Annual Quality Assurance Report
for
Academic Year 2016 – 2017

Submitted by

Bansilal Ramnath Agarwal Charitable Trust's

VISHWAKARMA INSTITUTE OF TECHNOLOGY

666, Upper Indiranagar, Bibwewadi, Pune – 411 037
(An Autonomous Institute Affiliated to Savitribai Phule Pune University)

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

The Annual Quality Assurance Report (AQAR) of the IQAC for Academic Year 2016-17

Part – A

1. Details of the Institution

1.1 Name of the Institution

> BRACT's Vishwakarma Institute of Technology

1.2 Address Line 1

> 666, Upper Indira Nagar,

Address Line 2

> Bibwewadi,

City/Town

> Pune

State

> Maharashtra

Pin Code

> 411 037

Institution e-mail address

> director@vit.edu

Contact Nos.

> 91 20 24202284 (Dean Quality Assurance)

Name of the Head of the Institution:

> Prof. (Dr.) R.M. Jalnekar

Tel. No. with STD Code:

> 91 20 24202221

Mobile:

> 9552544489

Name of the IQAC Co-ordinator:

Prof. A.S. Marathe

Mobile:

9822418794

IQAC e-mail address:

ashutosh.marathe@vit.edu

1.3 **NAAC Track ID** *(For ex. MHCOGN 18879)*

EC/64/A&A/02   dated 08.07.2013

1.4 **NAAC Executive Committee No. & Date:**
(For Example EC/32/A&A/143 dated 3-5-2004.
This EC no. is available in the right corner- bottom
of your institution's Accreditation Certificate)

EC/64/A&A/02   dated 08.07.2013

1.5 Website address:

www.vit.edu

Web-link of the AQAR:

http://www.vit.edu/images/PDF/AQAR_2016_17.pdf

1.6 Accreditation Details

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1st Cycle	A	3.29	2013	5 yrs.

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

26.07.2013

1.8 **AQAR for the year** *(for example 2010-11)*

2016-17

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC ((*for example AQAR 2010-11submitted to NAAC on 12-10-2011)*

    i.   AQAR 2013-14 submitted to NAAC on 14-08-2014
    ii.   AQAR 2014-15 submitted to NAAC on 21-08-2015
    iii.   AQAR 2015-16 submitted to NAAC on 19-08-2016

1.10 Institutional Status

   University   State ☐   Central ☐   Deemed ☐   Private ☐

   Affiliated College   Yes [√]   No ☐

   Constituent College   Yes ☐   No ☐

   Autonomous college of UGC   Yes [√]   No ☐

   Regulatory Agency approved Institution   Yes [√]   No ☐

   (eg. AICTE, BCI, MCI, PCI, NCI)

   Type of Institution   Co-education [√]   Men ☐   Women ☐

                     Urban [√]   Rural ☐   Tribal ☐

   Financial Status   Grant-in-aid ☐   UGC 2(f) [√]   UGC 12B [√]

               Grant-in-aid + Self Financing ☐   Totally Self-financing [√]

1.11 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)*   Savitribai Phule Pune University

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

Autonomy by State/Central Govt. / University | √ |

University with Potential for Excellence | | UGC-CPE | |

DST Star Scheme | | UGC-CE | |

UGC-Special Assistance Programme | | DST-FIST | |

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

UGC-COP Programmes | |

2. IQAC Composition and Activities

2.1 No. of Teachers | 09

2.2 No. of Administrative/Technical staff | 05

2.3 No. of students | 02

2.4 No. of Management representatives | 01

2.5 No. of Alumni | NIL

2. 6 No. of any other stakeholder and

community representatives | NIL

2.7 No. of Employers/ Industrialists | NIL

2.8 No. of other External Experts | 01

2.9 Total No. of members

    18

2.10 No. of IQAC meetings held

    03

2.11 No. of meetings with various stakeholders: No.   13   Faculty   05

    Non-Teaching Staff Students   02   Alumni   03   Others   01

2.12 Has IQAC received any funding from UGC during the year?   Yes ☐   No √

    If yes, mention the amount

2.13 Seminars and Conferences (only quality related)

    (i) No. of Seminars/Conferences/ Workshops/Symposia organized by the IQAC

    Total Nos. ☐   International ☐   National ☐   State ☐   Institution Level 2

    (ii) Themes   ISO 9001:2015 implementation, Faculty Appraisal

2.14 Significant Activities and contributions made by IQAC

> 1. Improvement in Attendance Monitoring for Faculty and Staff through ERP
>
> 2. Awareness of MOOCs based Teaching Learning
>
> 3. Development of Video Assignments and submissions
>
> 4. Improvement in In-House Outcome Based Education Software
>
> 5. Implementation of ISO 9001:2015
>
> 6. Promotion of Internships amongst UG 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
1 . Improvement in Attendance Monitoring for Faculty and Staff through ERP	ERP based provision for checking individual attendance records – daily, weekly and monthly was made.
2. Awareness of MOOCs based Teaching Learning	Implementation of MOOCs based Teaching -Learning from A.Y. 2017-18
3. Development of Video Assignments and submissions	Use of ICT enabled tools such as Google Classroom for providing and submitting Assignments
4. Improvement in In-House Outcome Based Education Software	NBA Accreditation for all 7 UG Programs
5. Implementation of ISO 9001:2015	Design and development of applicable forms. Certification extended by BSI for A.Y. 2017-18 after Continuous Assessment Visit in March 2017
6. Promotion of Internships amongst UG students	Around 45% students secured internship for A.Y. 2017-18, as an effect of spreading awareness amongst students and tie-ups with companies

Academic Calendar of the year 2016-17 attached as Annexure- II

2.15 Whether the AQAR was placed in statutory body   Yes √   No

Management [√]   Syndicate [ ]   Any other body [ ]

Provide the details of the action taken

> Annual Quality Assurance report was presented during the Board of Management Meeting on 11th March 2017.
>
> Since March 2017, NAAC awareness sessions, discussions about new NAAC format have taken place.

