**
08.09.16 Thursday		**INTERNAL ASSESSMENT TEST - 1**
09.09.16 Friday	4	
10.09.16 Saturday	5	Attendance register verification by VP
11.09.16 **Sunday**	**HOLIDAY**	
12.09.16 Monday	**HOLIDAY – BAKRID** **Sports for Dept 13/09/16 to 29/09/16**	
13.09.16 Tuesday	6	**Sports competition for CIVIL Dept (4pm to 6 pm)**
14.09.16 Wednesday	1	**Sports competition for CSE Dept (4pm to 6 pm)**
15.09.16 Thursday	2	**Sports competition for ECE Dept (4pm to 6 pm)**
16.09.16 Friday	3	**Sports competition for EEE Dept (4pm to 6 pm)**
17.09.16 Saturday	4	**Sports competition for ISE Dept (1pm to 6 pm)**
18.09.16 **Sunday**	**HOLIDAY**	
19.09.16 Monday	5	**Sports competition for MECH Dept (4pm to 6 pm)**
20.09.16 Tuesday	6	**Sports competition for TCE Dept (4pm to 6 pm)**
21.09.16 Wednesday	1	**Sports competition for MBA Dept (4pm to 6 pm)**

22.09.16 Thursday	2	Sports competition for MCA Dept (4pm to 6 pm)
23.09.16 Friday	3	Quarterfinals – Basketball, Kabaddi & Throw bal (4pm to 6 pm)
24.09.16 Saturday	4	Quarterfinals - Foot ball & Volley ball (1pm to 6 pm)
25.09.16 **Sunday**	**HOLIDAY**	
26.09.16 Monday	5	Semi finals & Finals Kabaddi & Throw ball (4pm to 6 pm)
27.09.16 Tuesday	6	Semi finals & Finals Foot ball & Volley ball(4pm to 6 pm)
28.09.16 Wednesday	1	Semi finals & Finals Cricket & Basket ball (4pm to 6 pm)
29.09.16 Thursday	2	Chess & Table tennis for all Dept (B&G) (4pm to 6 pm)
30.09.16 Friday	**HOLIDAY – MAHALAYA AMAVASYE**	

October 2016		
DATE	DAY	ACTIVITY
01.10.16 Saturday	3	
02.10.16 **Sunday**	**H1OLIDAY**	
03.10.16 Monday	4	Team Practice morning session 6am to 7:40 Evening session 4pm to 6pm
04.10.16 Tuesday	5	Team Practice morning session 6am to 7:40 Evening session 4pm to 6pm
05.10.16 Wednesday	6	Team Practice morning session 6am to 7:40 Evening session 4pm to 6pm
06.10.16 Thursday	1	Team Practice morning session 6am to 7:40 Evening session 4pm to 6pm
07.10.16 Friday	2	Team Practice morning session 6am to 7:40 Evening session 4pm to 6pm
08.10.16 Saturday	3	Team Practice morning session 6am to 7:40 Evening session 4pm to 6pm
09.10.16 **Sunday**	**HOLIDAY**	
10.10.16 Monday	**HOLIDAY – AYUDHA POOJA**	
11.10.16 Tuesday	**HOLIDAY - VIJAYADASHAMI**	
12.10.16 Wednesday	**HOLIDAY - MOHARRAM**	
13.10.16 Thursday	4	
14.10.16 Friday	5	
15.10.16 Saturday	**HOLIDAY – VALMIKI JAYANTHI**	
16.10.16 **Sunday**	**HOLIDAY**	
17.10.16 Monday		Team Practice morning session 6am to 7:40 Evening session 4pm to 6pm

18.10.16 Tuesday		**Team Practice morning session 6am to 7:40 Evening session 4pm to 6pm**
19.10.16 Wednesday		**Team Practice morning session 6am to 7:40 Evening session 4pm to 6pm**
20.10.16 Thursday	6	**Team Practice morning session 6am to 7:40 Evening session 4pm to 6pm**
21.10.16 Friday	1	**Team Practice morning session 6am to 7:40 Evening session 4pm to 6pm**
22.10.16 Saturday	2	**Team Practice morning session 6am to 7:40 Evening session 4pm to 6pm**
23.10.16 **Sunday**	**HOLIDAY**	
24.10.16 Monday	3	**INTERNAL ASSESSMENT TEST - 2**
25.10.16 Tuesday	4	**INTERNAL ASSESSMENT TEST - 2**
26.10.16 Wednesday	5	**INTERNAL ASSESSMENT TEST - 2**
27.10.16 Thursday	6	
28.10.16 Friday	1	**Parent Teacher meeting…**
29.10.16 Saturday	**HOLIDAY – NARAKA CHATURDASHI**	
30.10.16 **Sunday**	**HOLIDAY**	
31.10.2016 Monday	**HOLIDAY – BALIPADYAMI, DEEPAVALI**	

5.3.2   Furnish the details of major student achievements in co-curricular, extracurricular and cultural activities at different levels: University / State / Zonal / National / International, etc. for the previous four years.

The students of CMRIT actively participate in various events organized by different institution and have won many awards.

The detailed list of various co-curricular and extracurricular activities participated by our students are:

#	Date	Event	Venue	Students	Place
1.	4/4/2015 to 5/4/2015	NATIONAL LEVEL India's Biggest Civil Championship 2014-15 – IBCC"	IIT Mumbai	Karthik J Mohan Kumar MenduSneha Vishal kumarsingh Chandrashekar Gaurav	3rd place

				ShArma	
				ApurvChandrawal	
				Kumar Divyanshu	
2.	2014	Greeklist Hackathon	Firefox,Bangalore	Abraar K Syed	5th Place
3.	2009	Rajyapuraskar award (scott& guides)	Doddaballapur,Bangalore	MonishaRamesh	
4.	2014	Miss Diva Universe Contest-2014	Mumbai	MonishaRamesh	Top 10 Position
5.	2008	State level table tennis championship in both singles and doubles and cluster region championship in table tennis	Patna	VibhashRanjan	Winner
6.	2009	State level table tennis championship in both singles and doubles and cluster region championship in table tennis	Patna	VibhashRanjan	Winner
7.	2010	State level table tennis championship in both singles and doubles and cluster region championship in table tennis	Patna	VibhashRanjan	Winner
8.	2015	Rudraksh	New Horizon,Bangalore	Manjula S	2nd place
9.	2015	Gopalan Inter College Fest	GopalanCollege, Bangalore	Manjula S	1st place

10.	2015	Cambridge InterCollege Fest	Cambridge college,Bangalore	Manjula S	3rdplace
11.	2015	Kalasangama	Malleshwaram,Bangalore	Manjula S	2ndplace
12.	1.5.2015 TO 3.5.2015	SRISHTI 2015/National level	Banglore	Lohith v	1st price
13.	18/01/2014	Vocational training	BSNL,Bangalore	Arpitha K	Level B
14.	23/03/2014	Cultura-13	CMRIT	Gaurav Gupta	Volunteer
15.	16/03/2014	Youth convention	Bangalore	Yashwanth	Participated
16.	21/10/2013	TI competition	CMRIT	Archana Ramachandran	Participated
17.	2013-2014	Appreciation Certificate	MAD	Archana Ramachandran	Teaching Volunteer
18.	8/7/2013	Robosoft Labs	Bangalore	Archana Ramachandran	Internship program
19.	2013	Collage	NHCE	Archana Ramachandran	2nd place
20.	23/03/2014	Paper Presentation	CMRIT	Archana Ramachandran	1st place
21.	23/03/2014	Wordly Matters	CMRIT	Archana Ramachandran	2nd place
22.	27/3/15	Western Dance	Gopalan College of Engineering	Anusha.R.Thanga	First Prize
23.	20/2/2015	street play	CMRIT cultura-2015	Chandana.K.Reddy	First Prize
24.	20/2/2015	street play	CMRIT cultura-2015	Arnab Modak	First Prize
25.	20/2/2015	street play	CMRIT cultura-2015	Asutosh Kumar Tiwari	First Prize
26.	20/2/2015	street play	CMRIT cultura-2015	Ashwath Kumar	First Prize
27.	27/3/15	Indian Filmy Dance	Gopalan College of Engineering	Swarna.K	First Prize
28.	27/3/15	Indian Filmy Dance	Gopalan College of Engineering	Anjaly.S George	First Prize
29.	27/3/15	Indian Filmy Dance	Gopalan College of Engineering	Parvathi Jayram	First Prize
30.	27/3/15	Indian Filmy	NHCE	Swarna.K	First

		Dance			Prize
31.	27/3/15	Indian Filmy Dance	NHCE	Anjaly.S George	First Prize
32.	27/3/15	Indian Filmy Dance	NHCE	Parvathi Jayram	First Prize
33.	6/3/2015	Indian Filmy Dance	Cambridge Institute of Technology	Swarna.K	First Prize
34.	6/3/2015	Indian Filmy Dance	Cambridge Institute of Technology	Anjaly.S George	First Prize
35.	6/3/2015	Indian Filmy Dance	Cambridge Institute of Technology	Parvathi Jayram	First Prize
36.	21/2/2015	Group Singing	Cmrit cultura-2015	Aishwarya.C	First Prize
37.	28/3/2015	Inter departmental Basket ball	CMRIT	E.Rahul.Chowdary	First Prize
38.	28/3/2015	Inter departmental Basket ball	CMRIT	premChandar.V	First Prize
39.	28/3/2015	Inter departmental Basket ball	CMRIT	Uday Kumar	First Prize
40.	7/2/2015	State level Abacus Competition	Bangalore	Suman.R	consolation
41.	14/3/2015	State level WesternDance Competition	Chamarajanagar	Avinash.R	Second prize
42.	19/9/14	Robo Fest-2015	Quad Copter Championship workshop	Gaurav Gupta	First Prize
43.	19/9/14	Robo Fest-2015	Quad Copter Championship workshop	AkritiKumari	First Prize

Sports Achievements for the year 2016-17

Sl no	NAMES	ACHIVEMENTS
01	Ms. Chaya ECE Dept.	Represented Karnataka State in Junior Rugby Tournament at Mumbai from 19th to 22nd October-2016
02	Mr. Nitesh Kumar Reddy MECH Dept.	Represented Karnataka State in Junior Rugby Tournament at Mumbai from 19th to 22 October-2016
03	Mr. Kirthi Amruth Swaroop CIVIL Dept.	Represented Karnataka State in Junior Rugby Tournament at Mumbai from 19th to 22 October-2016
04	Ms. Sharavni B ECE Dept.	Won Silver Medal in 19th VTU Athletic Meet 2016-17 at Dr. T. Thimmaiah Institute of Technology, Kolar Gold Fields. Event- (Shot-Put)
05	Harsha A. ECE Dept.	Won Silver Medal in 19th VTU Athletic Meet 2016-17 at Dr. T. Thimmaiah Institute of Technology, Kolar Gold Fields Event-(Triple Jupm)

Sports Achievements for the year 2015-16

SL NO	EVENTS	ORGANIZING COLLEGE & DATE	REMARKS
1	SWIMMING Men & Women	GAT,BANGALORE,24TH-25TH August 2016	Participated
2	HOCKEY Men	BMSCE,BANGALORE,30TH-31TH August 2016	Semi-Final
3	BASKET BALL Men	NHCE,BANGALORE,7th-8th Sep 2016	Participated
4	CHESS	• VEMNA IT, BANGALORE, 17TH-18TH September 2016. • INTER ZONE SJMCE CHITRDURGA 23th & 24th Sep 2016	Over All 5th Place & Qualified for Inter Zone.

6	BADMINTON Men & Women	BMSCE,BANGALORE,21th- 22th Sep 2016	QUARTER FINAL & Semi F
9.	BASKET BALL Women	BMSIT,BANGALORE,26th-27th Sep 2016	QUARTER FINAL
10.	TABLE-TENNIS Men & Women	HKBK,BANGALORE,28TH-29TH Sep. 2016	Participated
11.	THROW-BALL Women	CMRIT BANGALROE, 8th & 9th OCT 2015	WINNER
12.	THROW-BALL Women	NIEIT MYSORE 13th & 14th OCT 2015	Participated

Sports Achievements for the year 2014

Sl. No.	Event	Remarks
1	Basketball	➢ Participated in State Level Tournament in REVA University and secured 2nd Place. ➢ Participated in State Level Inter Collegiate Tournament in RNSIT and secured 2nd Place. ➢ Participated in VTU Inter Collegiate Basketball Tournament. ➢ Participated in State Level Inter Collegiate Tournament in Christ University.
2	Cricket	➢ Participated in VTU Inter Collegiate Tournament and were SEMI FINALIST. ➢ Participated in State Level Inter Collegiate Tournament at UVCE and Secured 2nd Place. ➢ Participated in State level MS RAMAIAH MEMORIAL Tournament and Secured 3rd Place. ➢ Participated in CHAMARAJU MEMORIAL State level Tournament and were Quarterfinalist.
3	Football	➢ Participated in State level intercollegiate Tournament in SLAES DE FRANCIS Tournament and secured 2nd Place. ➢ Participated in VTU Inter Collegiate Tournament and were SEMI FINALIST. ➢ Participated in UVCE State level Inter Collegiate Tournament.
4	Hockey	➢ Participated in VTU Inter Collegiate Tournament. ➢ Participated in St.Johns State Level Inter Collegiate

		Tournament
5	Volleyball	➢ Participated in VTU Inter Collegiate Tournament and were SEMI FINALIST. ➢ Participated in State Level Inter Collegiate Tournament at NEW HORIZON College of Engineering and SEMI FINALIST.

Sports achievements in the year 2013

Sl. No.	Event	Place
1.	Basketball	VTU Interzone tournament 4th place

Sports achievements in the year 2012

Sl. No.	EVENT	REMARKS
1.	Basket Ball	Represented VTU Basketball team
2.	Hockey	Represented Karnataka State

Sports achievements in the year 2011

Sl.No.	EVENT	REMARKS
1	Basket Ball	Qualified for Quarter finals
2	Net ball	Quarter finals

5.3.3 How does the college seek and use data and feedback from its graduates and employers, to improve the performance and quality of the institutional provisions?

CMRIT recognizes that feedback from the stakeholders is very important for improving the performance and quality of the institutional provisions. The institution has clearly set and defined mechanism of obtaining feedback from the students and stakeholders. Such feedback helps in assessing the attainment of program outcomes, program education objectives and recognizing other gaps/requirements.

- Exit feedback from graduating students
- Alumni feedback
- Employers feedback
- Parents feedback

Assessment of the Program Educational Objectives is carried out at least once in an academic year generally at the end of the year. Assessment data is collected from representatives of five major stakeholders viz.

a. Students getting graduated (Exit Survey)
b. Students graduated from this department and employed with industries(Alumni Survey)
c. Potential Employers of the graduate students of this department (Employer Survey)
d. Faculty of the department (Course Survey)
e. Current final year students of the department (Student Survey).

The former three surveys will give broad idea about attainment of PEOs by graduates while latter two will help the department to find out how students and faculty are moving towards developing those aspects in students and implement corrective measures so that attainment of PEOs within 2-3 years of their graduation happens. The inputs from different stakeholders are obtained in standard survey forms which direct each of the stakeholders to give their judgment in the scale of 1 to 5 for the attainment of each of the four PEOs.

