



**Poojya Sane Guruji Vidya Prasarak Mandal's**

**D. N. Patel College of Engineering Shahada**

**Dist. Nandurbar, 425409, Maharashtra, India**



# **Self Study Report**

**Submitted to**

**National Assessment and Accreditation  
Council**

**Bengaluru, India**

## ABBREVIATIONS

ABET	Accreditation Board for Engineering & Technology
AICTE	All India Council for Technical Education
AMC	Academic Monitoring Committee
BCUD	Board of College and University Development
BE	Bachelor of Engineering
BoS/ BOS	Board of Studies
CAP	Centralized Admission Process
CSI	Computer Society of India
DTE	Director of Technical Education
GATE	Graduate Aptitude Test in Engineering
GRE	Graduate Record Examination
HoD/HOD	Head of the Department
IELTS	International English Language Testing System
ISTE	Indian Society for Technical Education
ISSN	International Standard Serial Number
IQAC	Internal Quality Assurance Cell
LIC	Local Enquiry Committee
LOI	Letter of Intent
ME	Master of Engineering
MOU	Memorandum of Understanding
MSEDCL	Maharashtra State Electricity Distribution Company Limited
NBA	National Board of Accreditation
NMEICT	National Mission of Education through Information and Communication Technology
NMU	North Maharashtra University
NPTEL	National Programme for Technology Enhanced Learning
NT	Nomadic Tribes
OBC	Other Backward Class
PEO	Programme Education Objectives
PG	Post Graduate
Ph.D	Doctor of Philosophy
PLC	Programmable Logic Controller
PO	Performance Outcome
SBC	Special Backward Class
SC	Scheduled Caste
ST	Scheduled Tribes
TOEFL	Test of English as a Foreign Language
TPO	Training and Placement Office

UG	Under Graduate
UGC	University Grants Commission
SNIP	Source Normalised Impact per Paper

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## PREFACE

*"Strive for perfection in everything you do. Take the best that exists and make it better. When it does not exist, design it."*

**Sir Henry Royce**

Innovations in Technology have been the key to growth and prosperity to any country, and engineering has been an important motivating force for this. Due to the vibrant changes in the international circumstances, extension of knowledge, incorporation of skills and values, integration of technology became predictable, which necessitated reforms in the engineering education system. The process of globalization and liberalization accelerated this process with emphasis on improvement in communal framework along with technological development.

Visionaries in India realized that technological advancements are intrinsically tied with virtually every aspect of society and it is essential to develop a scientific and technically cultured society.

Realizing this potential, the founder, Hon. Shri. Annasaheb P. K. Patil ventured into the education domain and established in the year 1969, the Mandal has been serving the sacred cause of education in the remote, adivasi part of the State of Maharashtra. Though the jurisdiction of the Mandal is the entire Maharashtra, it has concentrated on the Shahada tahasil of the State and this tahasil is 450 kilometers away from the state capital (Mumbai), adjoining the borders of the Gujrat State to the North side the M.P. to the East. This area is mainly populated with the economically & socially backward, poor peasants & the landless adivasis. To educate the young generation of such poor section of society, the Mandal has been conducting Colleges of Arts, Commerce, Science, Education, Engineering streams and Polytechnic, Industrial Training Center, Pharmacy, Agriculture are the other units which the Mandal conducts. Carrying forward this legacy, Hon. Shri. Bapusaheb Dipak P. Patil, Chairman, Poojya Sane Guruji Vidya Prasarak Mandal took them to exponential heights. With his cherished vision "Work for the betterment and upliftment of the masses" and aiming to develop talented engineers with the desire to serve the society and nation at large.

From the foundation, the Institute has grown leaps and bounds to reach the present state of education colossal. The Institute caters to six UG programmes, two PG programmes affiliated to North Maharashtra University (NMU).

It firmly believes that excellence can be accomplished by incessant assessment and accreditation process leading to its quality evaluation. Institute has initiated this endeavor by subjecting itself to the process of accreditation since 2005. In this journey it has been accredited by NBA for all eligible departments (once as per their eligibility).

Ascending in this expedition, we are pleased to submit ourselves to the assessment and accreditation by NAAC. We the stakeholders – the munificent management, proficient and compassionate faculty, enthusiastic students, accommodating parents, supportive society look forward for this quality exercise. I take this opportunity to thank all my staff, faculty for their unconditional and untiring efforts and encouragement from the management

**PRINCIPAL**

## Introduction

Poojya Sane Guruji Vidyaprasarak Mandal was established by Hon. Annasaheb P. K. Patil in year 1969. Today it imparts quality education in the field of Engineering, Pharmacy, Arts Science & Commerce, Agriculture, Polytechnic etc. All the institutes are approved by Government of Maharashtra and recognized by respective regulatory authorities.