Part – B

Criterion – I

1. 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	6	0		
PG	8	0		
UG	9	0		
PG Diploma				
Advanced Diploma				
Diploma				
Certificate				
Others				
Total	23			

Interdisciplinary	0			
Innovative	0			

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options – all applicable
(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	√
Trimester	
Annual	

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

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

   A analysis of the feedback as per Annexure-III

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

   B.Tech. Syllabus Revision – Video Assignments

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

   Department of Information Technology and Department of Electronics was established.

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of
permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
180	119	31	22	8

2.2 No. of permanent faculty with Ph.D.

52

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
185	0	31	28	23	4	10	0	249	32

2.4 No. of Guest and Visiting faculty and Temporary faculty

-	50	21

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	26	24	30
Presented papers	35	7	3
Resource Persons	14	13	1

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

1. Implementation of paperless submission using ICT enabled practices such as Google Classroom

2. Experiential learning opportunities through group mini projects in each semester.

3. Deputation of F.Y. B.Tech. students to NTU Singapore

4. Internship opportunities for hands-on experience in Summer Break as well as during 7th and 8th Semester

5. Organization of Mini and Major Project Exhibition

6. Skill Development in Computer and Electronics Trades in Engineering Workshops

2.7 Total No. of actual teaching days

 during this academic year

> 184

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

> 1. Open Book Examination
> 2. Online MCQ Examination
> 3. Online query handling for online Mid Semester Exam
> 4. OMR reading for faster processing of examination marks

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

> | 45 | 198 | 45 |

2.10 Average percentage of attendance of students

> 84.73

2.11 Course/Programme wise
 distribution of pass percentage :

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
Chemical Engg.	59	46	6	5	0	0
Computer Engg.	144	96	20	9	0	0
E and TC Engg.	125	94	16	9	0	4
Electronics Engg.	83	56	13	5	0	7
Industrial Engg.	23	19	2	1	0	1
IT Engg.	37	26	2	5	0	2
Instrumentation Engg	63	54	5	2	0	2
Mechanical Engg.	154	125	15	2	0	12
Production Engg.	37	30	2	3	0	2

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

 1) Through internal and external academic audits.

 2) Analysis of faculty feedback given by the students

2.13 Initiatives undertaken towards faculty development

Faculty / Staff Development Programmes	*Number of faculty benefitted*
Refresher courses	137
UGC – Faculty Improvement Programme	NIL
HRD programmes	62
Orientation programmes	25
Faculty exchange programme	1
Staff training conducted by the university	3
Staff training conducted by other institutions	43
Summer / Winter schools, Workshops, etc.	118
Others	

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	116	0	0	8
Technical Staff	47	0	0	5

Criterion – III

3. Research, Consultancy and Extension

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

- Establishment of research forum for various activities such as
  - Sharing of research by internal faculty members
  - Arranging expert lectures by outside eminent personalities
  - Arranging conferences and workshops
  - Submitting research proposals for government and non-government funding agencies
  - Pursuing consultancy work, developing incubation centers.
  - Writing patents
- Established research steering committee to coordinate the activities of the research forum.

- Industry Advisory Board (IAB) for every department and their involvement in Structure and Syllabus revision

- Meetings with mentor from IIT for every department

- Formalized the procedure for Departmental research data collection

- Formalized Training need Identification, Deputation and Feedback Process

3.2   Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	3	10	3	3
Outlay in Rs. Lakhs	24.05	220.29	74.36	84.34

3.3   Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	8	13	10	11
Outlay in Rs. Lakhs	8.60	12.59	9.29	6.9

3.4   Details on research publications

	International	National	Others
Peer Review Journals	70	-	-
Non-Peer Review Journals	16	-	-
e-Journals	5	-	-
Conference proceedings	76	7	-

3.5 Details on Impact factor of publications:

Range | 0-7.684 | Average | 2.129 | h-index | 2.956 | Nos. in SCOPUS | 4.571

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 (in Lakhs)	Received (in Lakhs)
Major projects	3 years, 2016	RGSTC	39.63	12
	2 years, 2016	DST	15.09	4.89
	3 years	RGSTC	19.64	-
	3 years	Bill and Melinda Gates Foundation, AIT, Thailand	20	6
	2 years	ISRO	86.25	86.25
	2014-17	Saptashrungi Pvt. Ltd. And VIT Pune	16	-
Minor Projects	2 years, 2015	BCUD,SPPU,Pune	0.60	0.60
	2 years, 2015	BCUD,SPPU,Pune	0.30	0.30
	2 years, 2015	BCUD,SPPU,Pune	0.30	0.30
	2 years, 2016	BCUD,SPPU,Pune	0.33	-
	2 years	BCUD,SPPU,Pune	2	2
	2 years	BCUD,SPPU,Pune	2	2
	2 years	DST + BELSPO	5	5
	1 year		3.3	3.05
	2015-17	BCUD,SPPU,Pune	1.50	1.50
	2016-17	Binghamton	-	-
	2016-18	BCUD,SPPU,Pune	1.65	-
Interdisciplinary Projects	-	-	-	-
Industry sponsored	2 years	Wilo Pumps	28	10
	2 years	Industry	3	-
	2 years	Standard Constructions	3	3
	2016-17	Konnet Vian Pvt. Ltd.	1	
	June 2017-Sep 2017	Pridex	0.60	
	June 2016 onwards	Liebherr Appliances, Aurangabad	1.05	

