



RAMAIAH
INSTITUTE OF TECHNOLOGY

M.S. Ramaiah Institute of Technology
(Autonomous Institute, Affiliated to VTU)

**Submission of
Annual Quality Assurance Report
(AQAR)**

for the academic year
2016-2017

Submitted to



राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद्

विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

an Autonomous Institution of the University Grants Commission

P. O. Box. No. 1075, Opp: NLSIU, Nagarbhavi, Bangalore - 560 072 India

Annual Quality Assurance Report (AQAR)

1: About the Institution

M. S. Ramaiah Institute of Technology was started in the year 1962 by the late Dr. M.S. Ramaiah, our Founder Chairman who was a renowned visionary, philanthropist, and a pioneer in creating several landmark infrastructure projects in India. Noticing the shortage of talented engineering professionals required to build a modern India, Dr. M.S. Ramaiah envisioned MSRIT as an institute of excellence imparting quality and affordable education. Part of Gokula Education Foundation, MSRIT has grown over the years with significant contributions from various professionals in different capacities, ably led by Dr. M.S. Ramaiah himself, whose personal commitment has seen the institution through its formative years. Today, MSRIT stands tall as one of India's finest names in Engineering Education and has produced around 40,000 ENGINEERING professionals who occupy responsible positions across the globe.

1.1: Vision and Mission Statements

- **To Evolve Into An Autonomous Institution Of International Standing For Imparting Quality Technical Education.**
- **MSRIT Shall Deliver Global Quality Technical Education By Nurturing A Conducive Learning Environment For A Better Tomorrow Through Continuous Improvement And Customization.**

Towards the accomplishment of its vision, at present the institute offers 13 UG programmes and 13 PG programmes. In addition to these engineering programmes, the institute also offers Computer Application and Business Administration at master level. The institute is permanently affiliated to Visvesvaraya

Technological University, Belgaum, Karnataka. In recognition of its academic excellence, the institute was granted autonomous status by UGC in the academic year 2007-08 to 2013-14. Further, UGC extended autonomous status from 2013-14 to 2018-19. The institute is scaling up its post graduate education and research through TEQIP.

Strategic Plan

M.S. Ramaiah Institute of Technology (MSRIT) was established in the year 1962 by the Founder Chairman Late Dr. M.S. Ramaiah under the aegis of Gokula Education Foundation (GEF). The mission of GEF is 'To deliver Education and Health for the betterment of mankind'. Keeping in tune with the mission of the parent society, MSRIT set its mission as 'MSRIT shall deliver global quality technical education by nurturing a conducive learning environment for a better tomorrow through continuous improvement and customization'. These missions emerge from the core values of GEF - Build Relationships, Encourage Creativity and Innovation, Provide Employable Education, Openness in Communication, Respect for Individuals, and Total Satisfaction to Customers. Based on these core values MSRIT has arrived at the long term objectives. These are To establish a Global Network of Centers of Excellence, To Deliver Quality education programmes consistently, To Meet the Requirements of stakeholders continuously, To Recruit the Best Teaching Talent and Create an Environment for High Level Performance and To Develop, Improve, Customize Technologies and Teaching Methodologies. The strategic plan for the implementation of vision and mission of the institution is as given in Figure 1.

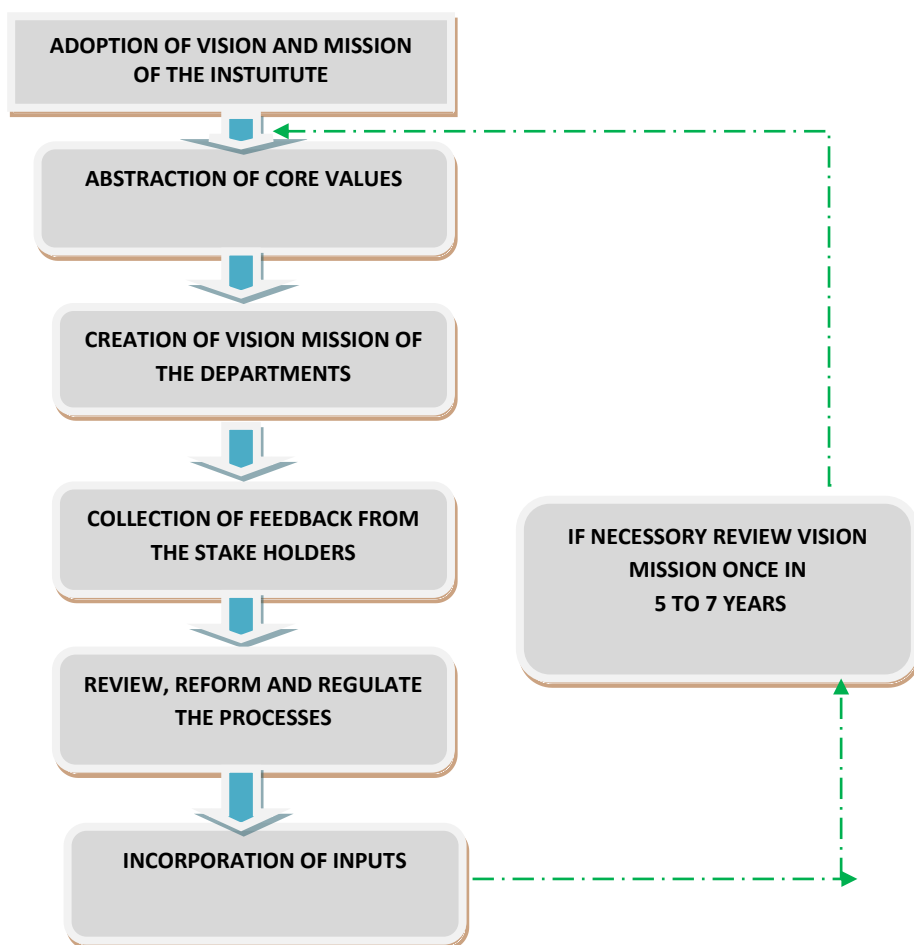


Figure 1 Strategic Plan

- The institute provides sufficient physical resources to carry out research activities by the faculty and students, which is over and above the prescribed curriculum.

Facilities	Number	Total built-up Area
Class rooms/Tutorial rooms	108	~7245 Sq. mts
Laboratories including research Labs	96	~9180 Sq. mts
Seminar Halls/Board rooms/Auditorium	5+4+1	~11800 Sq. mts
Workshop/Computer centre/Drawing hall	9+2+5	~2850 Sq. mts
Administrative and Amenities Area	-	~13195 Sq. mts
Library	1 Apex Block	425 Sq. mts
	1 ESB II	2323 Sq. mts
	1 Arch.Block	100 Sq. mts
	1 LHC	950 Sq. mts
Auditorium/Seminar Halls		
Auditorium	Apex Block	640 Sq. mts
Seminar Halls	Division of Electrical Sciences	220 Sq. mts
	Lecture Hall Complex (2)	285 Sq. mts
	Engg.Science Block II (2)	610 Sq. mts

1.2 Internal Quality Assurance Committee (IQAC)

To ensure that quality work executed in a systematic manner becomes a day-to-day habit, MSRIT has established a Quality Management System on the lines of International Standard ISO. In the process of establishing the QMS according to ISO 9001:2008, the institute has analyzed all its processes and their interactions. Consequent to the autonomy awarded to MSRIT, the process of Design and Development of Syllabus and Curriculum along with evaluation and examination processes have devolved and have been suitably included in the process interactions. The structure of the IQAC cell of MSRIT is shown in the table below:

Sl. No.	Name	Department and Designation	Composition	Position
1.	Dr.N.V.R. Naidu	Principal, MSRIT	Head of the Institution	Chairperson
2.	Sri. S.M. Acharya	Chief Executive, GEF (Engg.& General Sciences)	Management Representative	Member
3.	Dr. T.V. Suresh Kumar	Registrar (Academic)	Senior Administrative Officers	Member
4.	Sri. Ramesh Naik. S	Registrar (Administration)		Member
5.	Dr. C.G. Puttappa	Controller of Examination		Member
6.	Dr.G.S. Prakash	Chief Proctor		Member
7.	Dr. S. F. Kattimani	Librarian		Member
8.	Dr.N.L.Ramesh	Professor, Dept. of Maths	ISO coordinator	Member
9.	Dr. Anitha K.	Prof and Head, Dept of CSE	Faculty of MSRIT	Member
10.	Dr. Maya V Karki	Professor, Dept of ECE		Member
11.	Dr B. Umadevi	Associate Professor, Dept of Civil Engg.		Member
12.	Dr. M.N.Chandra Prabha	Professor, Dept of Biotechnology		Member
13.	Dr. Brijesh	Assc prof, Dept of Chemical		Member
14.	Dr M. Rajesh	Assc Prof, Dept of IEM		Member
15.	Mr. Sunith Babu . L	Asst Prof, Dept of Mechanical Engg		Member
16.	Sri Kannan . K	MD, Benaka Enterprises		Distinguished Alumni
17.	Sri Vikram .S	5 th Semester Student of Dept of CSE	Student representative	Member
18.	Sri. Ravichand. S	MD, Progressive Industries	Industry representative	Member
19.	Sri Nipul Sahni	Director, Tejas Networks	Employer	Member
20.	Dr. Y.M. Satish	Professor, Dept of MBA	Senior Faculty	Coordinator

Ensuring that Quality Policy and Objectives are stipulated, responsibilities to various positions are assigned and QMS is reviewed periodically by the Governing body.