The evidence of the achievement of the PEOs

Program educational objectives	Strongly Agree	Agree	Partially Agree	Strongly Disagree
I The students will be able to analyze and solve engineering problem by applying basic principles of mathematics, science and engineering		■		
II The students will be able to use modern engineering techniques to develop their skills and knowledge after graduation to fulfill the needs of society	■			
III The students will have the necessary professional skills, such as high ethical standards, effective oral and written		■		

communication and teamwork to be productive engineers		■	
IV The students are better employable and achieve success in their chosen areas of engineering science and related fields	■		

The PEOs have been redefined thus

- Collection of feedback from stakeholders
- Assessment and Evaluation of PEOs
- Review by the quality assurance committee
- To bridge the gap in the curriculum recommendation to the board of studies
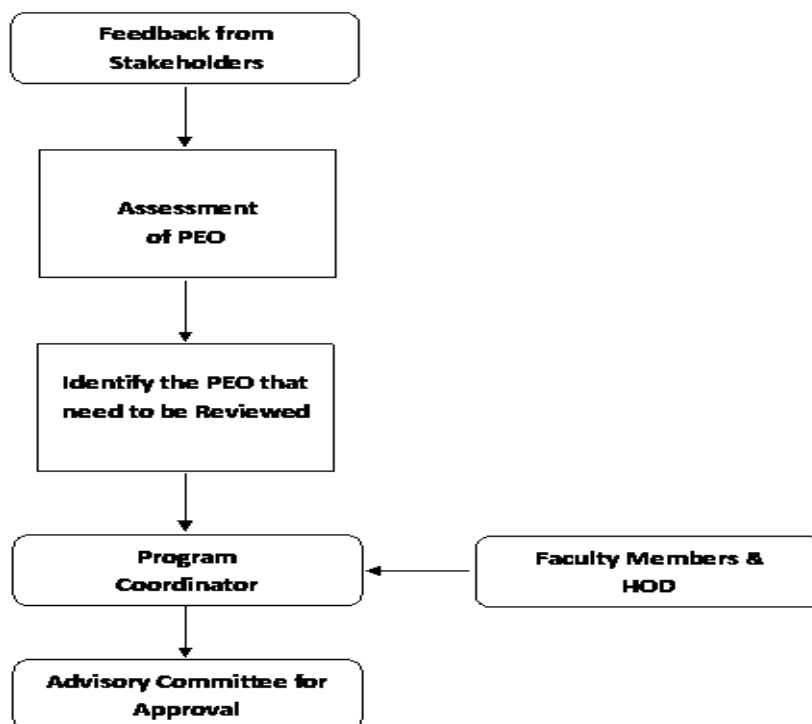
5.3.4   How does the college involve and encourage students to publish materials like catalogues, wall magazines, college magazine, and other material?

List the publications/ materials brought out by the students during the previous four academic sessions.

The college publishes a magazine JNANADHARA yearly basis which contains details about latest happenings in the college. The magazine also consists of articles and art work of both students and faculty members. The students can also remember their classmates and teachers by looking at the group photo of the entire batch in the magazine.

The literature club actively promotes and organizes various events for the students.

5.3.5   Does the college have a Student Council or any similar body? Give details on its selection, constitution, activities and funding.

Yes,

Sl. No.	Name	Department	Designation
1	Manasa D Patgar	CSE	President
2	B Chandrashekar	TCE	Secretary
3	Kumar Gaurav Singh	CIV	Cultural Secretary
4	Navya L	MBA	
5	Yogesh	EEE	
6	Pratith Shetty	CSE	
7	Ronak Jain	CSE	Tech Secretary
8	Sachin Soman	MCA	
9	Anjana Mohan	MECH	
10	Umanga	ISE	
11	Aishwarya Jakka	CSE	LIT Secretary
12	Aishwarya Bhatt	CSE	
13	Ashish Dahiya	EEE	
14	Nikhil SS	MECH	Hostel Secretary
15	Neha Bhardwaj	ISE	

16	Akash V Naik	EEE	Sports Secretary
17	N. MONICA RAJU	CSE	

In CMRIT, a Student Council is a representative structure for all the students in the college. It provides students with the opportunity to become involved in the affairs of the college, working in partnership with college management, staff and parents. It should always work for the benefit of the college and its students.

They are responsible for

• Working with the staff, Board of Management and Parents' Association in the college
• Communicating and consulting with the students in the college
• Involving as many students as possible in the activities of the Council
• Planning and managing the Council's programme of activities for the year
• Managing and accounting to the student council and Board of Management, for any funds raised by the Council.

The Student Council can be involved in many activities in the college. Here is a sample of some Student Council activities:

• Standard Yearly Activities: Liaising with principal and board of management on issues of concern to students.
• Communication and co-operation with college staff.
• Co-operating with management and staff on the development of college rules and regulations.
• Involvement in college planning.
• Having a say in college policies e.g. anti-ragging policy, healthy eating, code of discipline, punctuality.

Extra-curricular activities: Day 4 activities such as departmental club activities, Guest Lectures, Shristi, Kannada Rajyothsava, Tech Fest, Cultura etc.

Organizing recycling in college, getting involved or introducing the Green Colleges, running an anti-litter campaign, clean up an area of the college or helping out in the community on environmental issues.

Carrying out surveys and questionnaires on issues and reporting back to the college management with the gathered information.

Organizing social events: such as talent shows, fashion shows, battle of the bands, quiz events, sports tournaments.

College newsletter / magazine or putting together a college record for the year using photographs etc. linking in with other Student Councils in the area and organizing a meeting with a view of sharing ideas and information.

5.3.6   Give details of various academic and administrative bodies that have student representatives on them.

CMRIT has various committees where students are the part of the committees. These committees are as follows

* Anti-ragging
* Anti-ragging squad
* Alumni Association Committee
* Sports, Library
* Cultural Committee
* Placement and Career Counseling Committee
* Newsletter & Magazine Committee
* Institutional chapters
* Hostel College Hostel Committee
* Transport
* Disciplinary Committee
* Foreign Student Association
* NSS Committee

5.3.7   How does the institution network and collaborate with the Alumni and former faculty of the institution. Any other relevant information regarding Student Support and Progression which the college would like to include.

The institution keeps in touch with the Alumni and former faculty via social networks like Twitter, Facebook etc. The events in the institution and other activities are uploaded on YouTube to update the alumni about the events organized in the institution. The institution also maintains contact with its former faculties to get necessary inputs that can enhance the growth of the institution and quality of its teaching and learning processes. The former faculty members are invited as resource persons for guest lectures, seminars and workshops and also member in few of the committees. In order to keep in touch with the industrial trends and developments, alumni meets are conducted once in a year.

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

6.1.1   State the vision and mission of the Institution and enumerate on how the mission statement defines the institution's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, institution's traditions and value orientations, vision for the future, etc.?

VISION

To be a nationally acclaimed and globally recognized institute of engineering, technology and management producing competent professionals with appropriate attributes to serve the cause of the nation and society at large.

MISSION

- Create necessary infrastructure appropriate to the needs of the programmes and activities of the institution

- Attract and retain well-qualified faculty and supporting staff

- Create and facilitate an ambience for interdisciplinary engagement leading to a healthy competition among the students and staff in pursuit of excellence through lifelong learning

- Develop and operate mutually beneficial programs partnering with industries, institutes and individuals of national and international repute.

- Create mechanisms to understand the societal needs and provide solutions for the betterment of the society.

QUALITY POLICY

To deliver quality technical education to inculcate – scientific temperament and social commitment in our students, preparing them as inspired engineers partnering collective progress.

6.1.2   What is the role of top management, Principal and Faculty in design and implementation of its quality policy and plans?

The quality policy of the institution is well conveyed from the Vision and Mission statements which have been designed by the Top Management and

faculty. For implementing the quality policy, an action plan is prepared collectively by the Principal and the Heads of the Department. According to the action plan, specific roles are assigned to various faculty members.

Role of the Top Management

- Adopting the fees and other charges payable by the student of the college as fixed by the Government/University in this regard from time to time.

- Accepting endowments, institute scholarships, fellowships, studentships, medals prizes and certificates on the recommendation of the Academic Council.

- Approving the starting of new programmes of study with the concurrence of the University, leading to all the courses running in our institution.

- Lay down services conditions and emoluments as per the Council norms, allowances for teaching and non-teaching staff in the college, consistent with the University Status/ Ordinances / Regulations/ Rules/ Guidelines and other State Government Provisions.

- Lay down the procedure for selection recruitment of teaching, non teaching staff and for appointing them in the college, consistent with the University Statutes / Ordinances / Regulations/ Rules/ Guidelines and other State Government Provisions.

- Regulating and enforcing discipline among the members of teaching and non-teaching staff in accordance with the Rules/ Procedures/ Guidelines laid down in this regard.

- Investing funds belonging to the college in approval securities, as it shall, from time to time, think fit or in the purchase of immovable property.

- Transferring or accepting transfer of any movable or immovable property to the college.

- Entertaining, adjudicating upon and if thought fit, constitute a Committee to advise and/or recommend method to redress the grievances of staff members of the college.

- Delegating administrative, managerial and financial powers to the Principal and other functionaries in the College for its smooth functioning

- Approving the Annual Budget of the college.

- Performing such other functions & constitute Committee, as may be necessary and deemed fit for the proper development and fulfill the objectives for which the college was established.

Role of the Principal

- Leads the faculty, provides directions, and coordinates with them wherever necessary.

- Communicates the opinions of the top management to the faculty and staff regarding the responsibilities and duties assigned to each component of the institution during the implementation of the quality policy.

- Constitutes various committees for executing activities in accordance with quality policy.

- Takes initiatives to develop the liaison with the eminent academicians, scientists, industries, professional bodies and renowned institutions which directly or indirectly helps in implementing the quality policy.

- Designs& defines organization structure.

- Defines and delegates responsibilities of various positions in the organization.

- Ensures periodic monitoring & evaluation of various processes & sub-processes.

- Ensures effective purchase procedure.

- Prepares annual budget and manages accounts and finance.

- Conducts periodic meetings of various bodies.

- Facilitates employee recruitment process.

Role of Heads of the Department

The responsibilities of the Heads of the Department in the academic and administrative matters are as follows:

- Plan, organize and monitor execution of the academic activities according to the calendar of events.

- Observe and analyze faculty's teaching and provide them with necessary feedback for improving the teaching skills.

- Maintain records of departmental activities and achievements.

- Ensure discipline of the staff and students - punctuality in conduction of classes by the staff, and punctuality in attending the classes by the students; and other academic related activities.

- Ensure that the departmental laboratories and library are academically adequate, used optimally, kept clean, and run efficiently.

- Encourage, facilitate and bring about more sponsored projects to the department.

- Arrange field visits /industrial training and guest lectures by eminent personalities.

- Organize International/National seminars and conferences in the department.

- Conduct departmental meetings regularly, and have adequate interaction with the faculty and laboratory technicians to improve their overall effectiveness.

- Facilitate extra-curricular activities for students, faculty and staff for the overall growth of everybody and creating a team spirit.

- Propose Department Budget

- Adhere to QMS Procedures.

Role of the Faculty

The faculty plays a major role in the implementation of the quality policy.

- To plan and conduct academic activities as per the quality policy.

- Develop themselves as role models for students, and to upgrade skills continuously.

- To fulfill the given responsibilities in three primary areas namely teaching, research and administrative activities.

- Effectively contribute by being member of various committees.

- To develop and implement quality measures for the evaluation of various teaching, learning, and assessment processes.

- Take initiatives to associate themselves with research organizations, eminent academicians, professional bodies and industries.

6.1.3 What is the involvement of the leadership in ensuring:

- **The policy statements and action plans for fulfillment of the stated mission**

  ➢ The policy statements and action plans are formulated after careful

consideration by the management.

➢ The Management of the institution has long term vision for both, academics and administration.

➢ They guide, initiate, persuade the staff to actively involve themselves in realizing the goals and objectives of the institution.

➢ The Management supports and creates necessary infrastructure required to achieve the quality policy of the institution.

➢ Principal regularly monitors the progress and guides the staff if there is any deviation.

- **Formulation of action plans for all operations and incorporation of the same into the institutional strategic plan**

  ➢ Prior planning is made by every department well before the commencement of the academic year, and after careful scrutiny, the budget is allocated for improving infrastructure and development of the institution.

  ➢ Based on the objectives, the Management advises the staff to accomplish the strategic plans through various activities.

  ➢ Success is ensured through strict adherence to the action plans.

- **Interaction with stakeholders**

  ➢ The institution makes conscious efforts to build a healthy relationship with its stakeholders namely – students, parents, alumni, academicians, society in general and the industry.

  ➢ Institution involves all stake holders in decision making process by making them member in various administrative and academic bodies.

  ➢ The stake holders are invited regularly to the campus to interact with the policy makers, institution administrative staff, faculty and students.

  ➢ An action plan is prepared based on the feedback received from the stake holders.

  ➢ The progress made through the action plan is regularly monitored and the plan may be altered if needed.

- **Proper support for policy and planning through need analysis, research inputs and consultations with the stakeholders.**

  ➢ The institution has adopted the strategy of obtaining periodical feedback from students, parent teachers meetings, discussion with alumnus, and

means for sustainable interaction with the stakeholders.

➢ The inputs collected from various stakeholders are taken into cognizance by the management, and through various methods of analysis, critical areas requiring immediate attention and developmental initiatives are identified.

➢ The progress in these areas is subjected to a review process as a means for continuous improvement.

- **Reinforcing the culture of excellence**

  ➢ The staff members are encouraged to pursue research activities and to participate and organize seminars/workshops/conferences to keep themselves up-to-date with the recent trends in teaching, learning and evaluation, and their specialized area of research interest, thereby reinforcing a culture of excellence.

  ➢ They are also given special permission on duty to attend refresher and orientation programs.

  ➢ They are encouraged and motivated to be a member of various academic bodies.

  ➢ Awards and incentives encourage the spirit of excellence in the endeavors of the faculty. Such practices create an ambience that is most conducive for academic excellence.

- **Champion organizational change**

  ➢ Changes in the existing rules and regulations are brought about after a thorough discussion in planning and monitoring, based on the broader needs of the present generation.

  ➢ The institution follows a structured approach for ensuring that changes are smoothly and successfully implemented.

  ➢ In order to accomplish this, stakeholders' expectations are aligned, communicated and integrated with the employee's efforts for the growth of the institution. Thus, academic and administrative matters are brought to the notice of the Management to champion the changes required by the organization.

6.1.4 What are the procedures adopted by the institution to monitor and evaluate policies and plans of the institution for effective implementation and improvement from time to time?

- The meetings of the Governing Council are conducted once in 6 months. In

these meetings, the members thoroughly discuss developments and revise the policies if necessary.

- The Top Management's meetings are conducted periodically. In these meetings, policies and plans are decided and reviewed.

- Meetings of the various committees are conducted frequently to monitor and evaluate activities. The Principal's meetings with HODs are conducted every week to monitor all academic and student related activities.

- Faculty meetings are conducted in every department frequently to convey plans and instructions discussed in HOD meetings and kick-start their implementation as well as take feedback about the plans being implemented.

6.1.5 Give details of the academic leadership provided to the faculty by the top management?

- The faculty is involved in various academic, administrative committees like admissions committee, publication committee, library committee etc.

- The feedback/opinion will be collected from the faculty before formulating any academic related and non-academic related strategies.

- The Management and the head of the institution provides adequate freedom and number of incentives to faculty in strengthening teaching learning process, academic advancement, nurturing multifaceted talent in students.

- Faculty are given full liberty to represent and formulate plans for supporting slow learners, preparing required learning material, organizing various programs for enhancing curricular activities, encouraging enthusiastic learners for professional competency, conducting new experiments in laboratories, taking up projects.

- The freedom and the support motivates faculty in developing creative and innovative practices with mutual coordination and team work.

6.1.6 How does the college groom leadership at various levels?

The top Management aims at creating not just a few leaders but a leadership ladder, i.e. leadership at various levels. To develop leadership skills, it encourages the staff to attend training programs.

- Based on the performance of a faculty in academic activities, feedback from students, and from senior faculties, the top Management identifies the field of expertise of each faculty, their teaching and inter-personal skills. Based on

these data, the top Management provides different levels of leadership tasks and responsibilities to the faculty.

- Faculties are members in various committees.

- The strengths and weakness of the staff are identified while they are members of various committees.

- Such members are made coordinators/heads of the committees to lead.

- These leaders are again will be made as HOD/Academic coordinators whenever vacancy arises.

- The proper/required training and support is provided to these leaders and all staff of the institution.

- They regularly monitored and support will be provided by the top management personnel.

6.1.7   How does the college delegate authority and provide operational autonomy to the departments / units of the institution and work towards decentralized governance system?

- There is a well-defined hierarchy of authority in the institution and also in each of the departments.

- The head of the departments are accountable for smooth conduction of academic activities of the department. In turn they delegate important academic activities to the respective faculty members. For which a complete freedom has been given to the Head of the Departments.

- Also, regular departmental meetings are conducted in which important aspects of the requirements of the departments such as equipment, laboratory materials, books, journals and others are discussed and a power has been delegated to decide and recommend to the top management.