	Apr 2017- July 2017	Pridex	3.75	1
	Jan 2017- July 2017	Liebherr Appliances, Aurangabad	1.41	1.41
Projects sponsored by the University/ College	2 years	BCUD,SPPU,Pune	4.66	-
	2 years	BCUD,SPPU,Pune	7.91	6.70
	2 years	BCUD,SPPU,Pune	3	1.15
	2 years	SPPU,Pune	1.1	1.1
research projects *(other than compulsory by the University)*	Students 2016-17	DRDO	2	2
	2016-17	Forbes Marshall		
	2016-17	Mitsubishi Electric	1	1
Any other(Specify)				
Total			274.07	142.15

3.7 No. of books published   i) With ISBN No.   [6]   Chapters in Edited Books   [3]

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   [19,53,531]

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	-	-	2	-	4
Sponsoring agencies	-	-	1) SPPU 2) Self	-	Self

3.12 No. of faculty served as experts, chairpersons or resource persons   [51]

3.13 No. of collaborations   International [8]   National [9]   Any other [6]

3.14 No. of linkages created during this year   29

3.15 Total budget for research for current year in lakhs :

From Funding agency   25   From Management of University/College   50

Total   75

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	2
	Granted	-
International	Applied	-
	Granted	1
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
12	2	2	-	1	-	7

3.18 No. of faculty from the Institution
who are Ph. D. Guides   15
and students registered under them   61

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 other   -

3.21 No. of students Participated in NSS events:

University level   100   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 [11]

NCC [-]   NSS [1]   Any other [-]

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

- Police Mitra
- Blood Donation
- Aatmabodh
- NSS Camp
- Diabetes Awareness Camp
- Organ Donation Awareness Program
- Election Awareness
- Seva Sahyog : Food Safety Rally
- International Women's Day
- Tree Plantation
- I2I

Criterion – IV
4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing Sq.M.	Newly created	Source of Fund	Total
Campus area – Builtup Area	28655.68	-	-	-
Class rooms	2691.86	-	-	-
Laboratories	8435.65	-	-	-
Seminar Halls	1806.53	-	-	-
No. of important equipments purchased (≥ 1-0 lakh) during the current year.	-	-	-	-
Value of the equipment purchased during the year (Rs. in Lakhs)	-	-	-	-
Others	-	-	-	-

4.2 Computerization of administration and library

> Central Library is using the SLIM 21 Library Software with various modules for all library activity.
>
> Circulation Section, Journal Section, Procurement and Processing Section are fully computerised.
>
> Online public access catalogue facility is available within the campus for all students and staff.
>
> Bar coded based issue / return of books.
>
> Central Library has started SMS service from February 2014 for the benefit of students. Now students are getting SMS for their overdue books.
>
> News related to UGC, AICTE, DTE, University of Pune as well as News related to our Institute are now available on Institute Website.
>
> Softcopy of old question papers is now available on Institute Website.
>
> Biometric Attendance record keeping of staff and its availability for individual access
>
> Digitization of important documents such as land documents, service books etc.
>
> On-Line leave sanctioning

4.3 Library services:

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	60880	188.16 L	1710	9.15 L	62590	197.31 L
Reference Books	2937	85.45 L	--	--	2937	85.45 L
e-Books	2484	1.76 L	--	--	2484	1.76 L
Journals	216	8.91 L	--	--	216	8.91 L
e-Journals	4651	17.84 L	--	--	4651	17.84 L
Digital Database	132	0.50 L	--	--	132	0.50 L
CD & Video	1657	2.66 L	--	--	1657	2.66 L
Others (specify)	523	0.64 L	--	--	523	0.64 L

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Depart-ments	Others
Existing	1303	428	80	80	80	28	643	-
Added	-	-	-	-	-	-	-	-
Total	1303	428	80	80	80	28	643	-

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

Aircel Internet leased line : 44 Mbps [PO for 60 Mbps is given, work in progress]

Reliance leased line : 4 Mbps

4.6 Amount spent on maintenance in lakhs :

i) ICT

ii) Campus Infrastructure and facilities

iii) Equipments

iv) Others

Total : 120.68

Criterion – V
5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

1. Counselling and Grievance Redressal by IQAC members

2. Increase in Food outlets within the Campus

3. Fostering Technical and personality growth of students on the aegis of various students chapters such as IEEE, IE(I), ACM, IETE, ISA, SAE, etc.

4. Sports facilities on campus or by renting playgrounds and premises for students

5. Representation of Students in Board of Studies and Academic Board

6. Awareness amongst girl students regarding online mobile-app for protection purpose

5.2 Efforts made by the institution for tracking the progression

- Through QMS by checking attendance and academic Non conformity
- Through formative assessment throughout the semester
- Interim reviews for Projects and Seminars
- Counselling through class teachers and Dept. Heads
- Food Quality checking as a part of Quality Management System
- Student Scholarships related details monitored through Quality Management System

5.3 (a) Total Number of students

UG	PG	Ph. D.	Others
3489	330	0	-

(b) No. of students outside the state

UG – 90 PG -16

(c) No. of international students

UG – 89 PG -4

Men

No	%
2809	73.55

Women

No	%
1010	26.45

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
2305	353	130	659	24	3471	2333	325	115	634	15	3422

Demand ratio   Dropout %

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

> The Institute under Civil Services Aspirant Club have organized three awareness programs for giving guidance to students aspiring to join Civil Services.
>
> The Club members meet frequently to interact and prepare for competitive examination

No. of students beneficiaries   40

5.5 No. of students qualified in these examinations

NET	-	SET/SLET	-	GATE	64	CAT	17
IAS/IPS etc	-	State PSC	1	UPSC	2	Others	GRE- 51 CEED - 1

5.6 Details of student counselling and career guidance

> Abhivriddhi `Training & Development Cell' arranged training sessions for students on topics such as : Resume Writing, Group Discussions, Personal Interviews. Mock interviews were conducted department wise by inviting industry experts.