1.3 Collaboration between institution and academic institutes, industry, research labs.

Industry Institute Interaction Cell (IIIC) of MSRIT facilitates exchange of ideas amongst faculty, students and the industry experts. The prime objective of this cell is to strengthen the relationship between the institute and industry resulting in a mutually beneficial partnership. This interaction cell is very keen in collaborating with industrial organizations for working on various problems of mutual interest by entering into MoU's and some of the activities undertaken with different industries like; INTEL, IBM, ADOBE, NOKIA, MICROSOFT, HONEYWELL, INFOSYS, APPLE, SAP, JINDAL STEEL, SCHENEIDER ELECTRIC, BOEING.

1.4 Student Information System

MSRIT has in place a Student Information System (SIS), an online application that offers students and their parents/ wards/ guardians up-to-date information including attendance status, marks scored, timetable, lesson plans and more. A login ID and password is provided to help them access this information. The governing has approved and periodically reviews all the processes carried out.

1.4 Publication of Annul Report

The institutional Governing Body shall publish an annual report every year that includes; Academic related activities, Research and Development, Sports activities, Cultural Activities, NSS activities, Academic Review, Calendar of events, Budget statements, ISO related etc., The minutes of the Governing Body meeting is uploaded in the college Website

2 Board of Governors

As per the provisions exists in regulatory bodies the Governing Body of MSRIT consisting of fifteen members with expertise in various aspects of higher education in India.

Sl. No	Position	No	Category	Remarks	Name of the Member
1	Chairman	1	Management of GEF Trust	As per the rules and regulations Governing GEF Trust, the Chairman of the Trust shall be the Chairman	Dr. M.R. Jayaram Chairman, Gokula Education Foundation (GEF)
2	Member	4	Management of GEF Trust	of the Governing Body of MSRIT and will be one of the four members representing the GEF Trust management on the Governing Body of the College.	Sri M. R. Seetharam Vice Chairman, GEF
					Sri M R Ramaiah, Secretary, GEF & Director-MSRIT
					Sri M R Sampangiramaiah, Trustee,GEF
					Sri M. R. Kodandaram Trustee, GEF
3	Member	3		Nominated by the GEF Trust Management	Sri S.M. Acharya Chief Executive, GEF (Engg. & Science)
					Sri G. Ramachandra, Chief of Finance, GEF (Engg. & Science) Special Invitee
					Dr. Vinod Kumar Nowal Deputy Managing Director, JSW Steel Ltd. Torangallu, Bellary District, Karnataka-583275
4	Member	1	Faculty of the College	Nominated by the Principal based on Seniority.	Dr. T.V.Suresh Kumar, Registrar (Academic), M S Ramaiah Institute of Technology
5	Member	1	Educationist or Industrialists	Nominated by the GEF Trust Management.	Dr. V.K. Aatre Former SA to RM/Secretary, Dept. of Def
6	Member	1	UGC nominee	Nominated by the UGC.	Prof. A S Sheoran, Dept. of Mining Engineering, Jai Narain Vyas University, Jodhpur - 342011

7	Member	1	State Government Nominee	Nominated by State government Academician not below the rank of professor or state government official of Directorate of Higher Education/ State Council of Higher Education.	Dr. Shashidhar S Ramatal, Principal, Govt. Sri Krishnarajendra Silver Jubilee Technological Institute, K R Circle, Bangalore – 560001
8	Member	1	University Nominee	Nominated by the University.	Dr. V.D.Mytri Principal, Appa Institute of Engg. and Technology
9	Member	1	AICTE nominee	Nominated by AICTE.	Dr. B.S.Sonde Former Vice Chancellor, Goa University/Prof. of ECE, Indian Institute of Science
10	Member Secretary	1	Principal	Ex-officio.	Dr. N V R Naidu Principal, M S Ramaiah Institute of Technology

Independent Members: To bring value addition to Governing Body of MSRIT and various committees prescribed by Governing Body, MSRIT, the chairman appointed diligent and eminent personalities in the field of higher education and industry. These members contribute significantly in all aspects of effective governance of GOB.

1. Sri S.M. Acharya, Chief Executive, Gokula Education Foundation (Engg. & General Sciences)
2. Dr. Vinod Nowal, Deputy Managing Director, JSW Steel Ltd., Mumbai.
3. Sri G. Ramachandra, Chief of Finance, Gokula Education Foundation(Engg. & General Sciences)

Regulatory Compliance

Governing body ensures that information is provided to various regulatory agencies like UGC, AICTE, VTU, and Directorate of Technical Education (DTE).

- Mandatory disclosure to AICTE.
- Yearly status report to UGC and VTU.
- Several other Sources of funding, from, AICTE, UGC, DST&VTU provided to Research and Development.
- The risk based financial control to safeguard financial viability of the institution is well planned by the Governing Body by depositing, in various banks.

The Governing Body shall also ensure the *not-for-profit* purpose of the institution and accreditation by national/international professional bodies to assure quality to all its stakeholders.

The Annual Quality Assurance Report (AQAR) of the IQAC

All NAAC accredited institutions will submit an annual self-reviewed progress report to NAAC, through its IQAC. The report is to detail the tangible results achieved in key areas, specifically identified by the institutional IQAC at the beginning of the academic year. The AQAR will detail the results of the perspective plan worked out by the IQAC.

Part – A

I. Details of the Institution

1.1 Name of the Institution	M. S. Ramaiah Institute of Technology
1.2 Address Line 1	Vidya Soudha,
Address Line 2	MSR Nagar, MSRIT Post,
City/Town	Bangalore
State	Karnataka
Pin Code	560054
Institution e-mail address	principal@msrit.edu
Contact Nos.	080 23606934 / 080 23600822
Name of the Head of the Institution:	Dr. NVR Naidu
Tel. No. with STD Code:	080 23603122
Mobile:	9886844934, 9972087184
Name of the IQAC Co-ordinator:	Dr. Y.M.Satish

Mobile:

IQAC e-mail address:

1.3 NAAC Track ID (For ex. MHCOGN 18879)

1.4 NAAC Executive Committee No. & Date:

1.5 Website address:

Web-link of the AQAR:

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 st Cycle	A	3.01	2014	5
2	2 nd Cycle				
3	3 rd Cycle				
4	4 th Cycle				

1.7 Date of Establishment of IQAC: DD/MM/YYYY

1.8 AQAR for the year

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

i. AQAR 2015 – 16 submitted on 08-11-2016

1.10 Institutional Status

University	Not Applicable					
Affiliated College	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
Constituent College	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>		
Autonomous college of UGC	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
Regulatory Agency approved Institution (eg. AICTE, BCI, MCI, PCI, NCI)	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
Type of Institution	Co-education	<input checked="" type="checkbox"/>	Men	<input type="checkbox"/>	Women	<input type="checkbox"/>
	Urban	<input checked="" type="checkbox"/>	Rural	<input type="checkbox"/>	Tribal	<input type="checkbox"/>
Financial Status	Grant-in-aid	<input type="checkbox"/>	UGC 2(f)	<input checked="" type="checkbox"/>	UGC 12B	<input checked="" type="checkbox"/>
	Grant-in-aid + Self Financing	<input type="checkbox"/>	Totally Self-financing	<input checked="" type="checkbox"/>		

1.11 Type of Faculty/Programme

Arts Science Commerce Law PEI (Phys Edu)