- The Management approves budget in Finance Committee, and the Principal communicates them to the departments, such financial provision at the disposal of the HOD and Heads of the various committees.

- Various functional committees are formed every year and their responsibilities and functions are well-defined.

- HODs are also authorized to recruit competent faculty members for their department.

Thus, the institution decentralizes the authority and provides operational autonomy to the committees.

Chart of Delegation of work
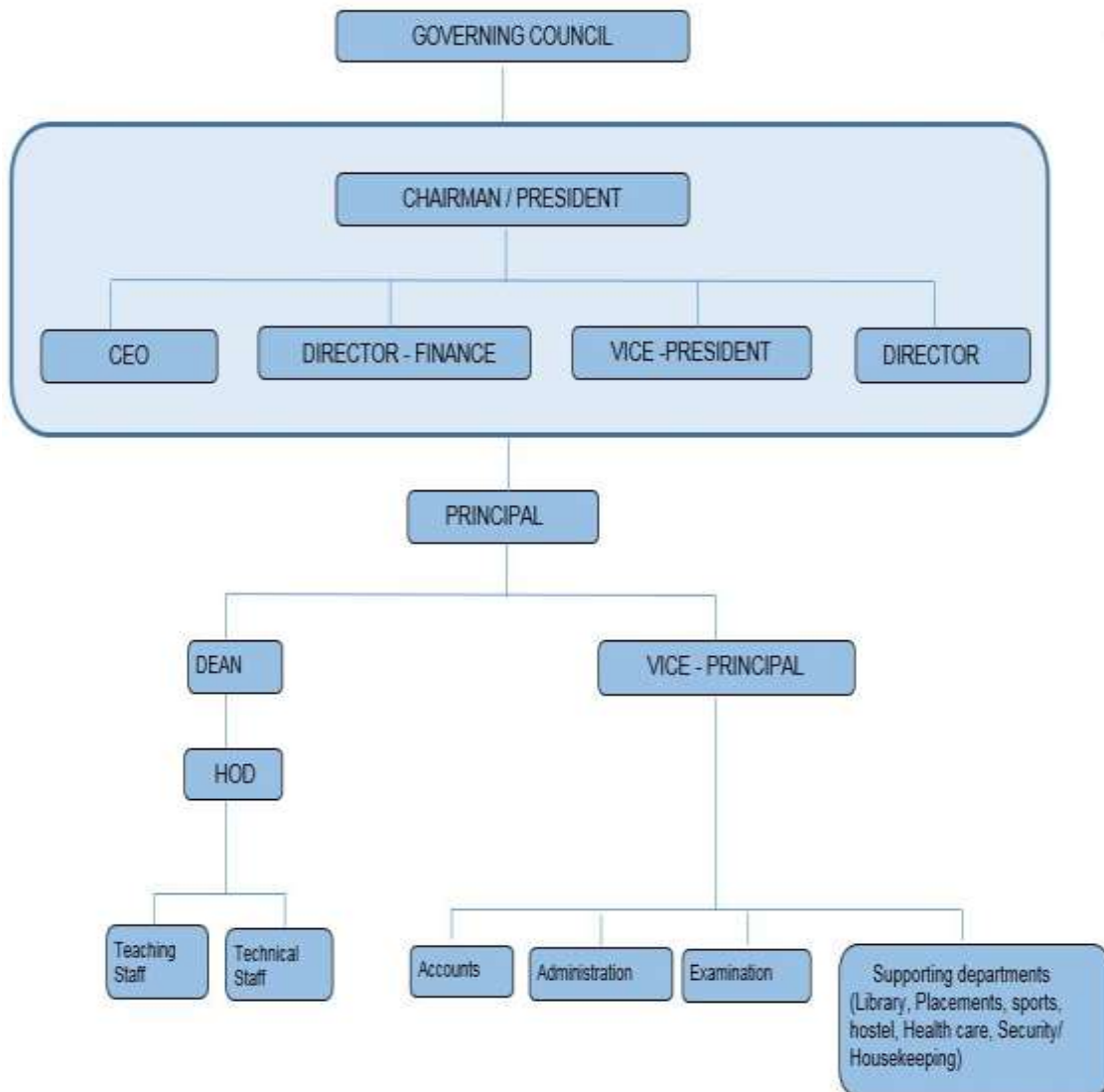
6.1.8   Does the college promote a culture of participative management? If 'yes', indicate the levels of participative management.

Yes, the college does allow participative management. All the stakeholders viz. parents, students, faculty and staff have representation on the various statutory and designated bodies. If for statutory reasons a particular group is not formally represented in these bodies, an informal mechanism ensures that it is not left out of the decision making process.

6.2 Strategy Development and Deployment

6.2.1 Does the Institution have a formally stated quality policy? How is it developed, driven, deployed and reviewed?

➢ All stake holders of the institution, industry experts, renewed academicians and researchers are contacted before finalising the quality policy. A CEO meet has been organised and their opinion on quality policy has been collected.

➢ The governing council of the institution discussed disseminated and developed quality policy.

➢ The institution strives hard in achieving high standards of teaching, training and development of human resources by encouraging its faculty and staff to work as a team and to update their knowledge and skills continually to match the needs of industry. Based on this idea the quality policy was developed.

➢ All the activities are driven by the quality policy and are closely monitored. The various performance indicators like pass percentage, research, placements, achievements in co-curricular activities of students and the achievements of the faculty are analyzed and reviewed.

➢ The IQAC will regularly review the above defined quality policies.

➢ NBA, LIC, Accreditation agencies, Assessment agencies visit ensures that standards of academic, non-academic, and administrative qualities are met with the institution.

6.2.2 Does the Institute have a perspective plan for development? If so, give the aspects considered for inclusion in the plan.

The institution has specific plans of development in its academic and administrative units, and strategy for its implementation to improve the overall quality of the functioning of institution. The following are the salient features of the developmental plan of the institution.

• To make the institution as a "Centre for Excellence"

• To develop the spirit of team building and knowledge sharing, through an out-reaching, collaboration and student exchange programs.

• To network with knowledgeable societies and institutions of higher learning across the globe.

6.2.3 Describe the internal organizational structure and decision making processes.

CMRIT has a governing body in place wherein the members are drawn from distinguished cross-sections of the society as shown in table below. The governing council meets once in every 6 months.

Governing Council

S. No.	Name	Designation/ Status	Profession
1	Sri. K. C. Ramamurthy, IPS	Chairman	M. P., Rajya Sabha, Rtd. IGP Govt. of Karnataka
2	Dr. Sabitha Ramamurthy	President	Ph.D.(Education), Educationalist running host of premier institutions under the umbrella of CMR Jnanadhara Trust
3	Dr. Anand Kumar	VTU Nominee	Prof., Dept. of CSE, SJBIT, Bangalore
4	Mr. Ananda Poojari	Member-DTE	Director-DTE
5	Mr. K. C. Jagannath Reddy	Member	Consultant, Builder and Educationalist
6	Dr. K. C. Raju Reddy	Member	Physician & Surgeon
7	Dr. K. P. Gopalakrishna	Member	Educationist, Chairman National Education Trust
8	Mrs. Shobha Reddy	Member	Administrator & Educationalist
9	Mr. K. R. Jayadeep	Member	CEO, CMRGOI
10.	Mrs. Shreya Reddy	Member	Director, HR and Finance, CMRGOI
11.	Dr. Bhaskar Reddy	Member	Director, CMRGOI
12.	Regional Director, AICTE	Nominee AICTE	RO & Director AICTE South West Regional Office, Bangalore
13.	Dr. Sanjay Chitnis	Member and Executive secretary	Principal, CMRIT
14.	Dr. B. Narasimha Murthy	Sr. faculty member	Vice Principal and Prof., CMRIT

The institute has a decentralized administrative structure as depicted in the flow chart below. Each and every one are involved in the decision-making and the transparency associated therein forms an important feature of the work culture

ADMINISTRATIVE STRUCTURE
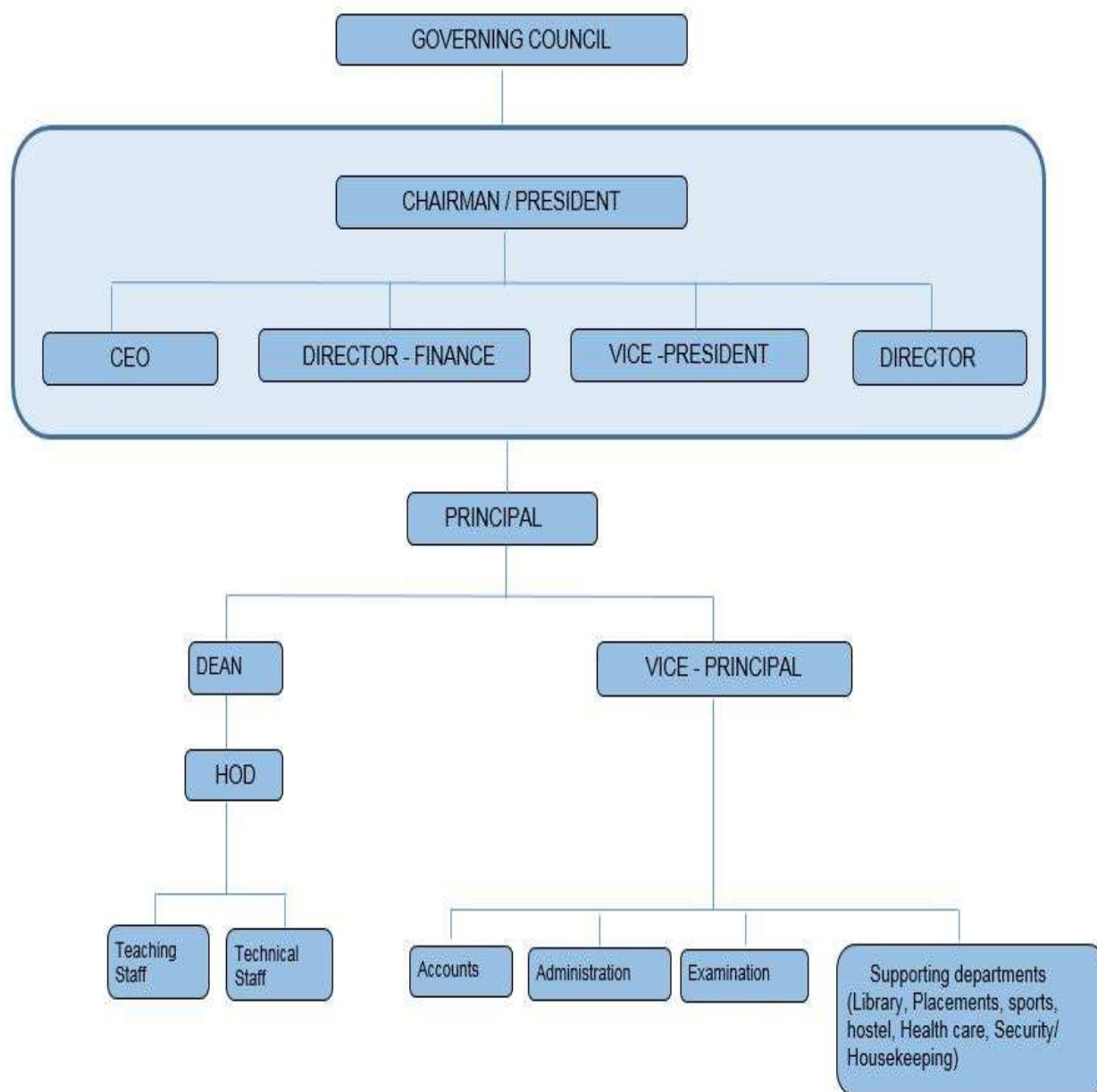
6.2.4   Give a broad description of the quality improvement strategies of the institution for each of the following

Teaching & Learning:

The Teaching Learning process is the back bone of the academic system of

any Institution. CMRIT gives utmost importance to teaching learning process so that the communication reaches to all the students of different groups. It is a tradition in our institute to continuously evolve and implement processes for quality in the teaching and learning process. The management , governing council have developed the following strategies in this regard. The Institution prepares academic calendar with respect to the university academic schedule. The calendar gives the information of the Institution, rules & regulations and specifies holidays and various events.

CRC & LRC monitors the implementation of Lesson plan and teaching methodologies. It conducts monthly meetings to review and suggest improvements.

CRC helps in designing the lesson plan and course plan for different courses across departments. The committee appoints chief course instructor for monitoring proper and quality delivery of lectures by the faculty and moderates the evaluation of blue books.

LRC ensures that experiments are conducted in accordance to the prescribed syllabus. The committee implements new and additional experiments for the better hands on experience of the students and faculty. It also monitors conduction of lab internal exams and purchase regarding lab requirements.
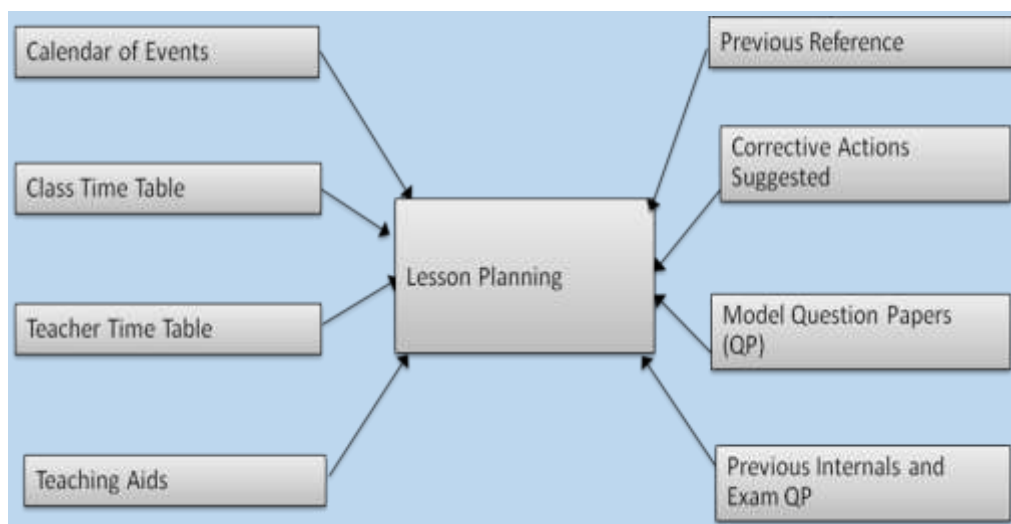
Apart from the Institution academic calendar, the individual departments organize their teaching plans, various co-curricular and extracurricular activities in the department calendar. The class time table is prepared, displayed at the departmental notice board, and circulated to the students.

Each faculty follows a lesson plan, which contains the details regarding the objectives to be achieved, details of the contents to be covered, the kinds of teaching aids to be used in the class room.

All faculty members use attendance register for the theory as well as laboratory courses handled by them. The attendance register contains details of students register number, name, attendance details, period wise syllabus coverage, periodical test marks, attendance percentage. Internal marks are calculated based on their performances in tests and assignments. Portion coverage is monitored by HODs and reported the same to the IQAC convener. In case of any deviation, special classes are planned.

The evaluation of students is done based on the periodical tests and is brought to the knowledge of the students by issuing the answer sheets with their comments and their parents are informed. When a student feels dissatisfied with marks allotted, he/she may seek the intervention of the HOD. If the problem still remains unaddressed, then the student may bring it to the attention of the principal.

The Institute ensures effective and efficient teaching learning process by:

Academic factor/Activity	Description (Justification)
Continuous Internal Assessment	**1. Assignments** Periodic assignments are given to students to test and supplement class room teaching. These assignments are evaluated on continuous basis to identify gaps in learning and subsequent remedial measures. **2. Internal Examinations** Periodic internal examinations (three per semester) are conducted to measure learning
Supplementary learning material	The following supplementary learning material is made available to the students to help them with regular course work. 1. Question Bank and VTU previous year Question Paper 2. Learning material from VTU e-learning Centre
Laboratory Work	Laboratory plans are prepared for each laboratory course. This plan includes number of experiments as prescribed in the curriculum. Apart from this, additional experiments/case studies are included in the plan. Laboratory manuals are prepared for all the experiments in the plan and are provided to the students at the time of practical. At the end of each experiment few assignment questions/problems are given. Continuous assessment system is also implemented for assessment of laboratory work. The assessment is done on the basis of timely submission of laboratory sheets, understanding of the experiment through oral questions and participation in performing the experiment. The student's performance in recorded in the student's lab status report.
Extra Coaching	Extra coaching is provided to students with poor academic performance as follows **1. ICP (Intensive Coaching Program) Classes.** These classes are conducted for students with poor performance in

	internal assessment tests. **2. Remedial Classes.** These classes are conducted for students failed in different subjects.
Guest lectures	Seminars/Guest lectures are conducted to cover concepts beyond the syllabus by Industrial experts.
Mentoring	Mentors are assigned to students at 1:20 ratio. The students can discuss their academic as well as personal problems to the mentor. These details are entered in mentoring sheets.
Soft skills training	Soft skill training from placement center is conducted which assists the overall development of students.