No. of students benefitted   150

5.7 Details of campus placement

On campus			Off Campus
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
119	668	343	-

5.8 Details of gender sensitization programmes

> 1. International Women's Day (8th March 2017)
>
> 2. Women Empowerment (NSS Camp)

5.9 Students Activities

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

State/ University level   200   National level   5   International level   -

    No. of students participated in cultural events

State/ University level   60   National level   -   International level   -

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

Sports : State/ University level   48   National level   -   International level   -

Cultural: State/ University level   13   National level   -   International level   -

5.10 Scholarships and Financial Support

	Number of students	Amount
Financial support from institution	-	-
Financial support from government	1616	12,88,81,657
Financial support from other sources	19	93,428
Number of students who received International/ National recognitions	-	-

5.11   Student organised / initiatives

Fairs   : State/ University level   1   National level   -   International level   -

Exhibition: State/ University level   -   National level   -   International level   -

5.12   No. of social initiatives undertaken by the students   11

5.13 Major grievances of students (if any) redressed: Improvement internship opportunities

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the institution

Vision : To be globally acclaimed Institute in Technical Education and Research for holistic Socio-economic development

Mission : 1. To impart knowledge and skilled based education in collaboration with Industry, Academia and Research Organizations 2. To strengthen global collaboration for students, faculty exchange and joint Research 3. To prepare competent Engineers with the spirit of Entrepreneurship 4. To inculcate and strengthen Research aptitude amongst students and faculty

6.2 Does the Institution has a management Information System

Computerization of administration

Administration at VIT is computerized under ERP. Following are the objectives of ERP.
- To provide one central repository for all information that is shared by all the various ERP facets in order to smooth the flow of data across the organization.
- To enhance productivity, efficiency of processes to achieve institutional objectives.
- Modular design to facilitate seamless integration of new requirements and growth.
- To reduce the response time by effectively transferring crucial information.
- To reduce paper work and increase operational efficiency.
- To streamline the numerous functions performed by the institute as a whole.

ERP provides a fully automated solution for running institutional processes with following Modules
- Registration
- Admission
- Fee Collection
- I-Card Generation
- User Management
- On Line Mid Semester Examination
- Sending Result Of Mid Semester On SMS And Email.
- Sending SMS, mail to students
- Staff Appraisal System (feedback)
- Feedback based courses to faculty. Creation ,updation of question
- Exam Marks Entry
- Examiner appointment, marks entry of theory TA, ESE and LAB marks.
- Exam Result
- Exam result calculation, declaration, sending SMS
- Exam Gradation
- Exam seating arrangement and many other exam utilities
- Staff Record Storage
- Leave Management
- Load Allocation subject assignment to staff before start of semester
- Timetable generation and various reports
- Room database, time table preconditions. staff conditions, reconditions of departments
- Course ,institute feedback
- Feedback on course contents , institute feedback
- Dynamic Query analyzer

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

6.3.1 Curriculum Development

- Module Pattern
- Exposure to international languages such as French, German, Spanish
- Four semester long communication and Soft Skill Courses
- Mini Project – Every semester
- Computer and Electronics oriented workshops alongwith conventional workshops
- Commerce, Law, IPR related electives
- Yoga, Philosophy, Ethics related electives
- Health, Hobbies, Skills related electives
- PD Courses designed and conducted by Industry or Industry Experts
- Comprehensive Viva Voce
- Internationally compatible Academic Calendar to provide internship opportunities for substantial duration
- Self paced planning of Engineering – slow learners and fast learners
- Honors – Mini specialisation in special domain and Minor – Interdisciplinary knowledge acquisition facility

6.3.2 Teaching and Learning

- English Proficiency tests, bridge courses for Diploma to Degree direct admissions
- Support for internship activities for advanced learners
- Honors course in each Department
- Effective Class Teacher – Guardian Scheme For mentoring the students
- Group discussions, quizzes, open book exams, MCQs based assessment
- Use of multimedia such as LCD, OHP and Audio visual aids
- The Library has a variety of CDs which are uploaded on a server for common usage. Also the NPTEL (National Program for Technology Enhanced Learning) resources can also be used within the campus through campus wide network.
- Field visits.
- Identification of non-performing students and by taking effective measures to address the non conformities.
- Courses by Industry experts
- Faculty from Purdue University teach courses in Machanical Engg. And Instrumentation Engg.