TEI (Edu) **Engineering** Health Science Management

Others (Specify)

1.12 Name of the Affiliating University (for the Colleges)

Visvesvaraya Technological University,
Belgaum

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

NOT Applicable

2. IQAC Composition and Activities

2.1 No. of Teachers	<input type="text" value="10"/>
2.2 No. of Administrative/Technical staff	<input type="text" value="05"/>
2.3 No. of students	<input type="text" value="01"/>
2.4 No. of Management representatives	<input type="text" value="01"/>

2.5 No. of Alumni	<input type="text" value="01"/>		
2.6 No. of any other stakeholder and Community representatives	<input type="text" value="-"/>		
2.7 No. of Employers/ Industrialists	<input type="text" value="02"/>		
2.8 No. of other External Experts	<input type="text" value="-"/>		
2.9 Total No. of members	<input type="text" value="20"/>		
2.10 No. of IQAC meetings held	02		
2.11 No. of meetings with various stakeholders:	No.	<input type="text" value="02"/>	Faculty <input type="text" value="02"/>
Non-Teaching Staff	<input type="text" value="02"/>	Alumni	<input type="text" value="01"/>
Students		Others	<input type="text" value="-"/>
2.12 Has IQAC received any funding from UGC during the year?	Yes	<input type="checkbox"/>	No <input checked="" type="checkbox"/>
If yes, mention the amount	<input type="text"/>		
2.13 Seminars and Conferences (only quality related)			
(i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC			
Total Nos.	<input type="text" value="-"/>	International	<input type="text" value="-"/>
		National	<input type="text" value="-"/>
		State	<input type="text" value="-"/>
		Institution Level	<input type="text" value="03"/>
(ii) Themes	<input type="text" value="Pedagogy, Bloom's Taxonomy, Quality Audit"/>		

2.14 Significant Activities and contributions made by IQAC

- Conferences, Workshops, Faculty and Staff Development Programmes organized at MSRIT during 2016-17:

International conferences	02
National conferences	01
Workshops/Faculty and Staff Development Programmes	55
Workshop on Blooms's Taxonomy	01

- To cater to the changing needs of the industry, new professional electives have been introduced in all the programmes.
- A two credit course "Engineering Design" has been introduced in the BE first semester. Self Study component has been introduced in some of the subjects in UG and PG degree programmes and internship has been introduced for BE degree programme.
- Centre of Imaging Technology has been established and Library has been recognized as an R & D centre under VTU.
- Up gradation of lab equipment's & use of modern software tools and Strengthen the existing laboratory facilities for consultancy work
- Student special training through guest lectures/workshops/Industry visits to improve the exposure to practical field problem.
- Awareness and training sessions are held on writing research papers and proposals to improve quality of journal papers and research proposal
- Financial assistance is given to the faculty to present papers in reputed National and International Conferences and publication of papers in reputed Journals towards promoting research in the institution.
- The entire campus is Wi-Fi enabled and internet is available round the clock in all departments, hostels and laboratories to facilitate research and academic related activities.
- The IQAC team members ensure that Student Support Services are given prime importance which focuses on academic performance & attendance matters of the students.
- OBE is implemented at teaching and learning initiatives, examination evaluation, research, industry interactions etc., Attainment levels are calculated taking into account the performance of students in SEE, CIE mid course survey and course end survey.
- Development of research laboratories in collaboration with M/S BOEING to strengthen the interdisciplinary research activity.
- An amount more than Rs 2 Crore is allocated in the annual budget and spent on improvement of laboratory infrastructure across the institute
- The collaborations with Industries like INTEL, SAP, IBM, APPLE, MICROSOFT, NVIDIA SCHNIDER ELECTRIC PHYLIPS HEALTH CARE, JINDAL STEELS, and HP are active and certificate programmes are conducted under these collaborations.
- Effective use of NEPTEL courses by our institute's Chapter was ranked AAA (Rank 3 in all India level) in NPTEL Online Course Certification Examinations in 2017.
- The institute has initiated recording video of the lectures conducted by the faculty. The recorded lectures can be accessed by all students.

2.15 Plan of Action by IQAC/Outcome

The plan of action chalked out by the IQAC in the beginning of the year towards quality enhancement and the outcome achieved by the end of the year *

Plan of Action	Achievements
Effective implementation of OBE	Course delivery sessions are planned as per the requirements of Outcome Based Education. Course delivery is monitored regularly and action is taken to align it with planned sessions. Workshops on OBE were conducted to train the newly inducted faculty members.
Effective implementation of accreditation to qualifying UG programs.	National Board of Accreditation for programs Chemical Engineering, Civil Engineering, Mechanical Engineering, Medical Electronics were taken up and all programs were accredited.
Upgrade the skills and competencies of faculty and staff through training programs/conferences/paper publications	Awareness and training sessions were held to promote quality journal paper publications and research proposals. Presentation of research papers in reputed conferences and journals were encouraged.
Extend further the laboratory facilities for consultancy work	Upgradation of lab equipment's & use of modern software tools and Strengthening the existing laboratory facilities for consultancy work
Utilization of departmental budget	Formation of committees for planning and utilization of budget allocated to improve laboratory and research
Strengthen R&D activities	Technology fund of 50 lakhs was allocated for research and development
Developing IPR, centre of excellence and research	Three faculty are working in collaboration with medical college to execute the funded projects
M S Ramaiah memorial lectures to invite eminent personalities to motivate faculty to carry quality research	Eminent personalities namely Prof VK Atre, Prof BS Sonde and Prof CNR Rao were invited to deliver memorial lectures.

2.15 Whether the AQAR was placed in statutory body Yes No

Management Syndicate any other body

Provide the details of the action taken

Sl. No.	Issue Raised in the previous GB Meeting	Action taken/Action Plan Report
1	An Institutional IPR Committee to be constituted for streamlining the IPR and Patenting Issues	<ul style="list-style-type: none"> The HoD R&D and IPR delivered few talks about patents and IPR Few faculty submitted IPRs, patents and a consultant has been engaged with college The IPR policy is in annexure I
2	Departmental Committees need to be constituted under each HoDs for proper monitoring of utilization of Departmental budgets	<ul style="list-style-type: none"> Principal in HoD's meeting informed that all the departments should form budget committees and the proposals from the departments were discussed and given in the budget 2017-2018

3	RIT Alumni Association Distinguished Lecture Series need to be organized every month for better alumni interaction	<ul style="list-style-type: none"> • Mr. Anurag Seth, Vice President, Wipro, on 25.11.2016; Title of the talk: Prepare for Digital Era • Mr. AravindJatti, Chairman, Jatti Motors; Talk title - Spirituality and Soft Skills on 17th January 2017 • Sri V. Nandakumar, Head, Sustainability & Business Excellence Services, Det Norske Veritas AS Talk title – Sustainability – What is it? on 17th February 2017 • Sri Krishna Prasad Chitrapura, Vice President and Business Head, Practo Technologies, Co-founder, Qikwell.com; Title of talk: Journey from being an employee to entrepreneur on 17th March 2017 • Sri Ashwin Sreenivasan, Vice President Esya Soft, Director, Yethi Medical Systems; Title of the talk: Start up Fundamentals – Truths and Myths on 28th April 2017
4	Best Teacher Award and Best Researcher Award need to be awarded with well-formed rubrics to motivate the teachers and researchers	This matter was discussed with the management, the Hon'able Chairman has deferred this issue for the time being
5	RIT Technology Fund of Rs. 50 Lakhs was approved by Hon'ble chairman to motivate the faculty and students of RIT to involve in product making and technology transfers	Few faculty submitted their proposal for funding Principal initiated motivating all the faculty in this regard
6	RIT Consultancy brochure need to be released on our website and to be circulated to relevant stake holders	Prepared and circulated to Industry and presented in annexure II
7	RIT is asked to benchmark an overall result to 80% and subject wise result to 85%	Informed to HoDs of all departments to analyze result and initiate suitable action in this regard
8	Science and Technology Forum to be constituted to regularly conducted popular science and technology lecture series and to be made open to all	A committee has been constituted and two talks were arranged for the year 2016-17.
9	RIT needs to focus on the thematic research areas in the Robotics and IOT domains	Four Research Domains identified; IoT, Nano materials, Video Analytics and Robotics. Initiated to establish Video analytics and Nano materials labs.
10	Ramaiah Campus consisting of Engineering, Medical and Advanced Sciences the collective wisdom was not made use in developing IPR, cutting edge technology research and center of excellences etc	The following faculty are collaborating with medical college and executing the projects. <ul style="list-style-type: none"> i. Dr. Viswanath T, TCE department (funding agency DST, 54.9 Lakhs) ii. Dr Sri Raam, Medical Electronics (funding agency DBT, 50 Lakhs) iii. Dr. Vijaya Kumar B P, ISE Department (funding agency ICMR, 86 Lakhs)
11	Incentives need to be given to the faculty members who are publishing in top quality Journals and Conferences	Policy implemented and the details are presented in annexure III
12	Upgradation of RIT website	The website development and maintenance was outsourced to Weloft Solutions, Bangalore.