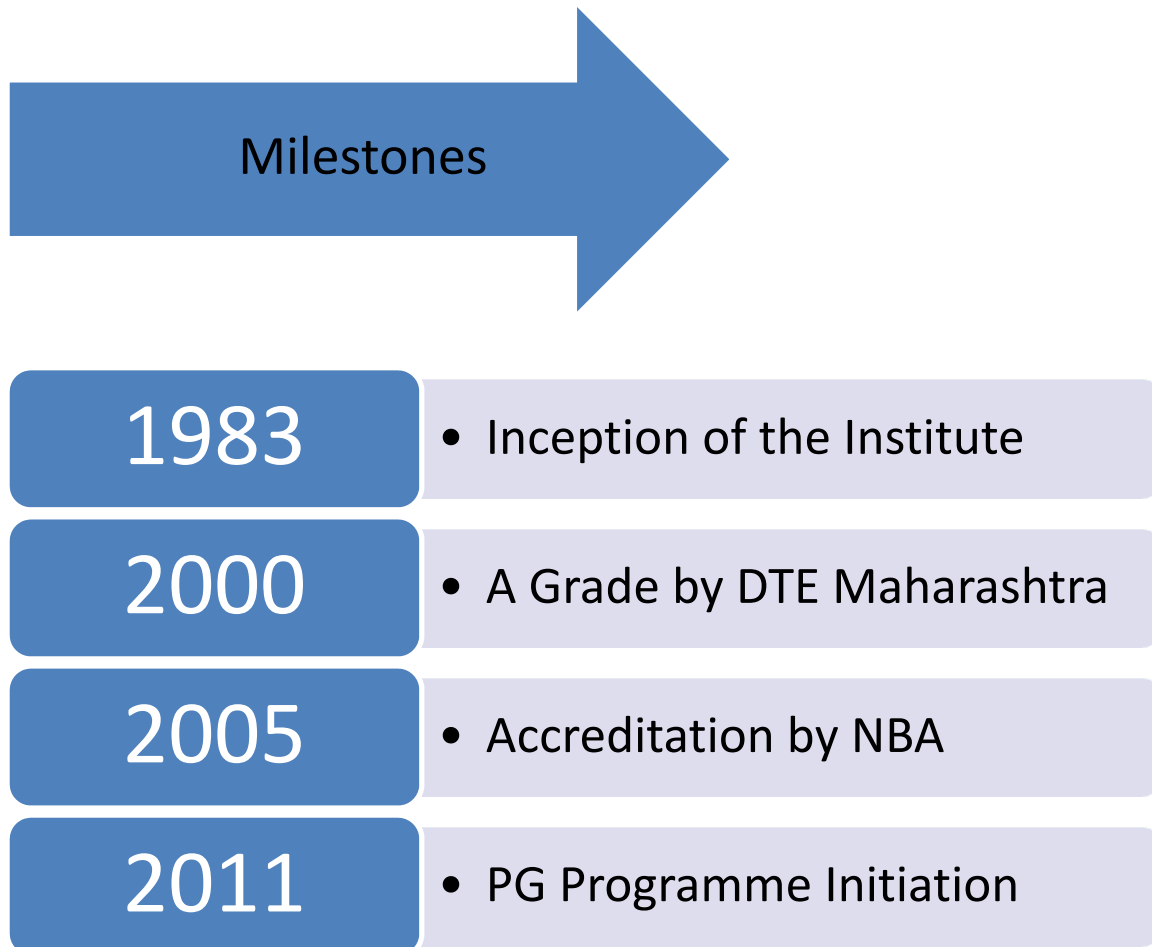
D. N. Patel College of Engineering, Shahada was established in 1983 with a vision “ Rise and Avail the Opportunities”. The Institute is affiliated to NMU Jalgaon. The Institute initially started with 3 UG programmes with an intake of 180. Institute has laterally expanded with 6 UG programmes, and vertically grown with 2 PG programmes with total student strength of 1246. Existing programmes and intake at the Institute are as below

Sr. No.	Programme	Year of Starting	Sanctioned Intake	Affiliation
1	Civil (UG)	1983	60	NMU Jalgaon
2	Instrumentation(UG)	1983	60	NMU Jalgaon
3	Electronics &Telecommunication(UG)	1988	60	NMU Jalgaon
4	Mechanical(UG)	1996	60	NMU Jalgaon
5	Computer(UG)	1999	60	NMU Jalgaon
6	Electrical(UG)	1999	60	NMU Jalgaon
7	Mechanical(PG)	2011	18	NMU Jalgaon
8	Electronics &Telecommunication(PG)	2012	18	NMU Jalgaon

The Institute has been augmented with a new infrastructure which interplays intelligent design and space articulation with ergonomically designed classrooms and laboratories having an impressive aesthetic look. The classrooms and seminar-halls are spacious, multimedia-enabled, along with high speed internet and Wi-Fi facility. Laboratories are well equipped with latest equipment, software and components. Library has a rich collection of printed as well as electronic resources including subscription to a large number of national and international journals, magazines and periodicals. Institute

has well maintained lawns, trees and handy plantations leading to a healthy and pleasant environment.

Institute has touched the height of merit in engineering education. Qualified, veteran and proficient faculty is the backbone of the Institute which is involved in teaching learning process to achieve academic excellence.