Research & Development:

The institution has created a very amiable atmosphere to the faculty members and students to involve themselves in research activities so as to face the challenges of the modern world. The institution has established Research and Development Cell and research committee is constituted to promote research aptitude among faculty and students with the following activities.

- Research committee regularly checks the quality of publications. The committee also verifies any sort of plagiarism and regularly guides the faculty and students to involve in research and publish their work in reputed conferences and journals.

- Recognized research centre are there for ME, EEE, ECE, CSE, TCE, ISE, MBA, MCA, Mathematics, Chemistry and Physics from VTU.

- Cultivates the culture of research among faculty, staff and students.

- Creates infrastructure for carrying out the research work by granting finance to departments (Data collection, equipments, publication work etc).

- Displays the expertise domains among faculty and students.

- Identifies interested faculty and students who can work on different domains

- Reviews library procurement of journals, magazines and other research publications (hard copies and e-subscriptions) and suggest improvements.

- Encourages faculty and students to use the facilities (hardware & digital library).

- Showcases prominently the research and project works of various groups.

- Encourages faculty & students to publish their research outcomes in conference with financial assistance and reward individual (or group) whose

outcomes have published in reputed journals.

- Invites research projects from faculty and students and finances innovative projects.

- Oversees the selection process of JRF/RA etc.

- Encourages faculties to submit their research proposals to funding agencies.

- Increases industry interaction for carrying out collaborative research works (It may start with invited talks, advisory board member, FDPs etc.)

- Updates CMRIT website about research activities and outcomes. Encourages faculty to create their website.

- Reviews the research proposals to be submitted to funding agencies as well as to CMRIT, and reviews the progress of project sanctioned.

- Supports PI/Co-PI for the successful completion of the project.

Community Engagement

Institution conducts community programs like

- Computer literacy drive

- Few student projects which have societal impact like traffic signal, irrigation wind energy etc.

  o Traffic Light Control: A remote-controlled *Hand-held device will enable traffic policemen manning junctions to change the sequence and timing of signals.*The trio has already conducted a round of discussion with traffic police top brass. The top brass are thrilled with the idea and is eagerly looking forward to a demonstration of the device.

o Wind Solar Hybrid System: The students set up a wind solar hybrid system and generated about 70-100 watts from the entire device(including a 50 MW Solar panel. The functional wind turbine was also tested to produce up to 100W of power. The wind turbine was self starting at about 4mph and can maintain its rotation at low speeds.

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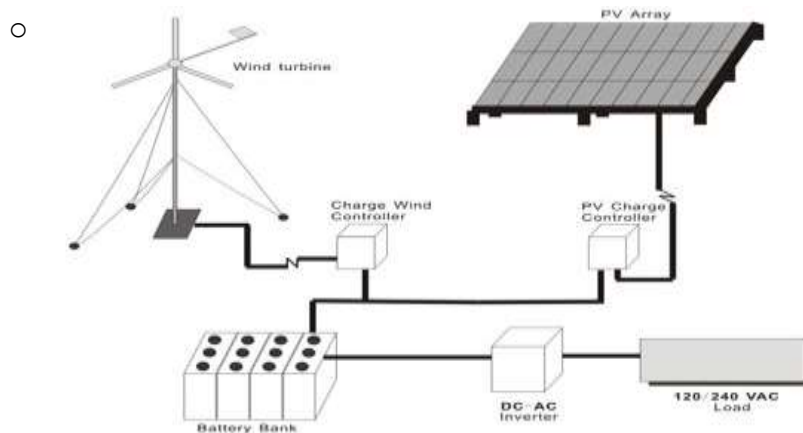
o Soldier rescue device- A prototype of RADAR was designed as soldier rescue device.The main objective of this project is to rescue the hidden soldiers from the dry snow whenever there is Avalanche.The students have done the coding in MATLAB software and the hardware model using ultrasonic sensors was also developed for giving the demo. The main parameter used in the project is the dielectric constant of the human body. They have proposed the idea of contact less (airborne) immediate rescue solution.

- Blood donation camps

- Tree plantation

- Health camps – (e.g. Eye check-up)

- Social charity towards orphanages, old-age homes by donating food, clothes and fulfilling other needs

- Through Women Empowerment Cell, the institution conducts sensitization and awareness programs against women exploitation and abuse.

- The Institution promotes cultural activities to nurture creative instinct in the students

- The Institution conducts sensitization and awareness programs about environment pollution control.

- The institution conducts entrepreneurship awareness program for government schools and colleges.

Human resource management:

- The institution uses evaluation methods for teaching/research of the faculty.

- The institution has definite strategies and implements them while recruiting and retaining faculty and other staff.

- The institution supports and ensures the professional development of the faculty through budget allocation for staff development. It sponsors the faculty for paper presentation in conference, participation in seminars, conferences, workshops, etc.

- The institution encourages research, membership of local, state, national and international professional associations.

- The institution organizes staff development programs and workshops for skill up gradation and training of the staff.

- Induction programmes are conducted for the faculty members.

Industry interaction:

- Institution involves the industry members for various academic and administrative committees.

- CEO meet is conducted regularly.

- Guest lectures are conducted as a way of enriching the students with the latest updates of the industries and technicalities.

- Industrial visit is an important activity in our undergraduate program.

- The institution supports visiting faculty to present their research and industrial knowledge to the students. Such events provide a great opportunity for students to get exposed to newer ideas or approaches.

- Center of excellence and incubation centre have been set up to facilitate interaction with industry. To mention a few, IBM centre of excellence, Infosys campus connect, TEXAS innovation lab etc. We also we have MoUs with various companies like SKF, EnlivingTechnologies, Bosh, Texas Instruments, Microsoft.

6.2.5   How does the Head of the institution ensure that adequate information (from feedback and personal contacts etc.) is available for the top management and the stakeholders, to review the activities of the institution?

- Principal conduct faculty meetings regarding the student feedback and the necessity for improvement in various aspects.

- Feedbacks are collected from parents during parents-teacher meetings held at regular intervals.

- Institutional performance is studied by the governing council of the institution.

- Internal quality checks, work log books are maintained by each teacher, every year feedback from the students is collected in the institution and in the hostels.

- The feedback received from various sources is shared with the concerned and are advised to improve further.

6.2.6   How does the management encourage and support involvement of the staff in improving the effectiveness and efficiency of the institutional processes?

Staff is involved in planning and implementation of all institutional processes. Some elements of the processes need to be worked upon time to time to ensure continuous improvement in the effectiveness and efficiency of the processes. To encourage the staff for their participation:

- Management appreciates and rewards the staff for their achievements in

academic and research activities.

- Management sponsors staff for STTPs, conferences, workshop and orientation programs.

- By providing special leaves for higher studies and attending courses.

- Management involves the staff members in various activities and decision making process related to the curricular, extra-curricular and administrative development of the institution.

- The staff members are involved as representatives/ members in various committees such as Grievance Redressal Committee, Staff academy/ staff welfare, etc. The suggestions of these committees are taken into consideration for major policy changes and decisions.

- The institution provides platform for interaction with eminent personalities from IITs and industries.

- The institution provides freeships and scholarships for the children of the staff.

- The management provides loan facility to the staff.

- The management also provides free transportation facilities for few staff members on request.

- A reward is given to faculty who have worked for the institution for a long duration (5, 10, 15 years and so on).

6.2.7   Enumerate the resolutions made by the Management Council in the last year and the status of implementation of such resolutions.

In the year 2015 Management council of CMRIT passed the following resolution to be met during the next academic year.

Resolutions:

- Improve Placements.

- Improve admissions.

- File NAAC Application

- Increase the number of scholarships given.

- Support the student participation in co-curricular activities.

- Submit more R&D proposals.

- Purchase more equipment.

- Actively involve alumni in development of the institution.

- Implement video conferencing facility.

Video conferencing is need of the hour for the professional students, to make them learn from the experts in their domain, either from research institutes like NAL, HAL, GTRE or from IITs and IISc. To connect students and staff to the experts at these centres, CMRIT is having state of the art facility to telecast running lecture from any geographical location. This centre is presently situated in the central library.

INITIATIVES TO IMPROVE PLACEMENT ACTIVITIES:

- Students are prepared based on the market requirement by conducting Prepare programs from V Semester.

- Technical and the Personality Development (along with aptitude, behavioral aspects) training programs are conducted for the students in the semester holidays in the month of July every year.

BUDGET APPROVAL:

Principalpresentedthebudgetplanfortheyear2015–16andafteranelaborate discussion the same was unanimously approved.

NAAC ACCREDITATION:

Principal informed all the members that CMRIT is going for NAAC Accreditation and the process for the same will be started very shortly. After an elaborate discussion about NAAC accreditation and its advantages for the institution, it is unanimously agreed to apply for NAAC accreditation status for the institution.

SPORTS:

Principal presented the list of awards received by the students in various sports activities in the year 2016. CMRIT students were the champions in VTU Inter collegiate football, volleyball, hockey and basketball tournaments.

INSTITUTIONALACHIEVEMENTS:

Principal also presented the other institutional achievements other than academics and sports.

6.2.8 Does the affiliating university make a provision for according the status of autonomy to an affiliated institution? If 'yes', what are the efforts made by the institution in obtaining autonomy?

Yes, the affiliating authority does make a provision for according the status of autonomy to an affiliated institution. Keeping the trend of the academics in mind, the college has submitted necessary documents for obtaining autonomy and it is in the process. Meanwhile, Legislation of Govt of Karnataka has passed a bill recognising CMR group as state private university in the name and style of "CMR UNIVERSITY"

6.2.9 How does the Institution ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyse the nature of grievances for promoting better stakeholder relationship?

The institute has a grievance redressal mechanism in place. A central grievance redressal committee is formed to keep a healthy working environment amongst staff, students and parents. The committee records complaints related to academics, resources and personal grievances. The constitution of the committee is as given below.

S. No.	Name	Designation
1	Dr. C.M. Bhaskar Reddy	Director
2	Dr. Sanjay Chitnis	Principal
3	Dr. B. Narasimhamurthy	Vice-Principal
4	Dr. H.N. Shankar	Dean –Academics and Research
5	Prof. Pappa M.	Coordinator (UG) , Dept. of Electronics & Communication Engineering
6	Prof. Sanitha Michail C.	Coordinator (UG), Electrical & Electronics Engineering
7	Prof.Swathi M.	Coordinator (UG) – Dept. of Computer Science & Engineering
8	Prof. Rajedra Prasad Reddy	Coordinator (UG) – Dept. of Mechanical Engineering
9	Prof. Sujatha S.	Head of the department – Telecommunication Engineering
10	Prof.Manoj Challa	Coordinator (UG) – Dept. of Information Science Engineering
11	Prof. Karthik M.	Coordinator (UG) – Dept. of Civil Engineering
12	Prof. Raveesha K. H.	Head of the department of Physics
13	Mr. Viswanth N.	Office superintendent
14	Mr. Eswara Reddy	Campus manager
15	Mrs. Kavitha	Hostel in-charge
16	Mr. Hegde	Hostel warden (Boys)
17	Mrs. Nirmala	Hostel warden (Girls)
18	Mrs. Nagarathna S.R.	Librarian
19	Sri Vaman. D. Gudi	Ombudsman, VTU

- **The mechanism and composition of grievance redressal system:**Decentralized functioning being quite effectively practiced, the redressal of majority of the grievances is eventually taken care by the respective department and the faculty. To address the women's complaints, women's grievances redressal committee and sexual harassment committee are in place. The issues of hostel students are considered by an anti-ragging committee. There is a separate committee to address any other grievances. The composition and working of these committees are in compliance with the university norms. Grievance boxes are also placed in the campus. The grievances can also be mailed to grievances@cmrit.ac.in. The composition of different grievance redressal committees is given below.

Women's Grievances Redressal Committee

S.No.	Name	Designation
1	Prof. Pappa M., Coordinator (UG), Dept. of ECE	Chairman
2	Prof. Sujatha S., HOD of TCE	Member
3	Prof. Raveesha K. H., HOD of Physics	Member
4	Dr. Indira Chaitnya Lekshmi, Prof. of Chemistry	Member
6	Mr. Sujith C. Pani	Advocate
7	Ms. Deepa Mani	Social Worker

Anti Ragging Committee

S.No.	Name	Designation
1	Dr Sanjay Chitnis, Principal	Chairman
2	Prof.Raveesha K.H., HOD of Physics	Member
3	Dr. Fazlur Rahaman, HOD of Chemistry	Member
4	Dr. Kamal Kumar, Prof of Mathematics	Member
5	Prof. Srinivas Reddy, Prof of Mechanical	Member
6	Prof. Pappa M., Coordinator (UG), Dept. of ECE	Member
9	Mr. Manjunatha. S. N.	Sub inspector, Mahadevapura, Police station
10	Mr. Divyam Raj	Student representative, 8th sem, TCE
11	Dr. Bhaskar Reddy	Management Representative

Anti Sexual Harassment Committee

S.No.	Name	Designation
1	Dr. Sanjay Chitnis	Principal & Chairman
2	Dr. K. Meenakshi	Convener
3	Dr. Manjunatha M.	Member
4	Mr. Shiva Reddy G.V.	Member

5	Mrs. Reba Kundu	Member
6	Mrs Keka M.	Member
7	Mrs Suganya J.	Member
8	Mrs Sujatha S.	Member
9	Mr Prathap D.	Member

Other Grievances Redressal Committee

S.No.	Name	Designation
1	Dr. Sanjay Chitnis, Principal	Chairman
2	Dr. Narasimhamurthy B., Vice Principal	Member-Secretary
3	Prof. Pappa M. Coordinator (UG), Dept. of ECE	Member
4	Prof. Sanitha Michail C., Coordinator (UG), Dept. of EEE	Member
5	Prof. Swathi M., Coordinator (UG), Dept. of CSE	Member
6	Prof. Rajedra Prasad Reddy, Coordinator (UG), Dept. of ME	Member

The suggestions are collected and compiled by the grievance redressal cell every month and action will be taken as per the guidelines and rules and regulations of institution, university and other government agencies.

6.2.10   During the last four years, had there been any instances of court cases filed by and against the institute? Provide details on the issues and decisions of the courts on these?

No

6.2.11   Does the Institution have a mechanism for analysing student feedback on institutional performance?If 'yes', what was the outcome and response of the institution to such an effort?

The institute has a clearly set and defined mechanism for obtaining the feedback from the students so as to improve the performance and quality of the institutional provisions. Student feedback is periodically collected through Enterprise Resource Planning (ERP) software system. The suggestions obtained from the feedback are considered by the management, and all viable solutions are implemented.

Feedback analysis and reward / corrective measures taken

➢ Recognizing the vital role of feedback process in teaching- learning, we solicit students' feedback twice in a semester.
➢ This online process is entirely transparent.

➢ Students are given a questionnaire which stresses on quality, discipline, sincerity, productivity and their suggestions and comments are solicited. The consolidated report is generated.

➢ Feedback analysis process: The feedback is shared with faculty and management. Principal studies the report and discusses the details of the feedback with individual faculty.

➢ For better performance of faculty, additional training programs like Avanti (an innovative teaching learning practice through peer instruction), FDP's are conducted and senior faculties monitor the class for evaluation and improvement.

➢ At the end of the semester, faculty demos are conducted and experts give feedback to improve the quality of teaching.

➢ Rewards and corrective measures: Once a year teachers are felicitated for better performance. Best teacher awards have been instituted in this regard.