Part – B

Criterion – I

I. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD	17	1	18	-
PG	15	-	15	02
UG	13		13	10
PG Diploma	-	-	-	-
Advanced Diploma	-	-	-	-
Diploma	-	-	-	-
Certificate	8	-	8	8
Others	-	-	-	-
Total	53	1	54	20
Interdisciplinary	-	-	-	-
Innovative	-	-	-	-

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options

Flexibility in the curriculum has been provided by offering professional electives at the department level, wherein the student has the flexibility to choose the elective of his / her choice. Also, at the institution level, open electives are offered by all the departments wherein the student can choose an elective offered by other departments.

To cater to the changing needs of the industry, new professional electives have been introduced in all the programmes.

During the BE programme, there is flexibility that a student can go abroad for internship for a period of two months during their vacation. A few students of BE have availed this flexibility and have gone abroad to carry out their internship.

(ii) Pattern of programmes:

Pattern	Number of Programmes
Semester	28
Trimester	-
Annual	-

1.3 Feedback from stakeholders* Alumni Parents Employers Students
(On all aspects)

Mode of feedback : Online Manual Co-operating schools (for PEI)

**Please provide an analysis of the feedback in the Annexure*

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

Centre of Excellence for manufacturing is established.

Centre of Imaging Technology is being established.

Library has been recognized as an R & D centre under VTU.

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

- A two credit course “Engineering Design” has been introduced in the BE first semester.
- More number of laboratory courses have been introduced in the new curriculum from fifth semester (BE) onwards.
- New soft-core subjects have been introduced in the new curriculum.
- Self Study component has been introduced in some of the subjects in UG and PG degree programmes.
- Mini-projects are introduced as a course in the new curriculum during third year of engineering.
- Interdisciplinary projects are encouraged where the students of different departments can form a project group to carry out their final year project work.
- Internship has been introduced for BE degree programme, wherein the students get hands – on training at an industry related to their programme.
- The scheme of teaching is modified to suit the changing needs of the industry; the number of theory courses, laboratory courses, tutorials and self-study courses are carefully incorporated in the new scheme.
- The students can take up MOOCS / Online courses recognized by the department and it will be considered for evaluation in the respective core subject during the semester.
- Programme outcomes have been defined for all the PG programmes and the course outcomes of all the courses are established to align with the programme outcomes.

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty	Total	Asst. Professors	Associate Professors	Professors	Others
	355	245	65	45	-

2.2 No. of permanent faculty with Ph.D. 135

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year	Asst. Professors		Associate Professors		Professors		Others		Total	
	R	V	R	V	R	V	R	V	R	V
	14	-	3	-	1	-	3	-	21	-

2.4 No. of Guest and Visiting faculty and Temporary faculty 7 18 6

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	154	134	33
Presented papers	171	110	0
Resource Persons	36	16	14

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

- Use of ICT tools and smart boards
- Use of E-learning resources such as NPTEL
- Project based learning
- Practice based Learning
- Activity based Learning
- Puzzle / Game based Learning
- Cooperative learning
- Introduction of Self-study component in curriculum
- Vocational Courses to build skill development
- Seminars presentations via YouTube
- Remedial Classes
- Online Courses / Certifications
- Upgradation of lab equipment's & use of modern software tools
- Student special training through guest lectures/workshops/Industry visits.

2.7 Total No. of actual teaching days

During this academic year 181

2.8 Examination/ Evaluation Reforms initiated by
The Institution (for example: Open Book Examination, Bar Coding,
Double Valuation, Photocopy, Online Multiple Choice Questions)

- Continuous Internal Evaluation is conducted throughout the semester with components of tests, assignment, seminar, and quiz and mini projects. Fifty percent of marks is assigned to CIE and remaining fifty percent of marks for Semester End Evaluation.
- Evaluation of students is spread to entire semester than end of the semester unlike in conventional university system of examination.
- The analysis of outcomes from CIE performance and SEE indicates the effectiveness of course content and delivering system
- This also helps in fine tuning of the syllabus contents for the course
- Question paper set is in the OBE format to assess various outcomes
- Randomly generated Bar codes are placed on the answer books ready for evaluation to maintain the confidentiality of the student.
- Limited number of books are evaluated by the evaluator in a day to maintain fair and error free evaluation.
- Each evaluator provided with scheme & solutions provided by the paper setter to ensure quality evaluation without any mistakes.
- Answer books are evaluated by two evaluators.
- Permissible difference in subsequent evaluations is 15, more than 15 referred to another review
- Complete evaluation process is automated with data of the student's performance is entered by the Evaluator.
- Complete performance data of the student is made available in Student Information System which is accessible to both students and parents.

2.9 No. of faculty members involved in curriculum
Restructuring/revision/syllabus development
As member of Board of Study/Faculty/Curriculum
Development workshop

144	101	23
-----	-----	----

2.10 Average percentage of attendance of students

88%

2.11 Course/Programme wise distribution of pass percentage:

UG

Title of the Programme	Total. No. of students appeared	Distinction %	Division		
			I%	II%	Pass%
Civil Engg	147	86.36	8.17	1.38	95.91
Mechanical Engg	248	89.52	6.2	2.41	98.13
Electrical & Electronics Engg.	62	70.97	27.42	1.61	100
Electronics & Communication Engg.	148	87	10		97
Computer Science & Engg.	143	81.1	17	1.2	99.3
Chemical Engg.	64	80	20	--	100
Industrial Engg & management	70	64.28	21.42		85.7

Information Science & Engg	154	100	-	-	100
Electronics & Instrumentation	59	61.02	32.22	5.09	98.33
Telecommunication Engg.	69	79.71	18.84		98.55
Medical Electronics	50	62	32	2	96
Biotechnology	57	84.22	14.03	1.75	100
B.Arch	80	100			100

PG

Title of the Programme	Total. No. of students appeared	Distinction %	Division		
			I%	II%	Pass%
Structural Engg.	27	96.29			96.29
Manufacturing Science & Engg	14	100			100
Computer Integrated Manufacturing	12	100			100
CAID	14	92.85	7.15		100
Digital Electronics & Communication	22	100			100
VLSI & Embedded Systems	14	100			100
Computer Science & Engg	23	100	--	--	100
Industrial Engg.	14	92.85	-	-	92.85
Information Science Software	12	100	-	-	100
Digital Communication	15	100			100
Biotechnology	17	100	-	-	100
MBA	103	84	12	-	96
M.Arch	07	100			100
MCA	66	95.45	4.55		100
CNE	09	100	--	--	100

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

- Implementation of OBE curricula for UG and PG programs
- Upgrade the skills and competencies of faculty and staff through continual training programs
- Strengthen interdisciplinary R&D activities
- Strengthen the existing laboratory facilities for consultancy work
- Enhance collaborative activities with industry and Research organizations
- Create Centers of Excellence in interdisciplinary areas of research
- Depute faculty members to pedagogical training
- Enhance networking with Indian and Foreign universities
- Increase awareness and improve the IPR-related activities
- Enhance IRG through consultancy, training and certification programs
- Encourage and enhance performance-linked incentives to faculty and staff
- Spread awareness among the public on the institutional achievements
- Help faculty members to upgrade their qualifications and attract faculty members with distinguished achievements in specialized areas

2.13 Initiatives undertaken towards faculty development

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
Refresher courses	23
UGC – Faculty Improvement Programme	02

HRD programmes	3
Orientation programmes	11
Faculty exchange programme	-
Staff training conducted by the university	32
Staff training conducted by other institutions	24
Summer / Winter schools, Workshops, etc.	119
Others	05

2.14 Details of Administrative and Technical staff

Category	Number of Permanent Employees	Number of Vacant Positions	Number of permanent positions filled during the Year	Number of positions filled temporarily
Administrative Staff	31	-	-	-
Technical Staff	69	-	-	-

Criterion – III

3. Research, Consultancy and Extension

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

Science and engineering research will be more influential in the 21st century than it has been in the 20th century. No one can predict which technologies will define the next century. But we know that the increasing interconnection of computers into a global network will transform work, communications, entertainment, and education. Hence research is a very important facet of any academic institute. This gives an opportunity for the faculty to develop their skills of scholarly enquiry and hence disseminate their knowledge to peers as well as students. The research policy at MSRIT is designed such that faculty can carry out research effectively as they are guaranteed certain freedom and are required to accept corresponding responsibilities. Research policy presents broad principles to guide the research endeavour and assure the integrity of scholarly inquiry at MSRIT.