## **THE COMMITTEES**

### **Governing Body**

<b>Sr. No.</b>	<b>Name</b>	<b>Designation</b>
1	SHRI DIPAK PURUSHOTTAM PATIL	President
2	SHRI KISHOR NAROTTAM PATIL	Vice-President
3	SMT KAMALTAI PURUSHOTTAM PATIL	Secretary
4	SHRI MAKARAND NAGIN PATIL	Member
5	SHRI PANDURANG RAMDAS PATIL	Member
6	SHRI VITTHAL MANGESH PATIL	Member
7	ADV. HUSIAN ALI ASGHER ALI BOHARI	Member
8	SHRI HAIDAR ALI KUTUBALI NURANI	Member
9	SHRI SAKHARAM DULLABH PATIL	Member
10	SAU HEMLATA DILIPBHAI SHAH	Member
11	SHRI SUBHASH RAMDAS PATIL	Member
12	PROF. RAMESH FAKIRA PATIL	Member
13	SHRI JAGDISH GIRIDHAR PATEL	Member
14	SHRI DIPAK RAMANLAL PATEL	Member
15	ADV. PRAFULLA GAJANAN PATHAK	Member
16	SHRI RAJESH UTTAM PATIL	Member
17	SHRI PREMSING HIMMATSING AHER	Member
18	SHRI SANDIP TUKARAM PATIL	Member
19	SHRI RAMAKANT SANBHU PATIL	Member
20	PRINCIPAL ARTS, SCIENCE & COMM. COLLEGE	Member
21	PRINCIPAL COLLEGE OF ENGINEERING	Member
22	PRINCIPAL G.M.CHAUDHARI POLYTECHNIC	Member
23	PRINCIPAL COLLEGE OF EDUCATION	Member
24	PRINCIPAL COLLEGE OF PHARMACY	Member
25	PRINCIPAL INDUSTRIAL TRAINING CENTER	Member
26	PRINCIPAL COLLEGE OF AGRICULTURE	Member
27	PRINCIPAL JUNIOR COLLEGE OF EDUCATION	Member

### Local Managing Committee

<b>Sr. No.</b>	<b>Name</b>	<b>Designation</b>
1	PROF. DR. P.D. PATIL	Member
2	SHRI D.N.PATIL	Member
3	PROF. R.G.PATIL	Member
4	PROF.J.P.PATIL	Member
5	PROF.S.U.PATEL	Member
6	PROF. M. N. PATIL	Member
7	SHRI P. R. PATIL	Member
8	SHRIMATI KAMALTAI PURUSHOTTAM PATIL	Secretary
9	HON SHRI BAPUSAHEB DEEPAK P. PATIL	President

### NAAC Steering Committee

<b>Sr. No.</b>	<b>Name</b>	<b>Designation</b>
1	DR. N. J. PATIL	Coordinator
2	DR. S. U. CHAUDHARI	Member
3	PROF. V. K. PATIL	Member
4	PROF. H. G. PATIL	Member
5	PROF. V. S. MAHAJAN	Member
6	PROF. K. A. PATEL	Member

## **Executive Summary**

D. N. Patel College of Engineering, Shahada was established in 1983. The Institute is affiliated to NMU Jalgaon. Institute offers 6 UG programmes (Bachelor of Engineering) in Instrumentation, Civil, Electronics & Telecommunication, Computer, Electrical, Mechanical and 2 PG programmes (Master of Engineering) in Mechanical, Electronics & Telecommunication. The Institute has recognized research centre in Mechanical Engineering. Two Branches of UG programme are accredited in year 2005 and two branches in year 2006 by NBA.

### **CRITERION 1: CURRICULAR ASPECTS**

#### **1.1 Curriculum Design and Development**

Institute has avowed, futuristic vision, mission and objectives well communicated to its stakeholders. Institute has 6 UG and 2 PG programmes affiliated to NMU Jalgaon and follow the curriculum and academic policies prescribed by NMU, Jalgaon. However, faculty is involved in curriculum design in various capacities at the university; 5 faculty members including Principal are members of BoS and numbers of faculty members are chairperson of various courses at the university. Faculty members actively participate in framing and drafting of the curriculum through which we make efforts so that our goals and objectives are aligned and realized. Workshops for curriculum designing are organized at the Institute and faculty is involved as resource persons and coordinators at such workshops. Institute has a well developed strategy for planning and implementation of the curriculum. Effective implementation of the curriculum is meticulously executed according to the Institute's academic calendar. Orientation of the faculty for effective implementation of teaching learning process is a regular practice at the Institute.

Institute has organized one workshop for redesign and framing of the 2015-2016 revised curriculum in association with the university. 20 faculty members had been resource persons in curriculum designing and implementing workshops. More than 25 faculty of the Institute have participated in the curriculum development workshops.

#### **1.2 Academic flexibility**

Flexibility as prescribed in curriculum is offered to select the elective in UG programmes. Students after completing first year of UG have a chance to opt for some other programme at the Institute of their choice. Institute supplements the need based demand by offering value addition courses over and above the curriculum. Curriculum consists of flexibility of two electives at UG level. Interdisciplinary elective course and customized industrial training and industrial visit are accommodated in the curriculum.