Feedback on facilities:

➢ Student's feedback on facilities is collected through suggestion box, tickets raised in ERP.

➢ Every student is given CMRIT email ID through which they report to Principal/ Vice Principal/ faculty mentors.

➢ On a daily basis facility manager in consultation with Principal initiates action and submits compliance report.

➢ Grievance Redressal Committee scrutinizes the grievances submitted by the employees and students (through the suggestion Box /by person/email) and suggests the recommendations to the Principal for suitable action.

➢ College Hostel Committee periodically visits boys and girls hostels to ensure that the students adhere to the rules and regulations of the hostels. The committee reports to the vice principal on the services like amenities, quality of food, hygiene etc. in the hostel.

➢ College Canteen Committee scrutinizes the quality of food, drinking water, hygenity in the canteen and reports to the Principal.

➢ Anti Ragging Committee monitors discipline among students' community in classroom as well as at other places and collect relevant evidences of incidents of indiscipline. In matters regarding law and order situation in the institute, the committee communicates with District administration.

6.3 Faculty Empowerment Strategies

6.3.1   What are the efforts made by the institution to enhance the professional development of its teaching and non-teaching staff?

• The institute deputes the faculty to attend workshops, conferences, seminars etc.

- The institute organizes in-house faculty development programs, administrative skills development programs, value based programs, and teaching-learning courses to enhance professionalism.

- The institute assists and encourages faculty to be a member of local, national, international, professional bodies and societies.

- The institute motivates the faculty and staff for arranging industrial training programs/visits.

- The institute motivates the faculty for research and development by providing seed money, digital library and research equipment and labs.

- The institute promotes research culture and research publication by creating infrastructure to carry out research work and run projects,

- The institute motivates the non-teaching staff to attend skill development and training program. It allows them to attend courses to improve their educational qualification.

- Institute organizes training programs on office automation, use of open source software etc.

6.3.2 What are the strategies adopted by the institution for faculty empowerment through training, retraining and motivating the employees for the roles and responsibility they perform?

For administrative skill development of staff, the institute organizes corporate training programs. For personality development, teaching skill development and social and technical up gradation, the institute organizes training programs in the following manner.

- The institute deputes the faculty for training organized by other organizations. For example, refreshers courses, orientation programs, etc.

- The institute invites resource persons such as industrialists, researchers and academicians for interactions with the staff.

- The institute encourages the senior faculty to motivate the junior faculty in following ways –

    1. Giving essential inputs, providing personal training on lecture/labwork /seminar-project guiding, counseling on career advancement.

2. Involving them in deep discussions on topics within the syllabus and beyond the syllabus.

3. Creating an open atmosphere for personal growth and to clarify the doubts, concepts and difficulties.

4. Conducting orientation program about the policies and procedures prevailing in the institution.

6.3.3 Provide details on the performance appraisal system of the staff to evaluate and ensure that information on multiple activities is appropriately captured and considered for better appraisal.

Faculties of CMRIT are assessed for their effective teaching methodologies from the students twice in a semester. This process is an online one, and is conducted at college level and is fool-proof. The faculty is assessed against well designed questions which cover all aspects of effective teaching methodologies such as:

- Adequacy of the coverage of topics in the syllabus

- Effectiveness of the board-work

- Effectiveness of explanation of the concepts

- Adequacy of discussion of problems (if applicable) in the class

- Adequacy of revision of difficult portions of the syllabus

- Quality of response to your questions in the class

- Extent of technical interactiveness with the class

- Discussion of any interesting topic beyond the syllabus but relevant to the field

- Effectiveness of time utilization in the class

- Coverage in the assignments of the topics in the syllabus

- Helpfulness of the online course material (question bank etc.) and assignments for you to understand and prepare for tests and examination.

- Usefulness of the question paper(s) of internal test(s) in your preparation for the examination.

- Appropriateness of evaluation of the internal test blue books.

- Evaluation of blue books within a reasonable period and discussion of the solutions in the class

- Audibility and clarity of speech

- Maintenance of overall discipline of the class

- Punctuality

- Accessibility and availability after the class hours in the college

- Accessibility over email or phone

- Your overall acceptability of this teacher to teach you in any further semester

The each question is measured in the category of Excellent(5),VeryGood (4), Good (3), Average (2), Poor (1).The final assessment(overallrating)is made as per the equation mentioned below:

The overall rating is on the scale of 1 to 5.Soon after the feedback collection the in-charge staff will submit the department wise report to the Principal for necessary action. After the Principal verification faculty report will send to respective HODs.

The list of faculties having overall rating more than 4 and less than 3 are made available for reward and corrective measures respectively.

Also 360º feedback will be collected like the feedback from students, peers, HODs, Principal, parents, placement, industry, etc. Periodically these feedbacks are reviewed.

6.3.4   What is the outcome of the review of the performance appraisal reports by the management and the major decisions taken? How are they communicated to the appropriate stakeholders?

Corrective Measures

A meeting of Principal, Head of Department and the faculty performing below average is carried out after every feedback. The points of discussion are regarding preparation of the subject, student class control, methodology and are advised to improve by the next feedback. At the end of the semester, faculty seminars and demos are conducted and experts give feedback to improve the quality of teaching

6.3.5   What are the welfare schemes available for teaching and non-teaching staff? What percentage of staff have availed the benefit of such schemes in the last four years?

The institution has always realized that a contented employee is always an asset for the working organization. A healthy and good retention is maintained in the faculty cadre by creating a good environment and providing incentives as detailed below.

Staff Welfare Schemes	Number of Faculties benefitted (Department wise)											
	Physics	Chemistry	Mathematics	CSE	ISE	EEE	ECE	TCE	ME	CIVIL	MBA	MCA
Research Publications Incentive(RPI)	01	10	02	05	NA	7	7	NA	NA	4	NA	NA
Funded Project Incentive (FPI)	01	NA	NA	NA	NA	4	NA	1	1	NA	NA	NA
Industrial Consultancy Incentive (ICI)	NA	NA	NA	NA	NA	1	NA	NA	1	NA	NA	NA
Patent Incentive (PI)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

6.3.6 What are the measures taken by the Institution for attracting and retaining eminent faculty?

The institute offers freedom at work, and gives opportunity to excel in the domain of an individual. Also, it assigns higher administrative posts to the eminent faculty.

- Additional incentives/increments are provided to experienced and qualified ad-hoc faculty.

- The institute provides functional office infrastructure and other space to carry out their work effectively.

- For retaining the eminent faculty, budget is allocated for staff development, advanced study, research, participation in seminar, conference, workshop etc.

- Decentralized academic environment, good governance and flexibility in the teaching–learning process are provided in the institute. Due to these factors, the faculty gets full job satisfaction in their field.

- The institution has offered 6th pay for experienced faculty.

- The institution also offers higher packages for deserving candidates and thus retains them.

6.4 Financial Management and Resource Mobilization

6.4.1 What is the institutional mechanism to monitor effective and efficient use of available financial resources?

- Budget estimation from various laboratory in-charges for purchasing new equipment/software and the amount required for conducting various programs like guest lecture, workshop, faculty development program and seminar is estimated by a team of faculties under the guidance of Head of the Department.

- This exercise is carried out taking the recurring and non-recurring expenditure requirements for the department for the entire year and submitted to the Principal.

- Administrative officer and Principal consolidate the college level requirement and prepare the detailed budget. The approval is given on priority basis keeping in mind all the sections of the proposal have fair share. The comprehensive budget proposal is placed to the management committee for final approval.

- Any additional requirements that arise due to unforeseen expenditure shall be discussed in the HODs meeting and management committee is requested to ratify.

- Purchases will be made with the recommendations of duly constituted purchase committee.

- The amounts withdrawn from the banks will follow a systematic mechanism of obtaining the approval at various levels.

- Audit is done by the Chartered Accountants, at the end of the every year.

6.4.2 What are the institutional mechanisms for internal and external audit? When was the last audit done and what are the major audit objections? Provide the details on compliance.

Academic and financial audit for compliance of well established practices is an important part of evaluation which can provide valuable feedback for continuous improvement. External audit through Local inspection committee from the affiliating university is conducted once a year and by NBA once in 3 years.

The Academic Audit is a faculty-driven model of ongoing self-reflection, collaboration, teamwork and peer feedback. It is based on structured conversations

among faculty, stakeholders and peer reviewers all focused on a common goal: to improve quality processes in teaching and learning and thus enhance student success."

The scope of the Academic Audit at Program level is all seven NBA criteria at the program level. For Institute level audit, 8-10 criteria will be used.

The scope of the audit can be extended / reduced or can focus on specific area at the discretion of the management for any audit instance.

Audit Process

The audit is done by experienced and independent team based on checklist. It is based on verification of documents (direct evidences) as well as interaction with staff, students and stakeholders (indirect evidences).

IQAC forms audit teams to initiate audits as per the periodicity mentioned in the following table.

Field		Remarks
Attainment of Vision, Mission		Details: Lesson Plan: Check for identified Gap with mapping to PO/PSO and Plan for learning activity to close the Gap
Infrastructural facilities		
Program Curriculum and teaching learning process		
CO- PO -PSO attainment	Beginning /End of year	
Student performance		Curricular activities: Organising workshops/conferences/project exhibition/guest lectures /industry visits/etc
placements, higher studies, entrepreneurship		
Faculty schemes		
Faculty contributions		
Facilities and Technical Support		Extracurricular activities: Student clubs/Cultural activities/NSS/etc
Continuous Improvement of qualification		

Details of previous audit, major observations and their compliance is provided in annexure.

6.4.3   What are the major sources of institutional receipts/funding and how is the deficit managed? Provide audited income and expenditure statement of academic and administrative activities of the previous four years and the reserve fund/corpus available with Institutions, if any.

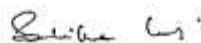# AUDITED STATEMENT OF INCOME & EXPENDITURE

Financial year 2012-13 (PG Programs)

CMR INSTITUTE OF TECHNOLOGY - PG STUDIES

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED
31ST MARCH 2013

Previous Year	Expenditure	Sch No.	Amount Rs.	Previous Year	Income	Sch No.	Amount Rs.
1,03,51,492	Remunaration to Staff	4	1,46,56,794	3,53,05,554	Fees	8	4,60,38,182
9,93,701	Administation Expenses	5	6,45,098	1,89,003	Other Income	9	1,89,175
3,85,679	Repairs & Maintenance	6	16,83,103				
15,78,204	Other Expenses	7	19,52,182				
850	Forex Loss						
3,50,969	Depreciation		2,62,422				
2,18,33,662	Income over Expenditure for the year		2,70,27,758				
3,54,94,557	Total		4,62,27,357	3,54,94,557	Total		4,62,27,357

As per our report of even date attached

For C.M.R.INSTITUTE OF TECHNOLOGIES
PG STUDIES

President

For SUNDARESHA & ASSOCIATES
Chartered Accountants
(Firm Registration No.008012S)

Partner

C.M.R.INSTITUTE OF TECHNOLOGIES - PG STUDIES

SCHEDULES ANNEXED TO AND FORMING PART OF BALANCE SHEET AS AT 31.03.2013
AND INCOME & EXPENDITURE ACCOUNT FOR THE YEAR ENDED ON THAT DATE

Sch No.	Particulars	Amount Rs.	Amount Rs.	Previous Year
1	CMR JNANADHARA TRUST			
	Opening Balance as on 01.04.12		28,25,449	21,44,025
	Add: Receipt during the year	15,19,409		30,43,150
	Excess of income over expenditure	2,70,27,758	2,85,47,167	2,18,33,662
			3,13,72,616	2,70,20,837
	Less: Remittance during the year		2,70,15,000	2,41,95,388
	Closing balance as on 31.3.2013		43,57,616	28,25,449
3	CASH & BANK BALANCES			
	Bank of India, Account No.3112		35,79,859	14,02,325
	Bank of India, Account No.3993		414	1,839
	Bank of India, Account No.3994		1,516	1,457
	Cash on Hand		87,750	-
			36,69,539	14,05,621
4	REMUNERATION TO STAFF			
	Salary		1,43,05,471	99,85,313
	Professional Tax		71,250	60,550
	EPF Payment		90,523	71,904
	Visiting Faculty		1,89,550	2,33,725
			1,46,56,794	1,03,51,492
5	ADMINISTRATION EXPENSES			
	Photo copying Expenses Paid		23,893	34,015
	Advertisement		56,180	2,92,295
	Printing & Stationery		5,43,993	6,43,798
	Postage and Telegram		720	2,222
	Promotional Expenses		12,500	15,000
	Conveyance		7,812	6,371
			6,45,098	9,93,701

for CMR JNANADHARA TRUST

President

M/s.C.M.R.INSTITUTE OF TECHNOLOGIES - PG STUDIES

Sch No.	Particulars	Amount Rs.	Amount Rs.	Previous Year
6	REPAIRS & MAINTENANCE			
	Housekeeping Expenses		65,911	71,627
	Institute Maintenance Charges		2,73,994	1,09,259
	Computer Maintenance and Stationery		18,972	32,366
	Electrical Repairs and Maintenance		4,25,668	55,963
	Repair & Renewal Expenses		8,36,445	92,937
	Generator Maintainance Expenses		60,317	23,527
	Lab Repair & Maintainance		1,795	-
			16,83,103	3,85,679
7	OTHER EXPENSES			
	VTU Belgaum		1,28,700	9,33,611
	AICTE		2,00,000	3,00,000
	Membership & Subscription		1,08,865	1,08,138
	Function & other Activities		1,54,940	99,480
	Honorarium		23,000	25,010
	Income/Student not Reported		4,33,736	-
	Bank charges		3,271	3,673
	Consultancey Charges Paid		3,50,000	15,000
	ID Card Expenses		1,670	3,292
	Scholarship		1,10,000	90,000
	Value Added Course		4,38,000	-
			19,52,182	15,78,204
8	FEES			
	Tution Fees	3,94,48,152		3,08,73,342
	Less: Fees Receivable	-	3,94,48,152	8,08,250
				3,00,65,092
	Examination Fees		12,67,820	8,55,300
	College Fees		54,48,810	4422662
	Convocation Fees		80,400	1,01,500
			4,62,45,182	3,54,44,554
	Less: Refund of Fees		2,07,000	1,39,000
			4,60,38,182	3,53,05,554
9	OTHER INCOME			
	Bank Interest		1,31,876	1,60,075
	Fine		19,120	10,400
	Miscellaneous Income		9,979	10,928
	Other Income		21,270	-
	Application Fees		6,930	7,600.00
			1,89,175	1,89,003

for CMR JNANADHARA TRUST

President

CMR INSTITUTE OF TECHNOLOGY - PG STUDIES

SCHEDULE - 2

SCHEDULE TO FIXED ASSETS AS AT 31ST MARCH 2013

Particulars	W.D.V as on 01.04.12	Additions Before 30.09.12	After 01.10.12	Total	Rate of Deprn	Deprn for the year	W.D.V as on 31.03.2013
Plant & Machinery	4,22,273	1,00,116	-	5,22,389	15%	78,358	4,44,031
Furniture & Fixture	6,99,703	61,674	9,120	7,70,497	10%	76,594	6,93,903
Computer	89,707	-	-	89,707	60%	53,824	35,883
Networking	3,999	-	-	3,999	60%	2,399	1,600
Books	3,41,646	-	-	3,41,646	15%	51,247	2,90,399
Total	15,57,328	1,61,790	9,120	17,28,238		2,62,422	14,65,816

for CMR JNANADHARA TRUST

President

Financial year 2013-14 (UG Programs)

CMR INSTITUTE OF TECHONOLOGY

BALANCE SHEET AS AT 31ST MARCH 2014

Previous Year	Liabilities	Sch No.	Amount Rs.	Previous Year	Assets	Sch No.	Amount Rs.
26,97,10,859	CMR JNANADHARA TRUST	1	37,40,93,187	26,37,28,744	FIXED ASSETS	3	36,98,95,362
					CURRENT ASSET & LOANS & ADVANCES CURRENT ASSET		
34,65,842	CURRENT LIABILITIES	2	43,97,896	23,800	Cash In Hand		.
				86,53,066	Cash At Bank	4	79,38,253
				7,71,091	LOANS & ADVANCES	5	6,57,468
27,31,76,701	Total		37,84,91,083	27,31,76,701	Total		37,84,91,083