The College have a research committee to monitor and address the issues of research. Under the guidance of Dr Raghu Krishnapuram the Head, R&D and IPR Cell, the institute has initiated following research activities in the academic year 2016-17.

- MSRIT has put in place a policy on intellectual property to promote creativity and innovation.
- Awareness and training sessions are held on writing research papers and proposals.
- A centre of excellence has been set up for imaging technologies to promote interdisciplinary research related to health care structural monitoring applications. MSRIT has also identified other niche areas for future development.
- MSRIT has initiated a special program to recognize quality publications. Financial assistance is given to the faculty towards TA, DA, Registration in reputed National and International Conferences and publication of papers in reputed Journals.
- Incorporated changes in the annual appraisal process of the faculty, so that research output is measured and appreciated in a transparent manner.
- Faculty involved in research are given less workload to facilitate research and development.
- All centres-of-excellence are brought in one place which has led interaction between academic researchers and product developers.
- In order to assist the faculty members to pursue research leading to the award of Ph. D. Degree the following incentives have been proposed:
 - Faculty member can be considered for grant of 25% Reduction in Work
 - M.S. Ramaiah Institute of Technology, Bangalore Load“ for a maximum period of two academic years in connection with his /her Ph. D related work.
 - A faculty member who has obtained admission for Ph.D. degree in a premier institute where there is a statutory requirement of minimum period of stay in the campus can be considered for grant of “Study Leave” with full salary for a maximum period of three months at a stretch.
 - A faculty member who has registered for Ph.D. Degree in an institute or ac university recognized by UGC and where there is no statutory requirement of minimum stay in the campus can be considered for grant of one full vacation of two months during which period no work (invigilation, valuation etc.) will be assigned to the faculty.
 - Ph.D. Registration/Tuition Fee weaver for the faculty members of MSRIT.
- In order to assist the faculty members to pursue research at the premier foreign universities / Institutes, a faculty can avail Sabbatical Leave as per the terms laid down by the institute.
- Promoting research climate amongst students the institute has taken many steps and they are listed below:
 - The students are required to undergo major and minor research project as a part of their curriculum.
 - The institute organizes national level research paper contest annually to promote students participation in research.
 - The students are also encouraged to present and publish their research work in conferences and journals.
 - Various research activities are conducted under different student clubs like IEEE students chapter, Robo MSR, Tech Fest at intra and inter collegiate level, EMB, Fluid power Society of India, Indian Institute of Foundryman, etc...

3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	8	18	1	41
Outlay in Rs. Lakhs	70.89332	381.550	11.58	3587.678

3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	11	5	3	9
Outlay in Rs. Lakhs	52.17	14.8	15	35.93

3.4 Details on research publications

	International	National	Others
Peer Review Journals	143	9	---
Non-Peer Review Journals	145	2	----
e-Journals	16	4	----
Conference proceedings	200	3	----

3.5 Details on Impact factor of publications:

Range Average h-index Nos. in SCOPUS

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

Nature of the Project	Duration Year	Name of the funding Agency	Total grant sanctioned	Received
Major projects	1-3	DBT, CPRI, VGST, DST, BRNS, IEL, AICTE, Nuclues Software, ABB, ICMR	404.15 (in Lakhs)	100.24 (in Lakhs)
Minor Projects	0.5 - 1	KSCST, ICSSR	Rs.3,47,000	Rs.1,72,000
Interdisciplinary Projects				
Industry sponsored	1-3	Lucid Software, BMS, TAG Corporation, Nihon Communication, ICWA, AICTE	17.064 Lakhs	1 Lakh + 3.244 Lakhs
Projects sponsored by the University/ College				
Students research projects <i>(other than compulsory by the University)</i>		MSRITAA, KSCST	3.725 Lakhs	2.825 Lakhs
Any other(Specify)				
Total			428.409 Lakhs	107.3095 Lakhs

3.7 No. of books published i) With ISBN No. Chapters in Edited Books

ii) Without ISBN No.

3.8 No. of University Departments receiving funds from

UGC-SAP CAS DST-FIST

DPE DBT Scheme/funds

3.9 For colleges

Autonomy CPE DBT Star Scheme

INSPIRE CE Any Other (specify)

3.10 Revenue generated through consultancy

3.11 No. of conferences

Organized by the Institution

Level	International	National	State	University	College
Number	3	4	0	0	10
Sponsoring agencies	TEQIP, ICSSR, DST, MSRIT				

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

3.13 No. of collaborations

International

National

Any other

3.14 No. of linkages created during this year

3.15 Total budget for research for current year in lakhs:

From funding agency

From Management of University/College

Total

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	7
	Granted	
International	Applied	1
	Granted	
Commercialised	Applied	
	Granted	

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

Total	International	National	State	University	Dist	College
-	-	-	1(KSCST)	-	-	-

3.18 No. of faculty from the Institution
Who are Ph. D. GUIDES?
And students registered under them

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

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

JRF SRF Project Fellows Any others

3.21 No. of students Participated in NSS events:

University level State level
National level International level

3.22 No. Of students participated in NCC events:

University level State level
National level International level

3.23 No. Of Awards won in NSS:

University level State level
National level International level

3.24 No. Of Awards won in NCC:

University level State level
National level International level

3.25 No. of Extension activities organized

University forum College forum
NCC NSS Any other

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

	NAME OF THE PROGRAMME
1	Blood Donation Camp
2	Plantation
3	Aids Awareness & Firmly Planning
4	HIV & AIDs Awareness Training
5	Clean Energy
6	Rain Water Harvesting
7	Health (General, Dental, Etc.)
8	Computer Awareness
9	Energy Conservation In Domestic Sector
10	Usage of Power
11	Self-Employment Programme
12	Cleanliness With Respect To The Environmental Hazards
13	Parthenium Nirmulane
14	English Speaking Course to Govt. School Students

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area	896012	-	Tuition Fee	896012
Class rooms	7245	-	Tuition Fee	7245
Laboratories	9180	-	Tuition Fee	9180
Seminar Halls	11800	-	Tuition Fee	11800
No. of important equipments purchased (≥ 1-0 lakh) during the current year.	09	16		25
Value of the equipment purchased during the year (Rs. in Lakhs)	40,62,430	59,11,434	Tuition Fee	99,73,864
Others	-	-	-	-

4.2 Computerization of administration and library

The Library began its existence in 1962. The library with its modern collection knowledge resources and innovative information services fills an essential role for students, faculty and the surrounding community in their intellectual pursuits. It is a centralized Air Conditioned fully automated library predominantly related to Engineering, Technology, Management and allied subjects. The collection comprises of 127554 volumes of Books with 33937 Titles and 53 National printed Magazines. The Library subscribes to about 8640 full text E-journals from ASCE, ASME, IEL Online (IEEE Journals, Standards and Conf. Proceedings), Springer Link, Taylor & Francis, Elsevier Science Direct, Proquest (Management and Eng.). The E-Books Subscription package includes around 22129 from Taylor & Francis-CRC Netbase & Springer Link & McGrawhill Education. In addition, there are 3720 Bound volumes of journals, 4404 CD's & DVD's, 75 Video Cassettes &

1421 IS Standards. All the operations of the Library are automated using Libsys 7 (Release 3.0) software.. As per the fourth Law of Library Science, "Save the time of Reader", the MSRIT Library has been scattered into 6 Locations spread across the campus with carpet area of 40350 Sq ft having state of art infrastructure facilities. The seating capacity of all Libraries is 1265. Library is an extremely important primary support service provided by MSRIT. The library and the associated facilities & services are indispensable in support of Learning, Teaching and Research. This basic necessity has been recognized and the methodology of developing and using the library and library-associated services is established in this Library. The main services are OPEN ACCESS TO RESOURCES , LENDING OF BOOKS, REFERENCE/REFERRAL SERVICE, INDIAN STANDARDS/PATENTS, WEB OPAC, SC/ST BOOK BANK SCHEME, MSRIT BOOK BANK SCHEME, ALUMNI BOOK BANK SCHEME, REPROGRAPHIC FACILITY, USER ORIENTATION PROGRAMME, AND INTER LIBRARY LOAN THROUGH INSTITUTIONAL MEMBERSHIP ETC.