#### **1.3 Curriculum enrichment**

Student centric learning is the focus of all the activities at the Institute. Encouraging management encourages the faculty and provides the facilities for effective delivery of the curriculum. Interactive teaching learning method is practiced at the Institute since inception. Institute along with all the provisions for effective delivery, consciously plans and ensures discussion of content beyond curriculum, expert lectures, and exposure to industry through industrial visits, study tours, implant training and real time projects. To bridge gaps in the curriculum, to acquire industry readiness and to enhance the knowledge

of latest technology amongst the students; seminars, workshops and conferences are organized at the Institute.

#### **1.4 Feedback system**

Institute religiously approaches the alumni, parents and society for the inputs on curriculum through feedback. Suggestions of the stakeholders are implemented through number of enrichment programs at the Institute. Fruitfulness of these enrichment programs is also evaluated. Feedback from alumni, employers and society is taken annually, whereas feedback from industry and parents is taken once in academic year.

### **CRITERION II: TEACHING LEARNING AND EVALUATION**

#### **2.1 Student enrolment and profile**

Student admission at the Institute is centralized and directed by the DTE, Mumbai. Institute supports this admission process by being one of the ARC for applications to engineering discipline. Counseling is done for all the aspiring students regarding career, selection of programme, financial support, scholarships and prospects available for students. Admission process of the Institute is transparent as it strictly adheres to the rules and regulations formulated by the government and NMU Jalgaon. Institute follows the guidelines of DTE regarding reservations to the backward classes, J & K and management quota. Institute is an ARC since last 04 years. 80% of the students are admitted through centralized admissions whereas 20% admissions are through Institute level quota.

#### **2.2 Catering to student diversity**

Institute consciously plans its strategies which comprises of care for differently abled, economically backward and rural students. Special support in infrastructure, library facilities and finance is provided to the said category of students.

Students are informed about the various support cells like Anti ragging, Grievance redressal and Women's redressal at the first year induction program. Coordinators of the cell create awareness and support the students for any issues.

#### **2.3 Teaching learning process**

Academic calendar is meticulously planned and prepared in advance. Principal and HOD's ensures the proper implementation of the academic calendar and is communicated to the students. Parents are informed their ward's progress through letter and through SMS. Individual attention of the students is ensured through the class teachers. Teaching learning at the Institute is a blend of traditional and modern teaching methods. Institute provides all the support and resources needed for implementing ICT and non-ICT pedagogical methods. Open source softwares / open educational resources are encouraged in teaching process. Industrial visits, study tours, implant training are regular features to have practical exposure. Real time and interdisciplinary projects are encouraged. Institute organizes expert lectures, seminars and workshops to enhance advanced learning. Institute organizes one industrial visit and one study tour every year at all the departments Value added courses to bridge the gap in curriculum are prominently adopted by the Institute.

#### **2.4 Teacher Quality**

Institute has a blend of young, qualified, experienced and competent faculty. Institute adheres to the prescribed statute of NMU in recruitment of faculty. There are 63 faculty

members amongst which 03 are Ph.D, 05 are pursuing Ph.D, and 53 are M.E/M.Tech. Faculty is trained to use pedagogical methods for effective teaching. Faculty is motivated to pursue research work and encouraged to publish and patent their research work.

### **2.5 Evaluation Process and Reforms**

Institute follows the policies and procedure of NMU in conduction, evaluation and reforms of examination. An examination committee is in existence at the Institute which ensures the smooth facilitation of examination at the Institute. Practical, oral and written examinations are the various modes of examination prescribed by university. Internal Sessional Examination is a part of continuous assessment process.

Academic calendar at the Institute has the scope for internal assessment which is in line with the university calendar. Continuous internal assessment of a student is conveyed to the parents and appropriate measures are taken to improve the results.

Although Institute adheres to the evaluation process of the university, it supports university in evaluation process through various ways. Number of faculty members contribute to university exams as Chairperson of a particular course. Chairperson for practical exam, plans exam time table and ensures the proper allocation of examiners for this course. Also, faculty members are examiners for assessment process. Institute contributes to the university examination evaluation process as a Central Assessment for Papers (CAP) center. Institute has been CAP center for PG as well as UG exams.

### **2.6 Student Performance and Learning Outcomes**

Student centric approach has lead to good results at the university. Institute has a track record of University toppers. Students have made a mark in various courses at the Institute level. Learning outcomes of each programme and course are defined by the university. Implementation of the curriculum is done in a way to achieve these learning outcomes. As a result of this meticulous planning and implementation number of students stand in the merit list at university, have enrolled for higher education, are involved in research activities and are entrepreneurs. Students are also instilled with principles to serve the society as a result of which number of alumni is serving the society through various organizations.

## **CRITERION III: RESEARCH CONSULTANCY AND EXTENSIONS**

### **3.1 Promotion of Research**

The Institute promotes research related activities by motivating the staff and students. MoUs with reputed national organizations has been signed. Staff is motivated to enhance funds for research from various funding agencies, industries, up- gradation of research laboratories. Staff members are also encouraged to present and publish papers in conferences, journals, and filing of patents.

The impact of R & D promotion and recommendations

- Number of Ph. Ds increased from 1 to 3 in the last four years and 5 faculty members are pursuing Ph. D.
- National seminars/conferences/workshops related to research are conducted on regular basis.
- Total 05 MoUs with industries and organizations

- Existing laboratories are modernized with additional latest equipment, experimental set-ups and software.