As per our report of even date attached

For CMR INSTITUTE OF TECHNOLOGY

For CMR JNANADHARA TRUST

President
President

For SUNDARESHA & ASSOCIATES
Chartered Accountants
(Firm Registration No 0080125)

Partner

Place: Bangalore

Date : 08.09.2014

CMR INSTITUTE OF TECHONOLOGY

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31ST MARCH 2014

Previous Year	Expenditure	Sch No.	Amount Rs.	Previous Year	Income	Sch No.	Amount Rs.
1,10,62,827	Administrative Charges	6	1,58,89,532	27,07,96,485	Tution and Other fees		31,50,51,880
8,50,42,218	Remuneration to Staff	7	10,85,29,840	34,88,287	Other Income	10	34,69,423
70,30,731	Repairs & Maintenance	8	1,10,87,258				
2,76,05,698	Other Expenses	9	2,83,06,900				
2,89,75,710	Depreciation		3,06,07,803				
11,43,67,588	Excess of Income over Expenditure for the year		12,40,99,970				
27,42,84,772	Total		31,85,21,303	27,42,84,772	Total		31,85,21,303

As per our report of even date attached

For CMR INSTITUTE OF TECHNOLOGY

For CMR JNANADHARA TRUST

President
President

For SUNDARESHA & ASSOCIATES
Chartered Accountants
(Firm Registration No.008012S)

Partner

Place: Bangalore
Date : 08 09 2014

CMR INSTITUTE OF TECHONOLOGY

SCHEDULES ANNEXED TO AND FORMING PART OF BALANCE SHEET
AS AT 31ST MARCH 2014 AND INCOME & EXPENDITURE ACCOUNT
FOR THE YEAR ENDED ON THAT DATE

Sch No.	Particulars		Amount Rs.	Previous Year
1	CMR JNANADHARA TRUST			
	Opening Balance as on 01.04.2013		26,97,10,859	21,37,08,588
	Add: Receipt during the year		15,52,83,058	8,66,99,683
	Excess of income over expenditure		12,40,99,970	11,43,67,588
			54,90,93,887	41,47,75,859
	Less: Remittance during the year		17,50,00,700	14,50,65,000
	Balance as on 31.03.2014		37,40,93,187	26,97,10,859
2	CURRENT LIABILITIES			
	Advance for Admissions		-	1,27,450
	Scholarship		35,03,121	13,84,281
	CMR Institute of Technology - PG Studies		3,17,500	4,62,500
	Canteen Deposit		50,000	-
	CMR Institute of Management and Technology		22,001	-
	Grant In Aid -Grant - AICTE-EC Dept-Capital Grant			
	Opening Balance	2,733		
	Less: Amount Spent during the year	2,733		
	Balance in hand	-	-	2,733
	Grant In Aid -Grant - Vision Group on Science & Technology-Revenue Grant			
	Opening Balance	3,527		
	Less: Amount Spent during the year	3,527		
	Balance in hand	-	-	3,527
	Grant - Center of Excellance Audio&Video- Capital			
	Opening Balance	607		
	Less: Amount Spent during the year	607		
	Balance in hand	-	-	607
	Grant - Internet Working Wifi - Cap Inv		1,97,000	1,97,000
	Grant - Ministry of Dept of Science & Tech - Capit		-	1,775
	Grant - VGST			
	Opening Balance	-		
	Add: Received during the year	80,000		
	Less: Amount Spent during the year	75,726		
	Balance in hand	4,274	4,274	-
	Grant- Ministery of Dept of Science & Tech Revenue			
	Opening Balance	3,16,891		
	Less: Amount Spent during the year	3,16,891		
	Balance in hand	-	-	3,16,891

For CMR JNANADHARA TRUST

[signature]

President

CMR INSTITUTE OF TECHONOGY

Sch No.	Particulars	Amount Rs	Previous Year
	Grant - VTU Research Grant - Robust ED		
	Opening Balance	3,575	
	Received during the year	4,490	
	Less: Amount Spent during the year	8,065	
	Balance in hand	-	3,575
	Grant - Vtu Research Project - Dept of Biotech		
	Opening Balance	6,30,004	
	Received during the year	-	
	Less: Amount Spent during the year	6,30,004	
	Balance in hand	-	6,30,004
	Grant - WMN Broadband on Powerline		
	Opening Balance	3,04,000	
	Received during the year	-	
	Balance in hand	3,04,000	3,04,000	3,04,000
	GEP 2012-13 Caution Deposit	-	31,500
		43,97,896	34,65,842
4	CASH AT BANK		
	BOI A/c No.8434110110003989	4,19,142	27,350
	BOI A/c Cmrit Research - 4815	6,494	6,242
	BOI A/c No.242 AECS Layout	8,04,104	56,77,263
	BOI A/C NO.535 Fest	6,89,168	3,92,897
	BOI A/c No.536 Scholarship - AECS	33,66,583	12,68,494
	BOI A/c No.8434110110003987	3,21,920	8,254
	BOI A/c No.8434110110003988	1,54,970	5,932
	BOI A/c No.8434110110003990	3,02,170	79,735
	BOI A/c No.8434110110003991	12,77,426	8,638
	BOI A/c No.8434110110006051	49,893	3,652
	BOI A/c No.8434110110006396	-	1,305
	BOI A/c No.8434110110006687	-	3,30,944
	BOI A/c No.8434110110006929	-	7,946
	BOI A/c No.8434110110007547	5,22,804	2,02,945
	BOI A/c No.8434103700000026	6,450	6,31,469
	BOI A/c No.8434110110011532	3,953	-
	Boi A/c No.8434110110011533	11,176	-
	BOI A/c No 8434102100000003	1,000	-
	BOI A/c No 8434102100000004	1,000	-
		79,38,253	86,53,066

For CMR JNANADHARA TRUST

Solim G.

President

CMR INSTITUTE OF TECHONOLOGY

SCHEDULE - 3

SCHEDULE TO FIXED ASSETS AS AT 31ST MARCH 2014

Particulars	W.D.V as on 01.04.13	Additions Before 30.09.13	Additions After 1.10.13	Total	Rate of Deprn	Deprn for the year	W.D.V as on 31.03.2014
Land scape	1,48,85,819	-	-	1,48,85,819	-	-	1,48,85,819
Building	10,97,42,071	37,41,110	58,04,186	11,92,87,367	10%	1,16,38,527	10,76,48,840
Building -Auditorium	2,63,92,646	-	-	2,63,92,646	10%	26,39,265	2,37,53,381
Furniture & Fixtures	1,59,07,319	47,75,130	65,42,632	2,72,25,081	10%	23,95,377	2,48,29,704
Plant & Machinery	3,18,81,093	43,35,940	95,00,549	4,57,17,582	15%	61,45,096	3,95,72,486
Computers	48,04,322	64,60,000	15,08,321	1,27,72,643	60%	72,11,089	55,61,554
Books	33,43,990	1,06,892	8,10,884	42,61,766	15%	5,78,449	36,83,317
Capital Work In Progress							
Building-CMRIT-Mech/ Hostel Block	5,67,71,484	6,25,57,082	2,95,31,695	14,88,60,261		-	14,88,60,261
Intangible asset under development	-	-	11,00,000	11,00,000			11,00,000
Total	26,37,28,744	8,19,76,154	5,47,98,267	40,05,03,165		3,06,07,803	36,98,95,362

For CMR JNANADHARA TRUST

President

CMR INSTITUTE OF TECHONOGY

Sch No.	Particulars	Amount Rs	Previous Year
5	**LOANS & ADVANCES**		
	Electricity Deposit	96,070	96,070
	Gas Deposit	15,000	15,000
	Telephone Deposit	4,000	4,000
	Tax Deducted at Source	9,934	567
	Lap Top Toshibha -Stock	-	4,39,990
	Robotics workshop-dept mech	30,036	30,036
	Tax Deducted at Source	5,428	5,428
	Salary Advance	3,47,000	30,000
	Water Supply Advance	1,50,000	1,50,000
		6,57,468	7,71,091
6	**ADMINISTRATION EXPENSES**		
	Postage & Telegram	76,245	2,630
	Electricity Charges	45,98,608	35,66,967
	Photocopying Expenses	95,835	80,309
	Courier Charges	53,686	55,599
	Printing & Stationery	55,20,854	36,81,566
	Conveyance Expenses	3,55,537	2,24,597
	Telephone Charges	1,75,747	1,77,993
	News Paper & Periodicals	54,146	24,629
	Advertisement	7,91,746	9,93,189
	Consultation Charges	6,19,500	7,24,000
	Internet Subcription Charges	14,42,235	8,37,862
	Staff Welfare Expenses	1,36,030	-
	Professional Charges	19,55,205	6,37,164
	Research and Development	11,942	-
	Travelling Expenses	2,216	56,322
		1,58,89,532	1,10,62,827
7	**REMUNERATION TO STAFF**		
	Salary	10,71,12,983	8,41,96,335
	Visiting faculty Payment	15,000	14,000
	EPF Payment	9,30,943	8,31,883
	ESI Payment	4,70,914	-
		10,85,29,840	8,50,42,218

For CMR JNANADHARA TRUST

President

CMR INSTITUTE OF TECHONOGY

Sch No.	Particulars	Amount Rs.	Previous Year
8	REPAIRS & MAINTENANCE		
	Institute Maintenance Expenses	12,78,169	15,57.095
	Electricitical Maintenance	5,61,007	1,69,431
	House Keeping Expenses	5,36,011	12,23,660
	Lab Maintenance	6,76,136	2,06.712
	Computer Maintenance	2,52,657	1,57,128
	Generator Maintenance	2,70,571	1,49,775
	Other Repairs & Maintenance	55,66,245	27,44,463
	Annnual Mainteneance Charges	4,59,943	3,44,250
	Network - Support Charges	3,74,540	4,48,761
	Vehicle Repairs and Maintenance	16,510	10,852
	Computer Software Development Charges	7,86,520	-
	Vehicle insurance	15,134	18,604
	Garden Maintenance Expenses	2,93,815	-
		1,10,87,258	70,30,731
9	OTHER EXPENSES		
	Remittance Of fee to VTU Belgaum	1,26,96,385	1,32,88,240
	Student Expenses -Laptop Distributed	-	3,54,750
	AICTE	-	6,00,000
	Membership & Subscription	1,67,342	2,28,316
	Function & Other Activity	13,49,043	14,52,093
	Fest Expenses	14,41,494	7,31,833
	Prize and Scholarship	4,95,610	5,45,949
	Honarium	22,556	5,56,500
	Bank Charges	13,106	18,078
	Comed K Councelling Charges	75,000	55,000
	Donation	1,00,000	-
	ID Card Expenses	2,46,691	2,09,217
	Value Added Programme	1,16,22,250	93,31,800
	Association of Indian universities	-	99,000
	State Teachers Welfare Fund	36,630	91,005
	Grant amount disbursed	9,14,020	
	Less:-Grant amount received	8,73,227	40,793	2,41,317
		2,83,06,900	2,78,05,698
10	OTHER INCOME		
	Fines recovered	3,03,133	11,80,693
	Photo copying charges	4,77,220	5,62,400
	Bank Interest Received	10,59,103	8,06,038
	Fest Account	4,48,100	4,13,677
	Rent	4,24,771	1,07,489
	Other Income	7,57,096	4,17,990
		34,69,423	34,88,287

For CMR JNANADHARA TRUST

President

Financial Year 2015 (PG)

CMR INSTITUTE OF TECHNOLOGY - PG STUDIES

BALANCE SHEET AS AT 31ST MARCH 2015

Previous Year	Liabilities	Sch No.	Amount Rs.	Previous Year	Assets	Sch No.	Amount Rs.
46,22,061	CMR Jnanadhara Trust	1	32,95,828	12,63,771	FIXED ASSETS	2	11,41,155
					CURRENT ASSETS, LOANS ADVANCES AND DEPOSITS		
				243	Tax Deducterd at Source		-
				30,40,547	Cash & bank balances	3	21,54,673
					Inter College Balance		
				3,17,500	CMR Institute of Technology		-
46,22,061	Total		32,95,828	46,22,061	Total		32,95,828

As per our report of even date attached

For C.M.R.INSTITUTE OF TECHNOLOGY
PG STUDIES

President

For SUNDARESHA & ASSOCIATES
Chartered Accountants
(Firm Registration No.008012S)

(C RAMESH)
Membership No.22268
Partner

Place: Bangalore
Date : 09.09.2015

Financial Year 2015 (For UG)

CMR INSTITUTE OF TECHONOLOGY

BALANCE SHEET AS AT 31ST MARCH 2015

Previous Year	Liabilities	Sch No.	Amount Rs.	Previous Year	Assets	Sch No.	Amount Rs.
37,40,93,187	CMR JNANADHARA TRUST	1	37,25,41,884	36,98,95,362	FIXED ASSETS	3	36,57,71,478
					CURRENT ASSET & LOANS & ADVANCES CURRENT ASSET		
43,97,896	CURRENT LIABILITIES	2	1,40,81,296	-	Cash In Hand		1,03,175
				79,38,253	Cash At Bank	4	1,89,48,953
				6,57,468	LOANS & ADVANCES	5	17,99,574
37,84,91,083	Total		38,66,23,180	37,84,91,083	Total		38,66,23,180

As per our report of even date attached

For CMR INSTITUTE OF TECHNOLOGY

For SUNDARESHA & ASSOCIATES
Chartered Accountants
Firm Registration No.008012S)

President

(RAMESH)
Membership No.22268
Partner

Place: Bangalore

Date : 09.09.2015
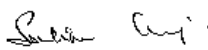
Financial Year 2016 (PG)

CMR INSTITUTE OF TECHNOLOGY - PG STUDIES

BALANCE SHEET AS AT 31ST MARCH 2016

Previous Year	Liabilities	Sch No.	Amount Rs.	Previous Year	Assets	Sch No.	Amount Rs.
3,295,828	CMR Jnanadhara Trust	1	2,411,520	1,141,155	FIXED ASSETS	2	1,511,524
					CURRENT ASSETS, LOANS ADVANCES AND DEPOSITS		
				-	Cash		10,000
				2,154,673	Bank Balances	3	889,996
3,295,828	Total		2,411,520	3,295,828	Total		2,411,520
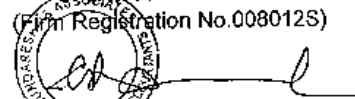
As per our report of even date attached

For C.M.R.INSTITUTE OF TECHNOLOGY
PG STUDIES

President

For SUNDARESHA & ASSOCIATES
Chartered Accountants
(Firm Registration No.008012S)

Partner

Place: Bangalore
Date : 04.10.2016

Financial Year 2016 (UG)

CMR INSTITUTE OF TECHONOLOGY

BALANCE SHEET AS AT 31ST MARCH 2016

Previous Year	Liabilities	Sch No.	Amount Rs.	Previous Year	Assets	Sch No.	Amount Rs.
372,541,884	CMR JNANADHARA TRUST	1	340,097,706	365,771,478	FIXED ASSETS	3	344,729,066
					CURRENT ASSET & LOANS & ADVANCES		
					CURRENT ASSET		
14,081,296	CURRENT LIABILITIES	2	7,505,106	103,175	Cash In Hand		60,489
				18,948,953	Cash At Bank	4	8,009,798
-	Book Draft		5,774,040	1,799,574	LOANS & ADVANCES	5	577,499
386,623,180	Total		353,376,853	386,623,180	Total		353,376,853

As per our report of even date attached

For CMR INSTITUTE OF TECHNOLOGY

For SUNDARESHA & ASSOCIATES
Chartered Accountants
(Firm Registration No.008012S)

President

Partner

Place: Bangalore

Date : 04.10.2016

6.4.4   Give details on the efforts made by the institution in securing additional funding and the utilization of the same (if any).

Thefollowingtablegivestheeffortoftheinstituteresponsibleforgeneratingfundfromasso ciated agencies.