The Library is kept open from 8 am to 9 pm on all working days (Mon-Fri), 9 Am to 9 PM (Sat) and 9 Am to 1 PM. During examination 8 AM to 11 PM (Mon-Fri), 9 AM to 9 PM (Sat & Sun). The Library has set up a model digital library to browse the net and access e-resources. It is well facilitated with 143 computers connected to high bandwidth speed of 140 Mbps internet. An 'MSRIT INSTITUTIONAL REPOSITORY' has been developed using Dspace software to access faculty publications, previous years question papers, lecture notes, project abstracts etc.

4.3 Library services:

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	80459	2,30,44,868.00	13832	67,21,329.00	94291	3,05,77,693.00
Reference Books	12638		1670	8,11,496.00	14038	
e-Books	21997	46,79,822.00	132	31,64,863.00	22129	78,44,685.00
Journals	9990		300		10290	
e-Journals	9557				9557	
Digital Database	34		18	1,27,351.00	52	1,27,351.00
CD & Video	5000		500		5500	
Others (specify)	23349 e-learning	85260.00	100 Impartus MSRIT Class Room Videos		23449 e-learning	85260.00

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Browsing Centres	Office
Existing	2800	20	02	120
Added	200	01	-	-
Total	3000	21	02	120

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

<ul style="list-style-type: none"> • The entire campus is Wi-Fi enabled • Internet is available round the clock in all departments, hostels and laboratories. • Computers with internet facility are provided to teaching and non-teaching staff. • Class room, seminar halls, conference halls are equipped with LCD projectors and internet facility.

4.6 Amount spent on maintenance in lakhs:

i) ICT	45.18
ii) Campus Infrastructure and facilities	60.10
iii) Equipments	85.54
iv) Others	40.69
Total:	231.51

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

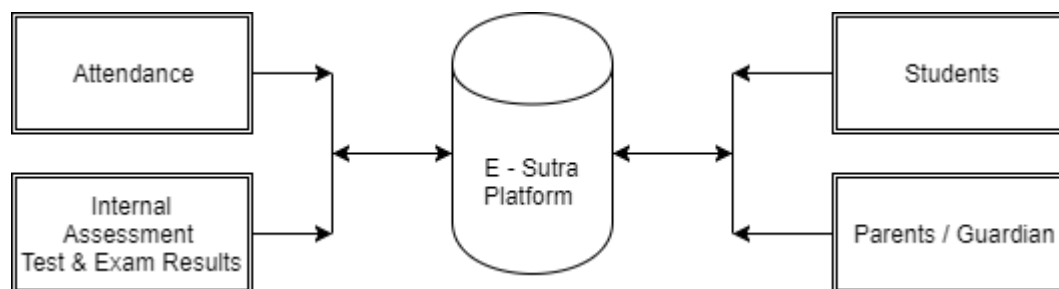
The IQAC team members ensure that Student Support Services are given prime importance across the college in various domain. Members of the IQAC committee are part of the following support system which facilitates the student centric activities

- Department Proctors
- Chief Proctor

The Chief Proctor who is an IQAC core committee member takes care of the student support mechanism which focuses on academic & attendance matters of the students and addresses them to all faculty members from time to time through internal E-mail communication & faculty meetings every semester. The Librarian provides information to faculty & students via SMS / Email about the library timings for regular semester and exam time, so that students can effectively use the library services for reference reading during examination time.

5.2 Efforts made by the institution for tracking the progression

The monitoring of attendance / academic performance of students has been completely automated using E-Sutra Platform which is both a web and intranet based access system. Faculty members regularly update the attendance and marks scored by students in the Internal Assessment Test, this data in turn can be accessed by both students & parents via a web based access from time to time. After the completion of the exam, the marks are tabulated and uploaded by the faculty members immediately after the valuating the scripts. Once the valuation process is completed and marks are verified by the examination department, the results are declared both online and in respective departments this enables both students & parents to see the results via a separate login given to them during the start of the academic year. Fee collection details can also be accessed online.



UG	PG	Ph. D.	Others
----	----	--------	--------

5.3 (a) Total Number of students	5712	892	167	-
----------------------------------	------	-----	-----	---

(b) No. of students outside the state 1637

(c) No. of international students 300

Men	No	%	Women	No	%
	3884	68.00		1828	32.00

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
1565	152	33	338	8	2096	1229	361	64	798	28	2480

Demand ratio NA Dropout % 1.2

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

The overall development of the student is taken care by the proctor who nurtures and educates the student for a span of THREE years on various career prospects and how to prepare for competitive exams. The department also invites experts from industry and coaching institutes to deliver/share information as part of department initiative through technical talks and awareness program on different exams.

No. of students beneficiaries 390

5.5 No. of students qualified in these examinations

NET	0	SET/SLET	0	GATE	39	CAT	5
IAS/IPS etc	3	State PSC	8	UPSC	3	Others	13

5.6 Details of student counselling and career guidance

The placement department organises career guidance seminars / training sessions to students of pre final / final year to enable them to face the interview process with confidence. The career guidance / assistance are given by placement department from time to time

No. of students benefitted 1217

5.7 Details of campus placement

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
348	1217	1563	-

5.8 Details of gender sensitization programmes

Women and Men faculty are treated equally at the institute and any concerns are addressed by the Department HOD if need arise the same issue is escalated to the Principal for remedial action. Issues & concerns in the department or at the college level is also addressed by a team comprised from various departments. This team meets and submits the report to the principal for suitable action.

5.9 Students Activities

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

State/ University level National level International level

No. of students participated in cultural events

State/ University level National level International level

5.9.2 No. of medals /awards won by students in Sports, Games and other events

Sports: State/ University level National level International level

Cultural: State/ University level National level International level

5.10 Scholarships and Financial Support

	Number of students	Amount
Financial support from institution	100	22,00,000
Financial support from government	1627	4,33,00,493
Financial support from other sources	10	5,00,000
Number of students who received International/ National recognitions	Nil	Nil

5.11 Student organised / initiatives

Fairs : State/ University level National level International level

Exhibition: State/ University level National level International level

5.12 No. of social initiatives undertaken by the students

*- NSS at Ramaiah Institute of Technology has several initiatives that involve the volunteers which take place throughout the year. During one of our initiatives, **Special Camp**, which is conducted during our semester end holidays, volunteers undertake the initiative to make new blue books out of old, used blue books. This activity is carried out for a period of 10-15 days under '**Pre-Camp**'.

The team later adopts a series of Government Schools and visits them regularly for a continuous period of 10 days, teaching them basics of English, Mathematics and Science. Books made by the volunteers at the beginning of the **Special Camp**, is awarded to the students of the government schools at the end of the **Special Camp**. This year, 2017, we have started a new initiative called '**Skill Development**' for the members of the **underprivileged household**, basic computers and English. We nurture them and also help build their confidence. At the end of the program, these men and women are awarded certificates stating that they have completed the course.

With the newly formed team, we start the academic year with orphanage and old age home visits. Team leader and their set of volunteers interact and have fun with their respective assigned centres. It proves to be a budding experience for the children, adults and our own volunteers likewise.

One of the major events conducted by NSS every year is the **BLOOD DONATION CAMP**. Around 15 blood banks set up their camps at our college which is open to the general public on one specific day. Last year, we had the privilege of collecting 1221 units of blood.

Apart from these major activities, we conduct e-waste drives, spot fix and all educate the local masses on the importance of segregation of wastes. We also have local self-defence workshops for women.

5.13 Major grievances of students (if any) redressed:

- Student Class Representatives are identified for each semester and any grievances are addressed by the Chief Proctor & Principal.
- Students identified under NFTE (Not Fit for Technical Education) category were counselled by their respective proctors and deputy chief proctor.
- Students having issues with course registration, withdraw and drop are counselled by their respective Proctors
- Students who are actively participating in Sports, Co-curricular activities and Extra-curricular activities are mentored for their consistent performance in academics

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

To Evolve Into An Autonomous Institution Of International Standing For Imparting Quality Technical Education.