### **3.2 Resource Mobilization for Research**

The Institute has a well structured policy for research promotion and funding.

- Sabbatical/ duty leave has been availed by 02 faculty members for research.
- Faculty members are motivated for filing of patents by the institute.
- Motivation to students for participating in prestigious competitions.

### **3.3 Research Facilities**

The Institute has state- of –the-art research facilities. All the laboratories are well equipped with latest instruments and software. Institute has provision for ICT, e-learning resources, e-journals and high speed internet.

### **3.4 Research Publications and Awards**

There is significant boost in the number of publications over the last five years. Almost 30% of the publications are in reputed journals. Faculty members are encouraged to file patents and anti-plagiarism software is provided for PG candidates.

### **3.5 Consultancy**

Faculty members provide consultancy in the subjects of their domain of expertise to other institutions/ industries. Mostly it is on honorary or reciprocal basis. Various departments of the Institute have received upto Rs. 50000 for their consultancy services. The Institute through its Training and Placement Cell has developed linkages with industries and research organizations, for the students and faculty to carry out their project and research work.

### **3.6 Extension Activities and Institutional Social Responsibility**

All the departments are actively involved in all the activities of various wings of the Department of Students' Affairs which undertake extension and outreach activities like awareness and sensitization programmes, blood donation camps, environmental protection throughout the year as per systematic plans. Faculty, students and society representatives participate in these activities.

Impact and outcome of extension activities: leading to overall personality development, ready for job, to face technical world and vertical growth, technology application for real time and societal problems, willingness to work for under privileged and national Integrity

### **3.7 Collaborations**

The Institute has several collaborations with organizations and institutes of national and international repute for its holistic growth. Through these collaborations, the quality of teaching-learning process, research activities and up gradation of facilities and services are enhanced.

In total, the Institute has MoUs with industries and academic organizations which has resulted in opportunities for; setting up of advanced labs, industry and institute sponsored projects; training and hands-on experience to students, seminars and workshops, webinars, video – conferencing and sharing of resources.

## **CRITERIA IV: INFRASTRUCTURE AND LEARNING RESOURCES**

### **4.1 Physical Facilities**

Institute has well designed infrastructure suiting the needs of higher education. One administrative block, one building with 3 floors and one building with 4 floors comprising of classrooms, seminar halls, auditoriums and other facilities providing space to cater the need of academics and other activities at the Institute. All the classrooms, laboratories are spacious and ergonomically designed giving aesthetic view. ICT enabled classrooms, well equipped laboratories, technically and acoustically designed seminar halls are the outstanding features of the Institute infrastructure. Training and Placement (T & P) cell provides adequate infrastructure for trainings, placement and co curricular & extracurricular activities. Sports ground and indoor games facilities are provided by the Institute.

### **4.2 Library as Learning Resource**

Central library of the Institute is of 400 sq. m area. It is enriched with content and well maintained by qualified and competent staff. Library committee of the Institute plans periodical upgradation of books, journals, magazines, periodicals and the maintenance. Library has 43120 books, more than 9750 titles. High bandwidth internet facility is available with dedicated computers for the digital library. Apart from regular schedule, during examinations and to support research activities library is open beyond the working hours.

### **4.3 IT Infrastructure**

No. of computers in the Institute are sufficient to fulfill the needs of all the departments, library and office. Dedicated internet facility is available having a high speed internet. Institute has its in house developed ERP used in day to day administrative process. Wi-fi facility is available in the Institute at the classroom, laboratory and seminar hall complex.

### **4.4 Maintenance of Campus Facilities**

The Institute has formed various committees for maintenance and upkeep of the infrastructure, campus facilities and equipment. Civil maintenance cell looks after building and campus maintenance. Gardening committee takes care of the plantation in the campus. Every department takes care of maintenance of electrical, electronic gadgets used in day to day life. Laboratory equipment, computers and other gadgets are calibrated and maintained internally as well as by placing annual contract to relevant agencies. Adequate budget is allocated for maintenance and up-keeping.

## **CRITERIA V: STUDENT SUPPORT AND PROGRESSION**

### **5.1 Student Mentoring and Support**

Institute has appointed class teacher for every class, which supports the students in academic and personal matters. Students from economically weaker background are guided and assisted to get scholarships from various government and private organizations. Students are counseled right from the time of their admission at the Institute. Regular communication of the class-teacher with the parent and minimum one parent teacher meet in academic year helps the students to overcome the issues, if any.

Regular communication with parents regarding attendance, marks and any other problems is done through SMS and in some cases by direct calls. Remedial classes are planned in the academic calendar and effectively implemented during the semester. Bridge courses to fill the gaps in curriculum are arranged in association with the relevant organizations depending on the need of the industry. T & P cell, in addition to the placement activities provides career and higher education counseling. Students are provided trainings for communication skills, and industry specific needs. Mock interviews, group discussions are practiced throughout the semester.

## **5.2 Student Progression**

Institute has a track record of university toppers. Overall performance of the Institute at university is good in the university examinations. Analysis of the results is done after every exam results and suitable action is ensured to have improved results. Subjects with less result are paid attention by conducting extra classes.