Sl.No.	Amount	Sources	Year	Dept.
1	Rs8,00,000/-	VTU Research Grant Scheme,VTU,Belgaum	2010-12	Electrical & Electronics Engg.
2	Rs13,12,000/-	VTU Research Grant Scheme,VTU,Belgaum	2010-12	Electrical & Electronics Engg.
3	Rs 5,50,000/-	Concord	2016	Electrical & Electronics Engg
4	Rs60,00,000/-	VGST DST GOVT. of KARNATAKA	2010-13	Electronics & Communicat ion Engg.
5	Rs12,00,000/-	VTU Research Grant Scheme,VTU,Belgaum	2011-14	Electronics & Communication Engg.
6	Rs15,00,000/-	AICTE	2009-12	Electronics & Communication Engg.
7	----	DST(State agency)	2014	Electronics & Communication Engg.
8	----	Texas Instruments	2013	Electronics & Communication Engg.
9	Rs. 49,50,000/-	DST project-Nanomission scheme Ref. No. SR/NM/NT-1034/2015 (G)	2015-2018	Chemistry Dept.
10	Rs60,00,000/-	DST project-Nanomission scheme Ref. No. SR/NM/NS-1161/2013	2015-2018	Chemistry Dept.
11	Rs4,00,000/-	VGST Ref. No. VGST/SMYSR/GRD444/2014-2015	2014-16	Chemistry Dept.
12	Rs23,00,000/-	DST-young Scientist Scheme Ref. No. YSS/2015/000078	2015-2018	Chemistry Dept.

13	Rs29,00,000/-	DST project Ref. No. 100/IFD/11575/2010-11	2011-14	Chemistry Dept.
14	Rs11,00,000/-	VTU Research Grant Scheme,VTU,Belgaum Ref. No. VTU/Aca./ 2010-11/A-9/11343	2011-14	Chemistry Dept
15	-----	VTU	2015	Telecommunication Engg.
16	-----	International Speech Communication Association, France & IEEE Signal Processing Society, Bangalore	2012	Telecommunication Engg.
17	Rs40,000/-	VisionGrouponScienceand Technology	2013-14	Physics Dept.
18	Rs2,00,000/-	AICTE	2009	Mathematics Dept.
19	Rs4,000/-	KSCST	2014-15	Mechanical Engg.
20	Rs5,000/-	KSCST	2015	Civil Engg.
21	1847000.00	DST	3 years	Effect of various parameters on the liquid metal embrittlement of stainless steel
22	4000	KSCST	1 Year	Dismantable houses a polymer based engineering solution for Indian poor
23	10000	KSCST	6 Months	Glauca Seed Decorticator

6.5 Internal Quality Assurance System (IQAS)

6.5.1 Internal Quality Assurance Cell (IQAC)

a. Has the institution established an Internal Quality Assurance Cell (IQAC)? If 'yes', what is the institutional policy with regard to quality assurance and how has it contributed in institutionalizing the quality assurance processes?

Sl. No.	Faculty Name	Designation/Department	IQAC Designation
1	Dr. Sanjay Chitnis	Principal	Chairman
2	Dr. Paras Nath Singh	Professor - CSE	Co-ordinator
3	Dr. B. Narasimhamurthy	Vice-Principal	Member
4	Dr. Kalaga Madhav	Professor - ECE	Member
5	Prof. Rajendra Prasad Reddy	Associate Professor-ME	Member
6	Dr. Girish	HOD-MBA	Member
7	Dr. Raveesha	Associate Professor-Physics	Member
8	Prof. Bhaskar Reddy	Director-CMRGOI	Member
9	Mr. Rajath S Rao	Alumni	Member
10	Ms. Manasa D Patgar	Student	Member
11	Mr. Siddu Ponnappa	C 42 (Employer)	Member
12	Mr. Ramanujan	TCS (Employer)	Member
13	Dr. Pratima	Principal, CMR Law school	Member

b. How many decisions of the IQAC have been approved by the management / authorities for implementation and how many of them were actually implemented?

CMRIT Management strongly believes in quality education as mentioned in the mission and vision statements and thus approves and supports the activities of IQAC and approves the decisions taken by the body as mentioned in the Academic Calendar. The Management has approved the following proposals of IQAC:

- Academic Auditing.

- Evaluation Reforms

- Student welfare activities and leadership development programs

- Innovative teaching learning

- Training for competitive examinations

- Exposure and interaction of students with academicians

- Student mentoring activities planned and organized

- Industrial visits to supplement theoretical knowledge with practical awareness

- Feedbacks on teachers, curriculum, library, and overall functioning of the college

c. Does the IQAC have external members on its committee? If so, mention any significant contribution made by them.

Yes, the college has external members in its IQAC. Dr. Pratima, Principal, CMR Law School is a member of the committee.

d. How do students and alumni contribute to the effective functioning of the IQAC?

StudentsandalumniarerepresentedintheIQAC.Theycontributetothevariousdecisionsta ken intheIQAC. An alumnus is a member of the committee as shown in the table.

e. How does the IQAC communicate and engage staff from different constituents of the institution?

IQAC presents its presentations before the Principal and the HODs during HOD meetings. Faculty and staff from different constituents of the institution are communicated through the heads of respective units.

6.5.2 Does the institution have an integrated framework for Quality assurance of the academic and administrative activities? If 'yes', give details on its operationalization.

Yes. The administrative sections of the institution interact with IQAC and scrupulously follow its guidelines in maintaining quality standards. The institution strictly follows the guidelines laid down by ISO.

6.5.3 Does the institution provide training to its staff for effective implementation of the Quality assurance procedures? If 'yes', give details enumerating its impact.

- The academic as well as the administrative working is further smoothened by conducting/attending time to time training sessions for the teaching and non-teaching staff of the college.

- Teachers are advised to monitor the workflow of the competitive colleges and thereby improve their academic performance. This helps the faculty to work for excellence and ensure all the stakeholders are benefited.

- Faculty is sponsored to get trained in orientation and refresher programs, summer/winter programs conducted by other reputed institutions/university

colleges, and are encouraged to participate in conferences and seminars and to apply for various funding projects. This has impact on improved teaching/learning practices, improved results and better placements.

6.5.4 Does the institution undertake Academic Audit or other external review of the academic provisions? If 'yes', how are the outcomes used to improve the institutional activities?

The institute undertakes internal academic audit in following matters-

- Audit of academic files of each faculty is carried out by competent faculty. This ensures audit of all aspects of teaching learning process.

- A separate audit about coverage of syllabus is conducted by every department every month.

- Every department submits "Academic audit form" to the IQAC at the end of every semester.

Outcome:

- In case of discrepancies, suggestions are given to the respective faculty for compliance.

- If the pace of syllabus completion is less than as planned, then, extra lecture sessions are made available to the respective faculty by making required changes in the time table.

- Departmental library books are procured as per the requirement.

6.5.5 How are the internal quality assurance mechanisms aligned with the requirements of the relevant external quality assurance agencies/regulatory authorities?

Our internal Quality mechanisms are aligned according to the requirements external regulatory authorities like VTU, AICTE, NBA & NAAC .

- IQAC and the Department Heads propose required infrastructure as per the AICTE norms. Governing council will deliberate on the proposal and approves.

- The Recruitment committee under the leadership of Principal, Dean and HODs and faculty requirement data from the Department Heads and IQAC as per the university norms and AICTE norms. Faculty is recruited accordingly.

- The Librarian and faculty from each department and IQAC initiate the library books and journal purchases according to the AICTE norms.

- Infrastructure and faculty status in the institute is peer reviewed by the Local Inspection Committee (LIC) of the university. Suggestions of the LIC are utilized by the IQAC.

- CRC & LRC monitors the implementation of Lesson plan and teaching methodologies. It conducts monthly meetings to review and suggest improvements.

- Anti ragging committee and Grievance redressal system are established as per AICTE/UGC regulations.

- Research committee is constituted to promote research aptitude among faculty and students. The committee guides the faculty and students to involve in research and publish their work in reputed conferences and journals.

- Industry experts share their opinion about the alumni working with them and their suggestions are also used by IQAC for further improvement.

6.5.6 What institutional mechanisms are in place to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?

- Course Refinement Committee (CRC) and Lab Refinement Committee (LRC) meet three times in a semester to assess the extent of syllabus coverage, and also the quality of teaching.

- The lesson plans, quality of course material, assignments and question papers prepared by the faculty are assessed internally and suitable suggestions are given for enriching the teaching and learning processes.

- New age programmes, relevant to the contemporary times, are introduced in view of the feedback on curriculum obtained from students and other stakeholders like peers, research bodies, industry and parents.

- Video-conferencing, with national and international experts, is organized to give a boost to the capacity of learning. Visual aids are used to enhance teaching-learning.

- Workshops are organized to upgrade the teaching skills in view of the technological advancement and the role of IT in enhancing the quality of higher education.

- Feedback collected from the students on faculty performance evaluates their performance. The feedback is analysed and evaluated. Further, teachers are counselled by the head of the department and also by the Principal if necessary.

- Annual reviews are conducted on detailed self-appraisal forms to evaluate the performance on teaching, research and other performance related issues. The head of the institution interacts with few students of each class and takes the feedback on the teachers on the effectiveness of their teaching.

6.5.7   How does the institution communicate its quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders?

- Vision, Mission, Quality Assurance policies are displayed on the website of the institution.

- Vision and Mission statements are displayed on boards at prominent places in campus.

- Vision, Mission and quality assurance mechanisms are included in the information brochure.

- Quality Assurance mechanisms and outcomes are informed to all during students induction program, students mentoring sessions, parents meetings, alumni meetings Principal's address at seminars/ conferences/ interactive sessions with stakeholders etc.

CRITERION VII: INNOVATIONS AND BEST PRACTICES

7.1 Environment Consciousness

7.1.1 Does the Institute conduct a Green Audit of its campus and facilities?

YES, the Institute conducts a Green Audit of its campus and facilities.

Green Audit is conducted in our campus by students that reflect various types of evaluation intended to identify environmental compliance and management system. The institution aspires to create a Clean and Green Campus. To ensure this it is taking necessary steps; inmates are fully aware and conscious of the after effects of the campus pollution and aspire to practice eco-friendly initiatives to have a healthy on-campus atmosphere.

Use of Dust Bins: The institution takes all measures and precautions to ensure the campus is free of plastic materials and other harmful wastes. The institution follows the policy of Reduce, Reuse and Re-cycle. Separate dustbins are provided in the campus for dry wastage and wet wastage. The institution further takes precautions to maintain tranquility in the campus. Honking is strictly prohibited in the campus.

S.No	Bin Type	Place where located	Number
1	Wet waste bins	Inside canteen Area	10
2	Dry waste bins	Around the campus	12
		Inside the college building	32

Plantation:

Lots of expenditure is incurred to keep the environment clean and green. The support staff works sincerely towards this cause. Tree plantation programs are conducted to create awareness among the students. Trees are planted where-ever possible in the entire campus which keeps the campus serene, green, shady, and cool. There are approximately 2000 plants inside the campus.

Rain water harvesting:

Rain water harvesting is of utmost priority to the institution. When the ground water resources are depleting, the rain water harvesting is the only way to solve the water problem. To cater the need of water requirement of our college, rain water at the time of down pour is captured from roof top of the building and stored above the ground. The rain water that gets collected at every block is fed into a rain water harvesting tank to preserve the underground water. There are two well sat different locations in the campus to raise the levels in the water table. Wastage of water is also restricted by having

frequent audits are made to check faucets, leaky ones are replaced or repaired, and that helps in saving lot of water. Rainwater harvesting will not only be helpful to meet the demand of water supply but also be helpful in improving the quantity and quality of water. The storage tank is of capacity 1.5 lakh liters.

Power saving: To create the awareness of power savings, college is using stickers, labels and posters of power savings. Due to safety aspect we don't have power saving signage and power saving is done physically by the security.

> 7.1.2 What are the initiatives taken by the college to make the campus eco-friendly?

Energy conservation

- Energy conserving lights like CFL, T5 tube lights and LED are used in the Institute campus.
- Every block in the institution has individual power control panels and energy meters installed, which help in separate and effective monitoring and control of energy consumption.
- The UPS batteries are maintained in good condition which reduces energy for charging of batteries. College has AMC.
- Turning off all electronic devices when not in use is also a good way of conserving energy. We save a considerable amount of energy by switching off the lights and using natural lighting during the day time. This is done by security.
- We use air conditioner only when it is required.

Use of renewable energy

Institute promotes the use of renewable energy sources, for the same Solar Geysers are installed in the hostel for hot water purposes saving lot of power & harnessing natural resource that is available in plenty. Students are motivated to take up projects in this area & a milestone has been achieved.

For Example, Students did a project on '**Wind Solar Hybrid System Power Generation'** and implemented in the college.

Efforts for Carbon neutrality

The institution has taken up certain preventive measures to check the emission of carbon-dioxide.

- The parking facility is provided for the students, faculties & visitors. Vehicles are parked in the open ground away from the inhibited areas which helps in

preventing the effects caused by pollution by vehicles.

- Paper wastage is disposed of and dried dead leaves wastage is buried in the soil to protect the campus from getting polluted.

Precautionary Measures

- Eating and drinking is strictly prohibited in the laboratories.
- Wearing of lab coats is encouraged to prevent accidents.

Hazardous waste management

The waste management oversees the collection and disposal of a number of waste streams from facilities, residences, and laboratories. We manage regulated hazardous wastes like chemicals, oils, pesticides, and cleaners. We also assist the generators in arranging for disposal of biohazard and sharps wastes, gas cylinders, and recyclable wastes such as batteries and electronic equipment.

E-waste management/ Junk Store

Computer monitors, printers, scanners, keyboards, mice, cables, circuit boards, lamps, clocks, lights, calculators, phones etc., are kept in the MakerSpace.

Things that have attained the end-of-life are a treasure-trove for makers. Not only do they house numerous components and spares that can be salvaged for the makers' own application but also provide an avenue for the maker to practice dismantling and assembling parts.

The MakerSpace has a good collection of computers, electronic appliances mechanical assemblies that make for a treasure-chest of unique and hard-to-find components.

For example: A team of CSE student volunteers conducted CLEAN SWEEP - "Cleanliness through Awareness" which also helped in maintenance of cleaning and greenery throughout the Institute premises. The Survey CLEAN SWEEP - "Cleanliness through Awareness" was held on 18th October 2014.

7.2 Innovations

7.2.1 Give details of innovations introduced during the last four years which have created a positive impact on the functioning of the college.

Innovative process is required in a college to positively impact students to be responsible and capable of contributing to the growth of the society. In recent times the demand for Engineers has tremendously increased because of which many Engineering colleges are mushrooming paving way for the entry and admissions of even the average and also below average students. For example below are the following innovations especially entrepreneurs and innovators. To meet these demands, the following are some initiatives being undertaken:

Maker's Space

The MakerSpace @CMRIT is a melting pot of talent and ideas from across departments and specializations. These ideas are then transformed into tangible objects that draw upon inter-disciplinary skills and knowledge.

All that is needed to use the MakerSpace is the willingness to try out things and the attitude to persist through set-backs.

To aid the pursuit of this goal, the MakerSpace is equipped with the following: (i) Hand tools (ii) Power tools (iii) Laser Cutter (iv) CNC Router (v) 3D Printers (vi) The Maker Store (vii) Workshop/Ideation zone (viii) Junk store

The MakerSpace has a huge collection of hand-tools to aid the Maker work in their projects. The collection includes:

- Saws (Hack, pipe, hand)
- Chisels
- Screw-drivers
- Wrenches
- Files
- Ratchets and sockets
- Clamps and vices

Power tools:

A Maker's tool chest is not complete without an assorted collection of power tools that speed up the task of getting the proper finish to the workpieces. The collection of power tools at the MakerSpace includes:

- Jigsaw
- Drill guns
- Circular saw

- Angle grinder
- Powered planer
- Bench grinder
- Vibration cutter

Laser Cutter:

The MakerSpace at CMRIT boasts of being only one of the few colleges in the city with a Laser Cutter. This high-tech machine lends makers the capability to make cut outs of precise shapes using CAD files.

CNC Router:

The CNC router is another specialized machine that allows the maker to carve and cut precision shapes on wood and metals like aluminum and copper.

3D Printers:

3D printing is a buzzword in the contemporary world of technology. And that's not without a reason – 3d printers allow our makers the option of transforming computer models into physical models made PLA or ABS plastic. The MakerSpace boasts of having two "Julia" 3D-printers from Fracktal Works.