MSRIT Shall Deliver Global Quality Technical Education By Nurturing A Conducive Learning Environment For A Better Tomorrow Through Continuous Improvement And Customization.

- Towards the accomplishment of its Vision, at present the institute offers 13 UG programmes and 13 PG programmes
- In addition to the Engineering programmes, the institute offers Computer Application and Business Administration at master's level
- The Institute is permanently affiliated to Visvesvaraya Technological University, Belagavi, Karnataka
- In recognition of its academic excellence, the institute was granted autonomous status by UGC in the academic year 2007-08 to 2013-14. Further, UGC extended autonomous status from 2013-14 to 2018-19
- The institute is scaling up its post graduate education and research through establishment of Centre of Excellences
- The institute has successfully participated in TEQIP phase I and II

6.2 Does the Institution has a management Information System

- MSRIT has in place a Student Information System, an online application portal
- A login ID is provided to all the students and their parents/guardians
- The students and their parents/guardians can view online the up-to-date information like class attendance, Internal test scores, Class Time Table, Calendar of Events, Course Lesson plans and many more information
- The Governing body has approved and periodically reviews all the processes
- MSRIT has taken the digital initiative of making the entire campus as e-campus wherein all transactions within the campus are facilitated through Digital wallet system , Pay Se.

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

6.3.1 Curriculum Development

(a) Curriculum planning/implementation: OBE is implemented in the curriculum, across all the departments and for all the courses.

- The scheme of teaching is uniform for all the UG/PG courses in the institute
- Laying emphasis on lab-work, self-study and mini projects in each programme.
- Benchmarking UG/PG syllabi with those at elite institutes like IITs.

(b) Add-on/enriching courses:

- Introducing ‘Add-on courses’ of industry relevance at UG/PG made mandatory
- Continuing to engage emeritus/adjunct faculty for launching ‘Add-on courses’
- Introducing Vocational/Certification and Proficiency courses, MOOC based electives are offered in some of the departments

6.3.2 Teaching and Learning

(a) Academic integrity: Institute attaching much importance to this aspect, and:

- The complete examination process is online implemented in the student information system. Special precautions taken to ensure *integrity* in the examinations system
- Researchers/students subject their research papers/project reports to '*plagiarism*' check before submitting/communicating to the relevant places

(b) Student' feedback: Collected, disseminated and used for quality improvement as a matter of policy, by:

- Getting on-line student' feedback using a *questionnaire* every semester
- Mid-semester/semester-end feedback taken for improving the course delivery also used in Course Outcome attainment and evaluating Programme Outcomes
- Outgoing graduate/alumni surveys also conducted covering all academic activities
- Feedback obtained from employers for the alumni graduated in the past two to three years, helps evaluating the Programme Educational Objectives.
- Feedback questionnaires/formats are periodically revised and the system is working well

(c) Faculty development/orientation: Made mandatory requirement at the Institute for all faculty members since 2015-16 to:

- Attend workshops/conferences in emerging areas at MSRIT or elsewhere
- ~70 FDPs/SDPs/Pedagogy courses conducted at MSRIT in many areas since 2014

(d) New pedagogies: Also made a mandatory requirement for all faculty members to be proficient in:

- Using new pedagogical tools for all the programmes as and when made available
- Pedagogy/OBE through workshops being conducted at MSRIT in every semester

(e) Academic freedom: Faculty members provided freedom to innovate in academic activities, like:

- Introducing '*self-study*' in UG/PG curriculum and making use of online courses (NPTEL)
- Initiating project-based learning in some core courses at UG and PG levels
- Innovative methods like flipped class room used
- Evaluation of other CIE components based on online portals like Moodle, Code Zinger etc
- Providing inputs to Departments in curriculum planning/development/implementation

6.3.3 Examination and Evaluation

- Reviewing current CIE/SEE practices and introducing quality checks at many levels
- Implementation of mapping of Programme Outcomes and Course Outcomes to the Questions in CIE and SEE and thereby calculating their attainments online
- Use of Bloom's Taxonomy for developing effective test items

6.3.4 Research and Development

- (a) Strengthening R&D activities in Inter-disciplinary areas like:
- Centre for Imaging Technologies in collaboration with other organizations
 - Research Laboratories in collaboration with M/S BOEING
 - Taking up Sponsored R&D projects and Industrial Consultancy
- (b) Enhancing entrepreneurship skills, start-up culture and incubation centres
- (c) Setting up of Skill Development Centre and Finishing School
- (d) Launching of new demand-driven PG programmes in specialized subject areas
- (e) Increasing the number of faculty with Ph.D. Degree to 75% from present 33% by 2020
- (f) Having at least one Emeritus Professor at each Department

6.3.5 Library, ICT and physical infrastructure / instrumentation

- An amount more than 40 Lakhs is allocated in the annual budget for procurement of library books, subscription to e-Journals, improving digital library
- All the class rooms are provided with LCD Projectors and Internet to facilitate the faculty to make effective course delivery
- The institution has an arrangement with a company Impartus India Pvt. Ltd. to record the class room lecture live. The I/II semester courses and two courses in fourth and two courses in current semester are being recorded across all the departments. The students and the faculty have been provided with login IDs to view the lectures. A discussion forum can be created by students and the queries are answered by the respective faculty. This facilitates the slow learners and others to view the lecture to learn the topics of their course well
- An amount more than 2 Crores is allocated in the annual budget and spent on improvement of laboratory infrastructure across the institute

6.3.6 Human Resource Management

- Qualified, committed & experienced faculty and staff members serve in this institute
- Teaching & technical support staff are recruited as per the guidelines of AICTE / UGC, VTU & State government
- Office staffs are recruited as per the state government regulations
- The student – teacher ratio is maintained as per the AICTE guidelines
- Adequate support staff are provided for each department
- The processes ensure that the professional needs of the students are fulfilled
- Promotion policy is framed as per AICTE / UGC & State government rules & regulations
- Promotion is given to all deserving candidates as per the regulations of the institute, which is in strict accordance with regulatory bodies

6.3.7 Faculty and Staff recruitment

- ✓ M S Ramaiah Institute of Technology is working under Gokula Education Foundation
- ✓ The Governing Body reviews all activities of MSRIT including HR Policy for recruitment of qualified faculty under the norms of AICTE/UGC/VTU and Govt of Karnataka
- ✓ All the policy matters implemented in the institution are with due approval of the Governing Body
- ✓ Qualified faculty members are being recruited every year against the vacant post of each department by the Selection Committee along with subject expert for the department. The subject expert is selected by the HOD from other reputed academic institutes
- ✓ Prior to recruitment applications are being received through open advertisement in the newspaper also the advertisement is hosted on the institute website
- ✓ Promotion policies are also adopted in the institution and as and when vacancy arises senior faculty are preferred/considered for promotion with PhD degree
- ✓ Faculty salary are on par with 6th Pay Commission and duly approved by AICTE/UGC
- ✓ Faculty are encouraged to register for PhD degree every year in their respective research centers

6.3.8 Industry Interaction / Collaboration

1. The following collaborations with Industries are active,
INTEL, SAP, IBM, APPLE, MICROSOFT, NVIDIA SCHNIDER ELECTRIC
PHYLIPS HEALTH CARE, JINDAL STEELS, HP, BOEING
2. Certificate programmes are conducted under these collaborations, student ambassadors are selected by these industries to promote students to take part in online competitions, also project works are offered by some of the industries

6.3.9 Admission of Students

The selection and admission of students to Undergraduate, Post-graduate, Doctoral programmes are done as per the norms of Government of Karnataka policy

6.4 Welfare schemes for

Teaching	04
Non teaching	05
Students	02

6.5 Total corpus fund generated

200 Crores

6.6 Whether annual financial audit has been done

Yes No

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

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

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

For UG Programmes Yes No

For PG Programmes Yes No

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

- Complete Automation of Examination System
- External Reviewers in the process of Evaluation
- Question Paper Setting by both external and internal examiners
- Randomization of Questions from different question papers for the final SEE

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

NOT APPLICABLE

6.11 Activities and support from the Alumni Association

- Scholarships to economically weaker students
- Bus Pass Scheme
- Research Funding
- Project Funding

6.12 Activities and support from the Parent – Teacher Association

Periodically Parent-Teacher meetings are conducted to up date the performance of students to their parents.