Students are motivated for higher learning, for which classes are conducted at the Institute by experts and coaching by external agencies like coaching for GATE exam. Transcripts and recommendations are given to the students aspiring for higher studies abroad. Teaching assistantship scheme is practiced for the same. On an average 20% of the students go for higher studies in field of management and technology. Library facilities are also provided to the students/ alumni for continuation of studies.

## **5.3 Student Participation and Activities**

Institute organizes co curricular as well as extracurricular activities at the Institute to foster the varied talents of the students and also is motivated and guided them to participate in events at various levels. Academic calendar is structured to accommodate the above said activities. Students chapter of various professional bodies are active at the Institute and regularly organize inter college and intra college technical events. Students have excelled in project competitions organized under these chapters. Students are supported and provided with adequate sports facilities. Institute has represented in various sports like Chess, Table Tennis upto national level and has secured Gold, Silver and Bronze medals. Institute has cricket, football, volleyball, box football, chess and carom teams participating regularly at inter collegiate tournaments.

Students carry out regular social activities like organ donation rally, Dhvaj Nidhi for Army People. Institute organizes environmental awareness programs during special days like Mahatma Gandhi Swachata Abhiyan on 2<sup>nd</sup> October every year.

## **CRITERIA VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT**

### **6.1 Institutional Vision and Leadership**

Institute has vision and mission which are futuristic in nature. They satisfy the needs of society by providing quality education through leading-edge technology. Vision, mission and objectives of the Institute focus on the needs of society by providing quality education. The Principal of Institute is assisted by HODs, Section in charges and coordinators of various cells in decision making process at the Institute. Faculty and staff are assigned with the roles and responsibility to work in a harmonious environment with complete



transparency. IQAC has a well developed process to ensure quality benchmarks of academic and administrative activities.

### **6.2 Strategy Development and Deployment**

Based on the vision and mission of the Institute, Institute has a perspective plan developed by Principal, HOD's with suggestions of IQAC under the guidance of LMC and GB. Deployment of the quality policy is done by providing excellent academic infrastructure, conducive learning environment and harmonious work culture. Student surveys and feedback from all the stakeholders plays vital role in framing policies.

### **6.3 Faculty Empowerment Strategies**

The Institute recognizes the importance of the dedicated faculty for realizing its vision. Institute has a merit policy for recruitment of a competent faculty. Faculty is encouraged for qualification enhancement and carries out consultancy activities. Performance appraisal of faculty is done annually. Fare representation to women is ensured at all levels of organization and their safety and security is given the top priority.

### **6.4 Financial Management and Resource Mobilization**

The account section of the Institute looks after all the planning activities related to financial matters. Based on the requirement from various HODs, accounts section makes provision for all the academic and administrative activities. After approval of GB budget is allocated to respective sections/ departments. Reserve and corpus fund is maintained as fixed deposit by the Institute. In case of deficit of financial resources parent trust supports. The management has appointed financial consultants and internal auditors for statutory auditing and monitoring the financial transactions.

### **6.5 Internal Quality Assurance System**

The IQAC of the Institute was constituted in 2014. The IQAC is functional and its functions are extended to all the constituents units of the Institute in providing support on quality initiatives in matter related to academics, incentives, research and administrations.

## **CRITERION 7: INNOVATION AND BEST PRACTICES**

### **7.1 Environment Consciousness**

Institute has taken number of baby steps to create environment consciousness amongst the stake holders. Green audit of the campus has been performed by the Institute. Green audit committee at the Institute is active and performs the acts to maintain the ecosystem in and around the campus. Saving and optimum utilization of energy, rain water harvesting, e-waste disposal, ergonomic and aesthetic infrastructure are few of the highlights about environment consciousness at the Institute.

Students are provoked to help the society by participating in programs like rally for encouragement of organ donation, Mahatma Gandhi Swacchata Abhiyan.etc.

### **7.2 Innovations**

Numbers of innovations are introduced at the Institute which had lead to notable achievements. To name a few – Saving of energy by Power factor improvement, Rain water harvesting, Interactive teaching learning etc.

### **7.3 Best Practices**

The Institution has adopted and initiated number of best practices marking towards quality improvement. Few of the best practices are; Analysis of the learners for appropriate support; Provision of the newest equipment; Display of the artistic talent of students; National Technical Event of the, by the, for the students; Conscious efforts to improve communication skills; Medical facilities for the students; Induction of faculty new to the profession/ Institute; Faculty training for interactive teaching; Collaborations with industries; e-Yantra Robotics Laboratory with IITB; Organization of technical events; Grouping of faculty for collaborative work.

## **SWOC ANALYSIS**

### **STRENGTHS:**

- Premier higher education Institute, in the field of engineering, offering a variety of UG, and PG programmes.
- Qualified, experienced, dynamic, proficient and dedicated faculty with an attitude to excel in the profession.
- State of Art Building Infrastructure and Laboratory facilities.
- Computer Centre with Internet Connectivity.
- Effective Training and Placement Cell which is one of the best in the Country.
- Clean and green campus.
- Focus on co-curricular, extra-curricular and extension activities leading to holistic development of the students.