6.3.3 Examination and Evaluation

- Setting up of question paper to challenge various essential abilities of students such as analysis, synthesis, interpretation, design, etc. based on Blooms' Taxonomy rather than conventional memory recall based questions
- Teacher assessment based on tutorials where ever applicable and Home Assignment for all subjects / courses
- Central Assessment Programme at the end of Semester
- Intimation of student performance and announcement of result via SMS and e-mail
- Declaration of result within 15 days
- Extra term for all Courses – Summer Term
- Identification of academic and attendance defaulters and counselling for improvement in student performance
- Credit based system based on competition of SPI which is dependent on Grade points
- Formative and summative assessment
- Open book / MCQ / conventional Class Test
- MCQ based online Test with objective questions of varying degree of difficulty

6.3.4 Research and Development

1. Research committee is instrumental in working on following initiatives:

- Setting up VIT research quality policy: Publication requirements, research proposal submission requirements for faculty of various cadres, PhD Scholars and masters students
- Identifying departmental thrust areas and leveraging consultancy work by the faculty, based on these thrust areas.
- To develop Industry Institute Linkages, collaborative research entrepreneurship and incubation centres
- Identifying training needs of the faculty and deputing them to attend various seminars workshops and conferences to fulfil those needs.
- To conduct inter-departmental research meetings once in a month to foster interdisciplinary research collaborations amongst the faculty of distinct departments.
- To make sure that parent University norms are followed for the conduction of the PhD program at the research centre

2. Institute faculty has received Research Grants from ISRO, RGSTC, BCUD - SPPU

6.3.5   Library, ICT and physical infrastructure / instrumentation

- Library :
    - Central Library is using the SLIM 21 Library Software with various modules for all library activity.
    - Circulation Section, Journal Section, Procurement and Processing Section are fully computerised.
    - Online public access catalogue facility is available within the campus for all students and staff.
    - Bar coded based issue / return of books.
    - Central Library has started SMS service from February 2014 for the benefit of students. Now students are getting SMS for their overdue books.
    - News related to UGC, AICTE, DTE, University of Pune as well as News related to our Institute are now available on Institute Website.
    - Softcopy of old question papers is now available on Institute Website.

- ICT :
    - Broadband connection – connectivity speed improved from 16 Mb to 40 Mb
    - Development of mobile app for student related information on website
    - Development of Video conferencing facility
    - Online fee collection using Gateway
    - Project registration module
    - Facebook group for First year students

- Physical Infrastructure :
    - Campus security using surveillance cameras
    - Renovation of T&P facility
    - BT road construction
    - Increase in food outlets
    - Beautification of campus by floral tree plantation

6.3.6   Human Resource Management

- Submission of leave and sanctioning through ERP.
- Creation of data base for newly recruited faculty using ERP
- Integration of HR data for time table., feed back and allied activities
- Scanning of service books and other mandatory documents

6.3.7 Faculty and Staff recruitment

- Presentation , technical / non technical interviews, establishment of panel for faculty recruitment involving Dean, Registrar, Head of the Department, Senior Professor along with Director as a Chairman.
- Induction Training Programme for newly recruited staff

6.3.8 Industry Interaction / Collaboration

- Representation on Board of Studies, Academic Board and Bard of Management
- Consultancy projects
- Placement activity
- Guest lectures
- Professional Development Courses
- U.G./ P.G. Project sponsorship
- Internship opportunities during Summer Vacation and regular Semester
- Industrial visits
- Joint research programme
- Annual HR Meet to enhance employability of students
- Participation in Surveys
- Formation of Industry Advisory Board in each Department
- Annual HR meet for interaction with recruiters

6.3.9 Admission of Students

- Showcasing VI Institute activities through News papers, campaign, social media
- Counselling and guidance through Book publication
- Academic reforms to address needs of Industry, academia and Society at large

6.4 Welfare schemes for

Teaching Non teaching	• Group Insurance • Kalyankari Yojana • Credit Co-operative Society • Provident Fund and Gratuity • Tie – up with nearby Hospital for immediate medical attention at concession al rates
Students	• Earn and Learn Scheme • Scholarships • Educational Loan assistance • Tie – up with nearby Hospital for immediate medical attention at concession al rates

6.5 Total corpus fund generated

No

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	Yes	IIT Professors	Yes	ISO Consultant
Administrative	Yes	Phadke & Co.	-	-

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?

> • Auto –allocation of seating arrangement.
> • Personalized Time Table available to the student upon entry of General Registration Number
> • OMR reading for faster processing of examination marks

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

N.A.

6.11 Activities and support from the Alumni Association

- Representation in Board of Studies
- Alumni meet at Institute level in December 2016
- Material and technological support
- Interaction with faculty about Academics and Research
- Lectures about career planning

6.12 Activities and support from the Parent – Teacher Association

NIL

6.13 Development programmes for support staff

- GST awareness

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

1) Utilisation of computers - Number of office procedures are online. Unit Test and its result is also given online to all students. E-journal subscription is available to staff and students in the Library.

2) Bio-metric machines are used for daily attendance purpose.

3) Maintenance of trees, lawns, bushes by applying fertilizers and pesticides

4) Using the back side of one-side printed paper for drafting purposes. Recycling of waste paper through agency is carried out regularly, instead of burning it.

5) Dried leaves of trees are used for preparing compost.

6) Number of students are making use of municipal transport facility, rather than personal vehicles to avoid air-pollution.

7) Low Wattage consuming CFL (Compact Fluorescent Lamps) are installed in the campus. CFL Lamps, fans, computers, printers and other electricity consuming items are switched off or shut down to save electricity.

8) Eco-friendly and Energy Star compliant computer peripherals and other electronic and electrical appliances are used.

9) Beautification of campus by planting floral trees.

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.