Workshop/Ideation Zone:

A MakerSpace wouldn't be complete without a dedicate space to let the creativity and brain-storming sessions flow. The MakerSpace at CMRIT has a dedicated Workshop/Ideation Zone to specifically address this need.

The Worskshop/Ideation Zone is complete with LCD Projector, white boards, stackable work tables and a seating capacity of 40 people.

Junk Store:

Things that have attained the end-of-life are a treasure-trove for makers. Not only do they house numerous components and spares that can be salvaged for the makers' own application but also provide an avenue for the maker to practice dismantling and assembling parts.

The MakerSpace has a good collection of computer, electronic appliances mechanical assemblies that make for a treasure-chest of unique and hard-to-find components

Workshops organised:

Raspberry Pi – An Introduction: This workshop was aimed at introducing the most popular single-board computer to the students.

Getting started with Arduino – An Introduction

This two-day workshop was organised with the support of the CMRIT student chapter of the IEEE.

Drone and Robotics-

This two-day workshop was aimed at introducing the students to using hand-tools and showing them the nuances of the designing and building drones.

Incubation Center

The CMRIT - Sherpify Incubation Center, along with the CMRIT MakerSpace, aims to be the hub of innovative and high impact ventures in social, educational, commercial and other domains. It hopes to bring forth a revolution in how and what students learn and achieve while in college.

The Sherpify management team has years of experience working in some of the largest and most successful global organizations and has been part of the following entrepreneurial initiatives:

- Started and run their own ventures in US and India
- Helped create incubation centers
- Mentored entrepreneurs at NASSCOM 10,000 start-up program
- Mentored over 300 women entrepreneurs in Madurai.

The following teams have been selected to form the first set of incubates at CMRIT-SHERPIFY Incubation Centre.

- Saleman
- Physis
- Kidruino
- Finger Print
- Tap That
- Wedding Platform
- Anthony
- Xyztro
- SpaceUp
- Vegan

Virtual Labs

Virtual machines for each Lab are created on main Server. Each student is given an account. All the programs executed by students in lab are stored on this server. Students can access their accounts over LAN in college and from hostels. The faculty has access to all the students account; hence he/she can track the progress of students anytime any where.

Establishment of Research Center

To meet the increasing demand for research, the institute has set up a Research Center under the guidance of the University. Appropriate environment and facilities are provided to enable students and faculty to interact and conduct research in various fields.

Course Refinement Committee

To ensure standardization across the various departments and to foster effective Teaching & learning process, a committee for Course Refinement is set up here. This Committee consists of the dean, senior professors & HODs who act as Chief Course Instructors (CCI). Every course is handled by the Course Instructor & monitored by a Chief Course Instructor (CCI). The CCI looks into curriculum gaps, internal question papers, shared group activities and other ways to refine the course conduction. The common subjects across the departments are planned & students experience the same question paper during their internal assessment across the departments.

Lab Refinement Committee

Similar to the Course refinement committee, there is a committee set up to monitor and refine the labs. The Lab Refinement Committee (LRC) looks into lab curriculum gaps, lab experiment conduction, etc. To bridge the gap between the industry practice and academic lab, application oriented lab exercises are also conducted. Innovation in terms of application oriented lab exercises is developed. This enhances the student's concept learning through practical understanding.

Research Committee

Research committee is setup to cultivate the culture of research and also improve the quality of papers published by faculty and student of CMRIT. The Research Committee (RC) encourages faculty and students to publish research outcomes with financial assistance and reward an individual or group whose outcomes have been published in reputed journals. It also enhances the industry interaction for carrying out collaborative research works.

Mini projects

Mini projects offer dedicated, motivated and brilliant students an opportunity to enhance their understanding of technology and allow them to pursue their passions. It is an ideal way to realize and work upon common mistakes such as design issues, time management, topics etc. It also serves as the base for their final year project by helping them to choose their area of interest. They have to use their innovative ideas to do the projects as a team, thereby learning to be a team player. Since students are encouraged to do mini-projects in teams, it is also a good team building and leadership exercise.

Industry interaction

It help students gain firsthand information regarding functioning of the Industry. It also provides an opportunity to plan, organize and engage in active learning experiences both inside and outside the classroom provides an insight into do's and

don't in the industrial world. The real working environment of the industry helps them to see their future place in the working world. This also serves as a relation building process between institutes and industry. Many of the companies also use it as tool for building brand awareness. For example, the students from EEE Department had visited the following industries:

- Hoody 220 kV substation
- West Coast Paper Mill, Dandeli
- Supa Hydel Power Plant, Dandeli
- Rajamnae & Hegde, Tumkur
- Shivana Samudra Power House, Malavalli
- Kaiga & Kathra

Introduction of ERP system- "EDUC8"

- An integrated Faculty and student management information system covering the complete information of the entire academic related activities of the faculties and students are placed & monitored.
- Website Links - allows easy access to the materials uploaded by faculties, for the students.

Prepare Program

Goal: Meticulous and smart preparation is required by the students as a first step into a bright career. To help students in this direction, department of TCE in association with placement cell-CMRIT, structured a comprehensive "**PREPARE**" program for all the pre-final year students. "**PREPARE**" program is structured based on:

- Feedback from interview panelists of various companies
- Feedback from the graduating students of the 2015 batch
- Our experience in placement drives

The program is streamlined into following six courses which were tailored to bridge the gap between academia and industry.
- Infosys Campus Connect
- Cloud Infrastructure
- Web Applications
- MATLAB Applications
- Embedded Design
- OS(Linux and Android).

Penetration of Scientific temper in academics

1. Departments conduct Programming Lab
   Goal is to improve coding skills of students by
   - Project based learning.
   - Taking up Industry defined problems and case studies.
2. Use of interactive communications tools, smart boards for teaching.
   - Effective uses of technology such as AV classrooms, PPT, presentations, students' discussion group activity have enhanced the teaching and learning process.

7.3 Best Practices

7.3.1 Elaborate on any two best practices in the given format at page no. 98, which have contributed to the achievement of the Institutional Objectives and/or contributed to the Quality improvement of the core activities of the college.

Best Practice I

1. Title of the Practice

Teaching Engineering through Effective techniques, Mentoring, Intensive Coaching Program (ICP) and Remedial classes

2. Goal

- Laying a strong foundation for future engineer and scientist by imparting sound knowledge of concepts.
- Give exposure to the students in progressive areas and new trends of science and technology.
- Develop critical thinking by encouraging the students to apply the concepts learnt to new situations.
- Fulfill the needs of slow learners through mentoring, remedial teaching and by inducing curiosity.
- Build a healthy atmosphere oriented towards research amongst faculty and students.
- Develop oral presentation and written reporting skills of the students.

3. The Context

The major challenge we face in implementing these best practices is constraint of time. This poses a serious constraint in orienting the students towards subject

and related research activities. Related to mentoring, the students do take some time to familiarize and feel more comfortable with their mentors and most importantly develop confidence in them.

4. The Practice

It is imperative for engineering students to have a sound knowledge to understand the core engineering subjects comfortably. In pursuing this goal, we follow some of the best practices of training the students. For Example, in physics laboratory sessions, students are required to conduct experiments using discrete components in place of readymade trainer kits. In Electronics engineering, the introductory lab session help the students to acquaint themselves with digital multimeter (DMM), oscilloscope, bread board, electronic components etc. They are further trained to identify resistors using color coding; the diodes and transistors are identified using DMM. This enables them to choose the required components on their own while conducting the experiments.

At the end of the semester, the lab internal exams are conducted in a unique manner which enables the students to apply the concepts learnt to new situations. During the examination, they are required to pick questions from a vast collection of innovative question bank. In addition to this, students are encouraged to perform few experiments beyond the syllabus to acquire additional knowledge. The students are trained to write a technical report which communicates scientific information in a clear and concise manner. During each laboratory session students are asked typical viva questions to stimulate their thinking and encourage deeper understanding of the experiment.

Special attention is paid to slow learners by conducting special classes even after the college hours. Sometimes such students may not have a specific goal regarding their education. Such issues are dealt with through individual counseling and mentoring. Teaching–learning process is made effective by deliberately using models, live demonstration and videos. In order to engage the students with course material and reference books, assignments are given periodically and detailed solutions for those are provided.

By regularly organizing conferences and invited talks by eminent scientists, the department encourages students and faculty to get in touch with the progressing areas and new trends in science and technology.

4. Evidence of Success

Evidence of success is obtained by mid-course feedback from students on the

course and practices of teaching. This evidence also comes from faculty of other institutions who are visiting the department as external examiners.

5. Problems Encountered and Resources Required

Students from rural background face additional challenges of adjusting to technical institutions apart from language problem. This is one of the major problems we encountered in implementing the best practices. The other problem we faced is lack of funding agency to carryout students' projects.

Best Practice II

1. **Title of the Practice**: Bottom up approach for innovation and Research.

2. **Goal:** The Institute inculcates the culture of Research and Innovation amongst various Departments and each department has a Centre, which empowers students with skills and knowledge to address the problems of society. We believe in the Gandhi's principle of "Indians solving problems of the Indian society". In this direction, we define the problem appropriately and then gather the scientific and technological expertise to solve it. The approach is not individual (either student or faculty) centric, but it is problem specific. The institution strongly believes that technical education's paramount responsibility is knowledge enhancement and to increase social responsibility of students.

3. **The Context**: For example, a student team had an opportunity to present a project at state level competition which also coincided with their internal exams. In less than few minutes, the institute arranged to conduct those exams for the students at a convenient date. The student team comprised of students from different departments and it involved the co-ordination among the different department HOD's and individual faculty to rise to the occasion and contribute. The said student team won consolation prize at FKCCI, "Manthan". CMRIT believes in designing practices which show tangible output and result in betterment of education. Practices are most effective when implemented and it happens by participation of all stakeholders in an institute: the students, faculty, management, support staff etc.

4. **The Practice**: The Institute believes that the education has to be problem oriented and that even first year students have to be encouraged to participate in projects and take up real time problems. One such instance is applying for

19 projects for a state level engineering competition called 'Sristhi'. It so happened that the project submission day was preceded by four holidays and a state level Bandh. The CMRIT College has taken the initiative to bring students to the college and allowed the respective faculty to work with the students to finish the project presentation. It so happened that due to 'Bandh', the project posters could not be printed in time for the Sristhi conference. The college management convinced a merchant to open the shop for helping the faculties and students to complete their work in time. Basic Science department had won three first prizes, one each in affordable healthcare, technology for rural development and Swaccha Bharat category. TCE Department had won five prizes. The Institute has received overall "**Runners up"** trophy in this state level engineering competition. This shows the commitment of students and faculty for Research and Innovation.

5. **Evidence of Success:** The conceptualization of student projects regarding the social awareness is innovative and is judged in two ways. First, by the number of awards and prizes students won at different competitions. Secondly, the results need to be looked from the impact they had on society and overall motivation of students. In this direction, the students at the institute have won more than 10 prizes at different levels. The result analysis indicates that students are genuinely motivated to take up socially relevant problems. Some of the ideas are, "crowd funding to prevent farmer suicides", "women empowerment application for rural women", "dismountable houses for rural & urban slums", "polymer fly ash bricks to recycle plastic waste", "finding practical use for fly ash", "conversion of seawater to farming water using fly ash" etc. Most of the above mentioned projects have won prizes at state or national or international level competition. Our result analysis indicated that students are willing to take up problems of society often beyond their level if proper encouragement is given.

This is the second award for our Women Empowerment application:

RESULTS of SHRISTI 2016 happened from 6th to 8th May 2016:

1. FINAL YEAR PROJECT EXHIBITION

SN	TOPIC	GROUP	LEADER
1	Cotton Harvesting	Mechanical Sciences	Vishwanath
2	Maglev Train for India	Electrical Sciences	Arjun Kumar
3	Search and Rescue Robot	Electrical Sciences	Dilip B S
4	Lake Health Monitoring System Using Wireless Sensor Network	Electronics and Communication	Kaushal J N
5	Experimental Investigation for Potential Studies of OFC and TIO2 Blocks	CIVIL	Karthick .J
6	Blood Helfer	Computer Sciences	ShruthiVardhan
7	WIFI Enabled Smart Power Bar	Computer Sciences	Aben George

2. AVISHKAR

SN	TOPIC	BRANCH	THEME	LEADER
1	Indigenous Nucleic Acid Extraction Device from clinical samples	EC	ICT	Deepika R
2	Water on Call-Tap That	CS	ICT	Ayush Gupta
3	Regenerative Braking	ME	Others	Viswas B S
4	Implementation of Automated Precision Agriculture	TC	Others	J.Antony
5	SMART MOP	EC	Others	Chandini Singh
6	Aquaponics Smart Farming	EE	TSA	Shashank

3. TECHNICAL PAPER PRESENTATION

SN	TOPIC	BRANCH	THEME	LEADER
1	DismantableHouses:A Technology Innovation for Slums	ME	A	Koushik Reddy

2	Digital Stethascope	EC	C	Prashanth
3	Comparision of Undersea cable Networks with the Global Shipping	TC	C	Karishma
4	Development of a Four Quadrant Analog Multiplier Using a Single Quadrant analog multiplier and convertor Circuitary	EC	C	DebadityaMullick
5	Monitoring Tuberculosis drug Adherence in Patients	IS	F	GanesuniMytri

6. Problems encountered and resources required:

The Institute finds it difficult to make the students believe that "as a student, doing projects for society is a very satisfying experience". Meanwhile, the universal constraint of money is a hindrance too. For instance, the basic science team has won IEEE humanitarian award for "conversion of seawater to farming water". The award was given in July 2014 but they still have not received the money even after repeated letters and e-mails. Nevertheless, the faculty and the Institution have invested money to finish the projects, since it contributes to the problems of Indian farmers and Indian society. The third constraint is the facilities provided for public welfare related research. Our Principal has taken the initiative along with faculty members to write a grant proposal for establishing "Public good research lab" with the vision group on science and technology (VGST), Karnataka.

Best Practice III

1. Title of the Practice: Faculty training during semester breaks for the upcoming semester

2. Goal: CMR Institute of Technology believes in developing a team of faculty members who are strong in basics and fundamentals with a deep understanding of the applications of the concepts and experiments that are studied in the course. CMRIT also strives for the individual growth of faculty members by encouraging them explore more in the field of their interest. This will eventually transform into the better experience of the students in the classes and labs.

3. The Context: During semester breaks, the faculty of CMRIT conduct experiments pertaining to the subjects allotted to them for the upcoming semester. Faculty record the observations made during the experiments and prepare their own manuals. They also explore the applications of the experiments that are there in the syllabus and bring in new experiments to

help the students understand the subjects better and connect to the outside world.

4. The Practice: The lab refinement committee (LRC) is set up to look after the smooth functioning of the labs during the semesters. The LRC schedules the faculty experimentation and demonstration sessions during semester breaks. The faculty members conduct experiments and demonstrate the same in the presence of other faculty members and senior professors. Each faculty member is evaluated by the evaluators and provided with constructive suggestions for improvements.

5. Evidence of success: For instance, in the microwave and antenna lab of department of Telecommunication Engineering, CMRIT, faculty were successful in transmitting and receiving audio signals through a wireless channel over a distance of 10 meters. The faculty of Microprocessor lab of ECE and TCE department made a bus ticket generating prototype by interfacing 8086 microprocessor with a printer. They also built a module of traffic light control system using microprocessor 8086. Activities like these have boosted the confidence of the faculty members and helped them conduct lab sessions more effectively. This has motivated the students to explore the applications of the experiments they conduct in labs.

Any other information that may be relevant and important to the reader for adopting / implementing the Best Practice in their institution.

All the relevant information pertaining to presentation of Best Practices has been explained from Sl. No. 1 to 6 of the format.\

Contact Details

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Post-accreditation Initiatives

If the college has already undergone the accreditation process by NAAC, please highlight the significant quality sustenance and enhancement measures undertaken during the last four years. The narrative may not exceed ten pages.

Applying for the first time

Declaration by the Head of the Institution

I certify that the data included in this Self-Study Report (SSR) are true to the best of my Knowledge.

This SSR is prepared by the institution after internal discussions, and no part thereof has been outsourced.

I am aware that the peer team will validate the information provided in this SSR during the peer team visit.

Place: Bangalore   Signature of the
Date: Head of the Institution with Seal
                                                  Dr. Sanjay R Chitnis