### **WEAKNESS:**

- Testing and consultancy
- Placement with on an average low package
- Publication in reputed journals
- National and international Patents
- Due to the distance of the institute from the Capital and proliferation of engineering institute, good academicians with Ph.D. or other higher qualified personal are not in a position to share their valuable times for research activities and to produce research scholars.

### **OPPORTUNITIES**

- Scope for strengthening the industry institution interaction for better placements of students.
- To develop R&D activities by interacting with premier industries and reputed higher learning institutions.
- Enter into collaborative projects with industries and other institutions for better exposure of students.
- Networking with other institutions for sharing/acquiring know how of advanced technologies.

- Developing new curriculum in training programmes for students to match the industry requirements.
- To develop students into successful entrepreneurs for the technical development the future of the country.

#### **CHALLENGES:**

- To forge strong alliances with National and International organizations for academic and R&D activities in thrust areas of Engineering, Technology.
- To get 100% employment.
- Maintain balance in admission between various programmes
- To accredited the Institution by NBA.

#### **CONCLUDING REMARKS**

- The faculty expertise comprises of experience gained through Academic Institutions/Universities and reputed R&D Organizations.
- Improved teaching and learning process through the use of audio-visual aids.
- Conducting Employability Enhancement and Personality Development Training Programs for the students.
- Certification Training programs in the areas of specializations.
- Improved Campus Placements for students.
- MoUs with industry and R&D Organizations for development of the institute.

## Profile of the Institute

### a) Name and address of the college:-

Name: D. N. PATEL COLLEGE OF ENGINEERING, SHAHADA
Address: D. N. PATEL COLLEGE OF ENGINEERING, SHAHADA DIST NANDURBAR
City: SHAHADA District: NANDURBAR Pin: 425409
State: MAHARASHTRA

### b) For Communication:

Designation	Name	Telephone with STD code	Mobile	Fax	Email
Principal	Dr. Purushottam Dynandeo Patil	02565 229649	94235 17700	(02565) 229740	principal@coeshahada.ac.in
Steering Committee Co-ordinators	Dr. Nitin Jagannath Patil	02565 229649	98606 78868		nitinpatil2002@gmail.com
	Dr. Sanjay Uttam Chaudhari		93700 58469		vastumaharshee@gmail.com
	Prof. Vijay Khushal Patil		94234 97762		vkpatilchintoo@rediffmail.com
	Prof. Hemant Gorakh Patil		94223 65424		hemshalaka@gmail.com
	Prof. Vinod Shantaram Mahajan		89832 84783		vinodsm@rediffmail.com
	Prof. Kalpana A. Patel		81496 34025		patel.kalpana2007@rediffmail.com

### 3. Status of the Institution:

- i. Affiliated College
- ii. Constituent College
- iii. Any other (specify)

√

### 4. Type of Institution:

#### a. By Gender

- i. For Men
- ii. For Women
- iii. Co-education

√
---

#### b. By shift

- i. Regular
- ii. Day
- iii. Evening

√
---

**5. Is it a recognized minority institution?**

Yes

No

√

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

--

**6. Source of funding:**

Government

Grant-in-aid

Self-financing

Any other

√
---

**7. a. Date of establishment of the college:**

07/08/1983

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

North Maharashtra University Jalgaon
--------------------------------------

(If it is a constituent college)

**c. Details of UGC recognition:**

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

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

Under Section/clause	Recognition/Approval details Institution/ Department/ Programme	Day, Month and Year (dd-mm-yyyy)	Validity	Remarks
i.	AICTE	30/04/2016	2016-2017	Letter No. Western/1-2815731897/2016/EOA

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

Yes

No

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

Yes

No

**9. Is the college recognized ?**

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

Yes

No

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

b. For its performance by any other governmental agency?

Yes

No

If yes, Name of the agency and Date of recognition: (dd/mm/yyyy)

NBA: (File No. NBA/ACCR-386/2005 - 2006, Renewal under process)

AICTE: Letter No. Western/1-2815731897/2016/EOA

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

<b>Location *</b>	<b>RURAL</b>
<b>Campus area in sq. mts.</b>	12.24 ACRES
<b>Built up area in sq. mts.</b>	26770

**11. Facilities available on the campus (Tick the available facility and provide numbers or other details at appropriate places) or in case the institute has an agreement with other agencies in using any of the listed facilities provide information on the facilities covered under the agreement.**

- Auditorium/seminar complex with infrastructural facilities      √
- Sports facilities

- Play ground      √
- Swimming pool
- Gymnasium      √

- Hostel

- Boys' hostel      √
  - i. Number of hostels - 01
  - ii. Number of inmates - 210
  - iii. Facilities: Cot, Reading Table & Chair, TV, Hot Water, internet, indoor

sports etc.,

- Girls' hostel      √
  - i. Number of hostels: 01
  - ii. Number of inmates: 120
  - iii. Facilities: Cot, Reading Table & Chair, TV, Hot Water, internet, indoor

sports etc.,

- Working women's hostel      NA
  - i. Number of inmates:
  - ii. Facilities:

- Residential facilities for teaching and non-teaching staff (give numbers available - cadre wise)

- Cafeteria --      √
- Health centre -      √

Facilities: First aid, Inpatient, Emergency care facility, Ambulance

- Health centre staff -

Qualified doctor	Full time	<input type="text"/>	Part-time	<input type="text" value="√"/>
------------------	-----------	----------------------	-----------	--------------------------------

Qualified Nurse	Full time	<input type="text"/>	Part-time	<input type="text"/>
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Facilities like banking, post office, book shops:

- Transport facilities to cater to the needs of students and staff:      √
- Animal house
- Biological waste disposal:



- Generator or other facility for management/regulation of electricity and voltage: ✓
- Solid waste management facility: Biogas generating by mechanical department.
- Waste water management: Under processing by civil Department.
- Water harvesting: Under processing by civil Department.