> 1. Academic innovations to improve teaching learning at B.Tech level
>   - Provision for Semester Internship
> 2. Inclusion of online fee payment through Gateways using ERP
> 3. Facebook Groups and Whats app groups for better communication
> 4. Use of Google classroom for On-line submissions
> 5. Paperless circulation of notices

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

> Plan – To revise Under Graduate Structure & Syllabus from S.Y. B.Tech. onwards
>   Action Taken - Implementation from Academic Year 2016-17
> 2. Plan – Department Industry Advisory Boards activities
>   Action Taken - Meetings of Department Industry Advisory Boards took place
> 3. Plan – Interaction with Department Mentor
>   Action Taken – Interaction of Department Mentors with Department faculty regarding Research guidance, facility support and academics
> 4. Plan – To carry out Academic Audits
>   Action taken – Academic audits carried out by IIT Professors
> 5. Plan – To organise HR Meet
>   Action Taken – HR Meet was organised on 22.06.2017 in Pune

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

> A) PD Courses by Industry
> B) ISO 9001: 2015 Quality Managements System implementation

> ** details in Annexure IV*

7.4 Contribution to environmental awareness / protection

> 1. All electrical and electronics equipments are switched off when not in use
> 2. CFL tubes and lamps are installed
> 3. Photographs / videos are digitally stored instead of paper albums or plastic tape
> 4. Appeal to all students and staff for using public transport or sharing the vehicle
> 5. Green coverage area is around 200 sq. mtrs.
> 6. Underground drainage and storm water system is available which is connected to Corporation line.
> 7. Research contribution of faculty from Chemical Engg. And Mechanical Engg. Department in development of cost effective toilets for rural India
> 8. Alternate Saturday – 2nd , 4th and 5th working.

7.5 Whether environmental audit was conducted?   Yes [ ]   No [√]

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

> Institute carries out Management Review Committee meetings periodically to address quality related, academic and other issues.

8. **Plans of institution for next year**

> 1. To organize International Conference in Computer Engineering
> 2. Two State level workshops in Multidisciplinary areas
> 3. To conduct orientation program for newly joined faculty
> 4. To improve student internships
> 5. To provide career counselling and guidance support to students, besides placement support
> 6. To revise M.Tech. Syllabus
> 7. To depute students to NTU, Singapore and/or SUNY Binghamton
> 8. To carry out Examination Automation

Name Prof. Ashutosh Marathe   *Name Prof. (Dr.) Rajesh Jalnekar*

-----sd-----   *----- sd-----*

Signature of the Coordinator, IQAC   *Signature of the Chairperson, IQAC*

_____***_____

Abbreviations:

CAS	-	Career Advanced Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
COP	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
DPE	-	Department with Potential for Excellence
GATE	-	Graduate Aptitude Test
NET	-	National Eligibility Test
PEI	-	Physical Education Institution
SAP	-	Special Assistance Programme
SF	-	Self Financing
SLET	-	State Level Eligibility Test
TEI	-	Teacher Education Institution
UPE	-	University with Potential Excellence
UPSC	-	Union Public Service Commission

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Annexure – II
Academic Calendar – A.Y. 2016-17

Sr. No.	Activity	Semester I	Semester II
I	**College Re-opens on**	-	**05-01-2017**
II	**Welcome and Registration**		
1)	Director's Address to S.Y.B.Tech., T.Y. B. Tech.& Final Year B. Tech,, M. Tech. – II and MCA – II and III students (alongwith FE, ME – I and MCA – I students in IInd Semester)	02-08-2016	
2)	Director's Address to F.Y.B.Tech., M.Tech. – I & MCA – I students in Ist Semester	17-08-2016	N.A.
3)	Registration for next Semester		
III	**Teaching – Learning**		
1)	**Teaching begins for all classes –** UG, / PG / MCA all years	01-08-2016	05-01-2017
2)	Remedial Teaching for all classes – UG / PG / MCA all years :Before End Semester Examination	08-12-2016	05-05-2017
3)	End of teaching for all classes	07-12-2016	04-05-2017
4)	Commencement of teaching for next semester / year for students	05-01-2017 (for Sem II)	01-08-2017 (for A.Y. 2016-17)
IV	**Examination & Assessment**		
1)	Test 1	25-08-2016 to	30-01-2017 to

Sr. No.	Activity	Semester I	Semester II
		31-08-2016	04-02-2017
2)	Repeat Test 1 and entry of marks in ERP	02-09-2016 to 09-09-2016	06-02-2017 to 11-02-2017
3)	Test 2, Project Interim Review, Seminar Review	17-10-2016 to 22-10-2016	20-03-2017 to 25-03-2017
4)	Laboratory Course assessments, Mini / Major Project assessment, Seminar assessment	01-12-2016 to 07-12-2016	
	Laboratory Course assessments, Mini Project assessment, Seminar assessment		27-04-2017 to 04-05-2017
5)	End Semester Examination for all classes	09-12-2016 to 19-12-2016	06-05-2017 to 16-05-2017
	Comprehensive Viva Voce	20-12-2016 to 21-12-2016	
	Comprehensive Viva Voce, Major Project assessment		17-05-2017 to 19-05-2017
6)	Central Assessment Programme (C.A.P.)	09-12-2016 to 22-12-2016	06-05-2017 to 20-05-2017
Sr. No.	Activity	Semester I	Semester II
V	**Breaks, Students' Activities**		
1)	Breaks		
	1) Diwali Break	24-10-2016 to 06-11-2016	N.A.
	2) Winter Break for students	23-12-2016 to	N.A.