6.13 Development programmes for support staff

- Soft Skill training programmes are regularly conducted for both support staff and technical staff members
- Technical staff members are deputed for various skill development programmes

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

- Solar Panels are installed on the buildings to harvest the solar energy
- Rain water harvesting system in place

Criterion – VII

7. Innovations and Best Practices

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

Institute has been continuously upgrading the current activities and embarking on innovative practices for improving the overall experience of all stakeholders. Following innovations were introduced in the last academic year:

Video lecture: The institute has initiated recording video of the lectures conducted by the faculty. The recorded lectures can be accessed by all students. This activity has helped the students who are slow learners and the one who had missed the lecture class in understanding the concepts clearly. Video lecture capturing is provided by Impartus Lecture Capture and the students can watch the lecture anywhere and anytime at their own pace.

NPTEL Chapter: NPTEL (National Programme on Technology Enhanced Learning) is a joint initiative of the IITs and IISc for offering online courses. MS Ramaiah Institute of Technology has an active Chapter of NPTEL. Students are motivated to register for these online courses. In March/April 1620 students and faculty have registered for various courses. NPTEL courses are used for the Continuous Internal Evaluation. Our institute's Chapter was ranked AAA (Rank 3 in all India level) in NPTEL Online Course Certification Examinations in 2017.

Digital Wallet - Mera Purse: In line with the our Hon'ble Prime Minister's Digital India drive, digital cash has been making inroads into our lives. Institute has been one of the earlier one to recognize this need and initiating the unique digital wallet system through Pay Se wallet brought up by Nucleus Software Exports Ltd. Under this the students and staff of the institute can carry out money transactions through an offline peer to peer solution.

Dr. M.S. Ramaiah Memorial Lecture: Institute has initiated M.S. Ramaiah Memorial Lecture under which an eminent personality is invited to address the students and staff of the institute. In this lecture Padmabhushan Dr. V.K. Atre (Former Scientific Advisor to Govt. India), Prof. V.S. Sonde (Former Vice Chancellor of Goa University), and Prof C.N.R. Rao, National Research Professor, Linus Pauling Research Professor & Honorary President Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, were invited.

Vocational and Proficiency Courses: Departments of Computer Science and Engineering and Chemical Engineering conducts Vocational Courses/ Proficiency courses for industry personnel and students.

Incentive System for Quality Publication: In order to enhance quality of reseach and motivate faculty members to publish their research work in highly reputed journals, an incentive system is set in place.

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

1. In the beginning of the Academic year Calender of events are planned and announced. Based on the calendar of events course co-cordinators plan their course delivery sessions as lesson plans as per the requirements of Outcome Based Education. Course delivery is monitored regularly and action is taken to align it with planned sessions.
2. Curriculum is continuously updated as per the decisions in Board of Studies meeting conducted annually and approved by Academic Council.
3. National Institutional Ranking Framework (NIRF) Ranking of the institute was 45 among the top engineering colleges in the country. The parameters for ranking Teaching , learning and resources, Research, professional practice, Graduate outcome and Outreach activities improved.
4. Decision to start MS Ramaiah Memorial lecture implemented and eminent personalities like Prof VK Atre, Prof BS Sonde and Prof CNR Rao invited.
5. Decision to undergo accreditation by National Board of Accreditation for programs Chemical Engineering, Civil Engineering, Mechanical Engineering, Medical Electronics taken up. Committees visited during March 31 to 2nd April and all program accredited.
6. In collaboration with Boeing a Joint research laboratory was set up at the institute premises.
7. Annual magazine Sudarshana and the Quarterly news bulletin of the institute published as planned.

7.3 Give two Best Practices of the institution (*please see the format in the NAAC Self-study Manuals*)

1. **Web enabled Information Management System by Contineo:** Information management at the institute is automated by E-sutra software provided by contineo.in. The software has enabled admission process, course registration, preparation of students' list for a course, maintaining students' attendance, examination process, preparation of eligibility list, analysis of continuous internal evaluations and semester end evaluations and its report generation supporting outcome based education. Result of semester end examination is announced online. A complete student information system is maintained digitally at the institute. It enables the end users (students, members of faculty and parents) to access the information about the progress with ease. Automation has improved the transparency of the system and made information available on time. The system is developed primarily with the end-users (students and parents) in mind; to enable the end-users to access their information about the progress with ease. The information is made available to them in the most transparent and timely manner. Further, the registration process, the generation of student lists in every course, and allotment of classrooms are automated and done very efficiently. The eligible list of students for the final examinations is also done through the system making it very transparent. The coding of the answer books and the assignment of evaluators are also done through the system making the process highly confidential. The consolidation of students' results and generation of reports are automated thereby optimizing the time taken to announce the final results of the students. The system is designed so that the monitoring process for the progress of the students is optimally customized to stand-up to the utmost quality standards of the institute.

2. **Proctorial System:** Instituted in the year 1998, the student mentoring system at the institute is called as Proctorial System. Under this system, every faculty member, called as Proctor, is assigned a group of students (ward). Proctor 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 Deputy Chief Proctor of the department, Chief Proctor, Head of the department, Principal and parent. This mentoring system is made more effective with the use of Student Information System software - E-sutra, which gives information to the parents about the performance and attendance of their wards.

3. **Academic review:** Academic Review of the department is conducted every three years by eminent academicians. Padmabhushan Dr. V.K. Atre (Former Scientific Advisor to Govt. India), Prof. V.S. Sonde (Former Vice Chancellor of Goa University) and Prof. S.S. Prabhu (Indian Institute of Science, Bangalore) were the members of review committees visited. The criteria of audit were Teaching faculty and Support Staff, Students Input quality and outcomes, Curriculum and Teaching-Learning process and R&D and Industrial interactions and other activities at department.

4. **Open Day Project Exhibition – Pradarshana:** Pradarshana is a two days Open Day Project Exhibition organized at the institute in the month of May. Projects carried out by the final year students are displayed during this exhibition. This exhibition is open for all students, parents and general public. It gives the students an opportunity to exhibit their project and present their work. A proceeding is also brought out on this day which contains the abstracts of all projects.

7.4 Contribution to environmental awareness / protection

MSRIT has shown keen concern for energy and environment and has take responsible steps in creating awareness and its conservation.

- Effluent Treatment Plant: Capacity of the effluent treatment plant at the institute enhanced to 25 lakh litre per day. Treated water used for gardening purpose.
- Green energy through solar photovoltaic cells: Electricity generation through solar photovoltaic panels on the rooftop of Electrical Sciences block and Engineering Sciences Block generates approximately 411kW of power.
- Vehicle emission testing : NSS unit of MSRIT conducted vehicle emission testing for students and staff at MSRIT.
- LED lights throughout the institute: Entire institute is provided with energy saving, long life and environment friendly LED lights.
- Power saving software in the computers: All computer systems in the institute has power saving software which automatically turns it off when it is not in use.
- Dustbins for Recyclable material: Separate dustbins in the campus are provided for recyclable matter.
- Recycling of used note books: NSS unit of MSRIT has conducted program for recycling used books. Test book etc which has unused papers are bundled separately and note books are prepared and distributed to schools.

7.5 Whether environmental audit was conducted?

Yes No

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

- MSRIT is ranked 45th among the top hundred Engineering Institutions across the country as per NIRF ranking survey of Ministry of Human Resources 2017
- MSRIT is number one among the Engineering Institutions under VTU affiliation, Belagavi as per NIRF ranking survey of Human Resources 2017.

8. Plans of institution for next year

Ramaiah Institute of Technology was established in the year 1962 by the founder Chairman Late Dr. M. S. Ramaiah under the aegis of Gokula Education Foundation. The institute with its valuable human resources, ever-improving infrastructure, constantly updated curriculum, and commitment to society identified its future plan to culminate to a state-of-art technical university and the following are the key short term objectives

- Ensuring that all UG and PG programs are accredited by NBA
- Catering to the requirements of all stakeholders
- Establishing skill development center for improving students' skills
- Strengthening R & D activities by improving the number of research publications in peer reviewed journals and patents as defined in NIRF
- Establishing Center of Excellence (CoE) in Nanomaterials and Video Analytics
- Enhancing industry collaboration through MoUs
- Improving outreach activities to address societal needs
- Ensuring continuous improvement in teaching – learning process
- Improving the image of the institution by publicizing the achievements like ranking, projects, R & D, accreditation etc

Name _____

Name _____

Signature of the Coordinator, IQAC

Signature of the Chairperson, IQAC

_____*_*_*_____