Sr. No.	Activity	Semester I	Semester II
		04-01-2017	
	3) Summer Break for students	N.A.	20-05-2017 to 31-07-2017
2)	Students' Activities		
	1) Annual Social Gathering	N.A.	03-03-2017 & 04-03-2017
	2) Vishwakarandak	21-09-2016 to 24-09-2016	N.A.
	3) Mélange	N.A.	15-02-2017 to 18-02-2017
VI	**Holidays**		
	Independence Day	Mon., 15-08-2016	----
	Rakshabandhan	Thu., 18-08-2016	----
	Gokul Ashtami	Wed., 24-08-2016	----
	Ganesh Chaturthi	Mon., 05-09-2016	----
	Anant Chaturdashi	Thu., 15-09-2016	----
	Anant Chaturdashi Next Day	Fri., 16-09-2016	----
	Dassera	Tue., 11-10-2016	----
	Holiday Adjustment Working day in lieu of adjustment	Sat., 17-09-2016 Sun., 11-09-2016	
	Holiday Adjustment Working day in lieu of adjustment Working day in lieu of adjustment	Mon.,10-10-2016 Sat., 08-10-2016 Monday timing Sun., 09-10-2016	

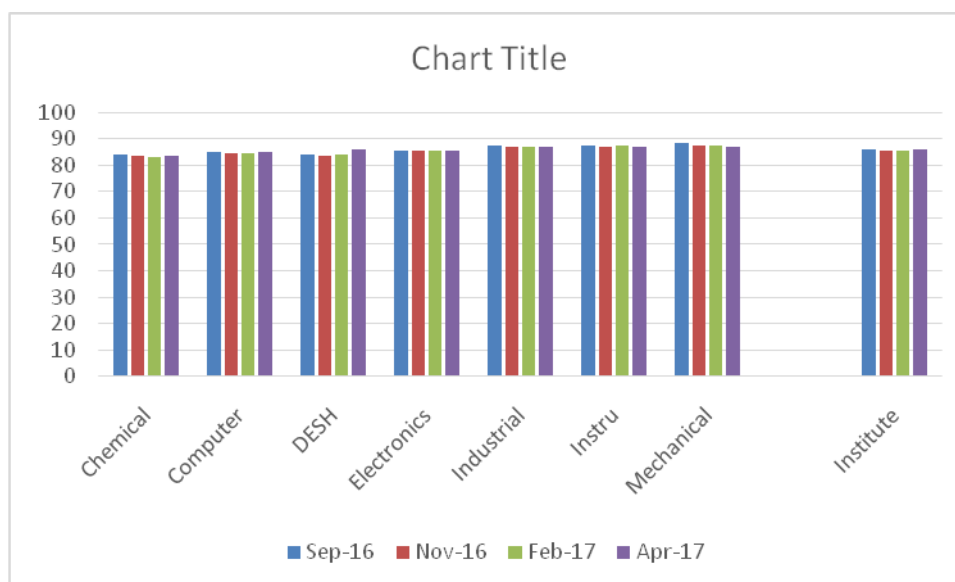| Sr. No.	Activity	Semester I	Semester II
		Saturday timing	
	Makar Sankranti	----	Sat., 14-01-2017
	Republic Day	----	Thu., 26-01-2017
	Dhuli Vandan	----	Mon., 13-03-2017
	Gudhi Padwa	----	Tue., 28-03-2017
	Dr. Ambedkar Jayanti	----	Fri., 14-04-2017
	Maharashtra Day	----	Mon.,01-05-2017
	Ramajan Eid	----	Mon.,26-06-2017

The following Holidays fall on Sunday –

02-10-2016: Gandhi Jayanti

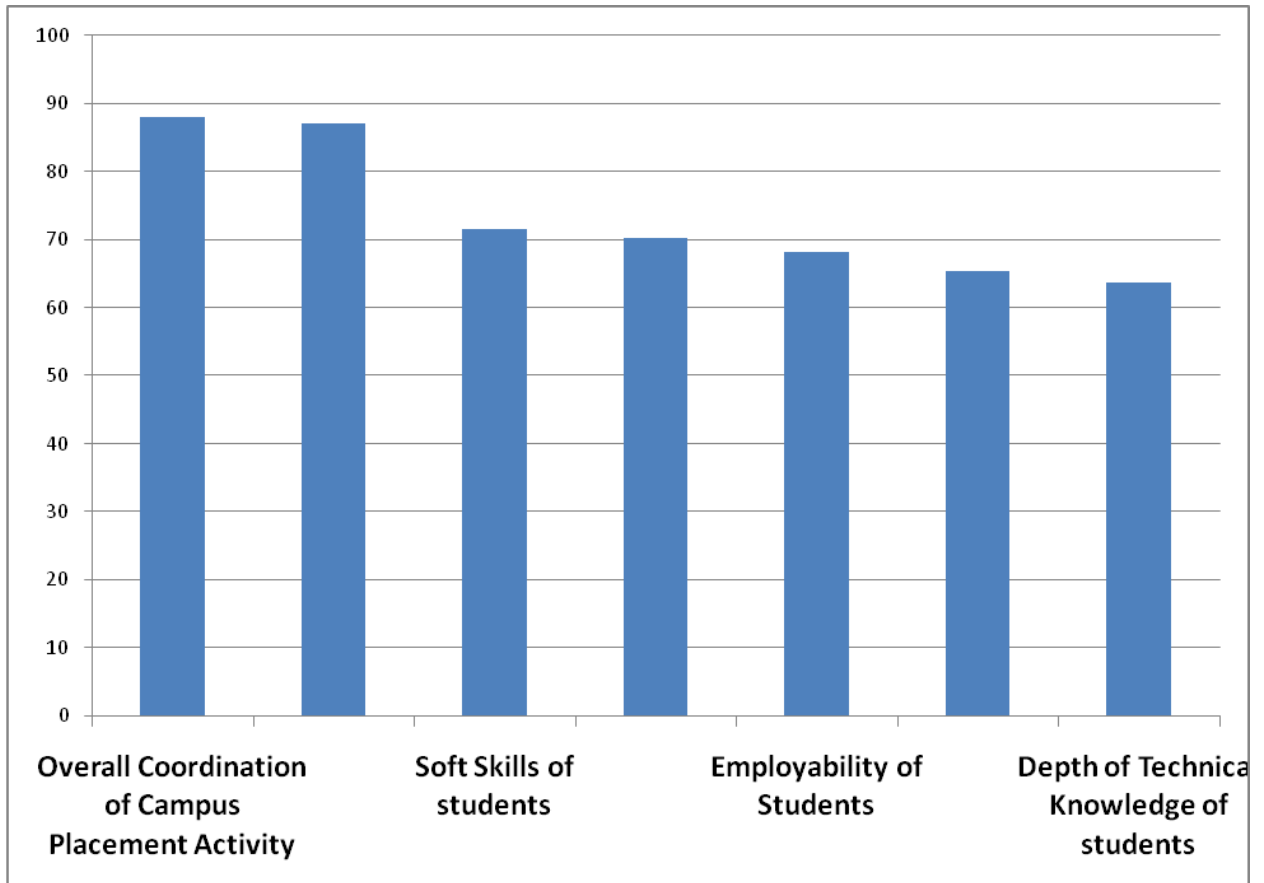19-02-2017 : Shivaji Maharaj Jayanti

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[PROF. (DR.) R. M. JALNEKAR]
Dean – Academics and Director

Annexure – III
Student feedback Analysis – A.Y. 2016-17

Performance Index A.Y.2016-17				
	Sep. 2016	Nov. 2016	Feb. 2017	Apr. 2016
Chemical	83.773	83.665	83.175	83.349
Computer	84.891	84.64	84.548	84.862
DESH	84.002	83.52	84.11	85.732
Electronics	85.254	85.385	85.55	85.37
Industrial	87.325	86.761	87.041	86.824
Instrumentation	87.263	86.71	87.436	86.933
Mechanical	88.158	87.488	87.363	86.7
Institute	85.80943	85.45271	85.60329	85.68143

Customer's Feedback

Annexure – IV
Best Practices of the Institution

A) Professional Development Courses by Industry :

1. **Title of the Practice :**
   Professional Development Courses by Industry

2. **Objective of the Practice :**
   To include Industry experts in teaching learning – The Professional Development Courses are specifically designed by Industry experts as per the need of Under Graduate students. The best practice is to ensure industry footfall in College Campus.

3. **The Context :**
   The idea of promoting Professional Development Courses by Industry was integrated in the Choice Based Credit System (CBCS). The availability of learned industry experts who had the flair and urge to teach was a challenge.

4. **The Practice :**
   A Professional Development Course of 2 credits and 2 hours per week with a course plan of 30 hours and assessment was made by all Board of Studies after understanding its academic need and after ensuring the availability of industry experts. Fitting the industry need in curricular framework as well as ensuring planned completion of the PF course was challenging.

5. **Evidence of Success :**
   In the Quality Objectives designed as per Quality Management System, it was intended to have PD Courses run by Industry in every Semester for T.Y.B.Tech. students. This best practice has been going on for more than 5 years with the industry experts expressing satisfaction.

6. **Problems Encountered and Resources Required :**
   Academic tuning of industry experts, communication soft skills of experts and improvement thereof was a challenge. Designing assessment and evaluation framework like other courses was another challenge.
   As per the student strength around 25 industry experts were required to implement the practice. However the best practice has been sustained for more than 5 years.

7. **Notes :**
   In order to adopt this best practice other institutes may establish industry interaction, identify academically oriented industry experts and explore possible opportunities to induct the experts into main stream academics.

B) ISO 9001: 2015 Quality Managements System implementation :

1. **Title of the Practice :**
   ISO 9001: 2015 Quality Managements System implementation

2. **Objective of the Practice :**
   The objective of implementation of QMS is to streamline operational and planning procedures of the Institute for efficiency improvement and better performance.

3. **The Context :**
   The inclusion of the academic environment under the requirements of ISO QMS was a challenge. Identification of duties and responsibilities of each Section Head / Department Head, development of applicable procedures, form formats and work instructions was another challenge.

4. **The Practice :**
   Planning and implementing higher educational practices under the framework of QMS for last 10 years is unique. Tuning the mindset of Management, faculty, staff, students and other stakeholders was challenging.

5. **Evidence of Success :**
   Through rigorous internal and external audits under the framework of QMS, the Institute has been able to showcase its excellent performance and contribution to society by producing competent engineers. The Institute has achieved glory in National quality benchmark such as NAAC, NBA, conferment of academic autonomy by UGC, IMC National Quality Award, etc. During the course of last 10 years the Institute has successfully retained its ISO Certification with zero non conformities in External Audits carried out by BSI authorities.

6. **Problems Encountered and Resources Required :**
   Tuning the mindset, removal of obsolesce and adaption of new academic practices under the QMS is a constant challenge. Continuous record keeping, transition from paper to paperless record keeping is a functional need. Trained faculty or efficient consultant with a good knowledge of QMS is also required.

7. **Notes :**
   Aligning the focus of QMS with the Institute Vision and Mission is essential. Institute needs to set up Quality Objectives and spread the QMS network throughout the Institute in accordance with it.