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

Sr. No.	Program Level	Name of the Program / Course	Duration (Years)	Entry Qualification	Medium of instruction	Sanctioned / Approved Student
1	Under-Graduate B.E.	Computer Engg.	04	H.S.C. (10+2) JEE, CET, AIEEE	English	60
		Mechanical Engg.	04		English	60
		E&TC Engg.	04		English	60
		Instrumentation Engg.	04		English	60
		Civil Engg.	04		English	60
		Electrical Engg.	04		English	60
2	Post-Graduate M.E.	Mechanical Engg	02	B.E. / B.Tech., Gate	English	18
		E&TC Engg	02		English	18

**13. Does the college offer self-financed Programmes?**

Yes

No

If yes, how many? [ 2 ] B.E. & M.E.

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

Yes	✓	No		Number	1 M.E. (E&Tc)
-----	---	----	--	--------	---------------

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

Faculty	Departments	UG	PG
Engineering	Computer Engineering	√	
	Mechanical Engineering	√	√
	Electronics & Telecommunication Engineering	√	√
	Instrumentation Engineering	√	
	Civil Engineering	√	
	Electrical Engineering	√	

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

- a. annual system
- b. semester system
- c. trimester system

Nil
2 (B.E. & M.E. )
Nil

**17. Number of Programmes with**

S.No	Syste	Programme
a	Choice Based Credit System	From A.Y. 2012-13 credit system for UG programmes and choice based credit system has been implemented.
b	Inter / Multidisciplinary Approach	In every discipline of UG provision of Inter disciplinary elective is there which gives to choose subjects from other disciplines
c	Any other	To bridge the gap following measures are taken- short duration certification courses, industrial training etc.

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

Yes

No

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

Yes

No

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

Positions	Teaching faculty						Non-teaching Staff		Technical staff	
	Professor		Associate Professor		Assistant Professor					
	*M	*F	*M	*F	*M	*F	*M	*F	*M	*F
Sanctioned by the UGC / University / State Government Recruited	01		06		31		---		---	
Yet to recruit	03		06		---		---		---	
Sanctioned by the Management/society or other authorized bodies Recruited	04		04		16		38		20	
Yet to recruit	---		---		---		---		---	

\*M-Male \*F-Female

## 21. Qualifications of the teaching staff:

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
D.Sc./D.Litt.	---	---	---	---	---	---	---
Ph.D.	03	---	---	---	---	---	03
M.Phil.	---	---	---	---	01	---	01
PG	02	---	11	---	36	03	52
UG	---	---	---	---	04	---	04
Temporary teachers							
Ph.D.	---	---	---	---	---	---	---
M.Phil.	---	---	---	---	---	---	---
PG	---	---	---	---	---	---	---
Part-time teachers							
Ph.D.	---	---	---	---	---	---	---
M.Phil.	---	---	---	---	---	---	---
PG	---	---	---	---	---	01	01
UG	---	---	---	---	01	---	01

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

Nil
-----

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

Sr. No.	AY Category	2012-13		2013-14		2014-15		2015-16	
		Male	Female	Male	Female	Male	Female	Male	Female
1.	SC	60	25	63	25	53	24	43	22
2.	ST	31	11	34	18	35	07	41	11
3.	DT VJ NT	62	21	91	14	72	14	58	22
4.	OBC	610	203	636	322	566	331	442	275
5.	SBC	25	06	20	09	19	06	29	5
6.	OPEN	390	115	184	41	286	105	215	84
<i>Total</i>		1178	381	1028	429	1031	487	828	419

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

Type of students	UG	PG	Ph.D.	Total
Students from the same state where the college is located	1210	12	Nil	1222
Students from other states of India	30	Nil	Nil	30
NRI students	Nil	Nil	Nil	Nil
Foreign students	Nil	Nil	Nil	Nil
Total	1240	12	Nil	1252

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

UG

15

PG

Nil

**26. Unit Cost of Education**

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

(a) Including the salary component

50000

(b) Excluding the salary component

7661

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

Yes

No

√

If yes,

a) Is it a registered centre for offering distance education programmes of another University

Yes

No

Name of the University which has granted such registration.

b) Number of programmes offered

b) Programmes carry the recognition of the Distance Education Council.

Yes

No

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

S. No	Cours	Ratio	
		U. G.	P. G.
1	Electronics & Telecommunication	15:1	12:1
2	Computer Engineering	15:1	----
3	Mechanical Engineering	15:1	12:1
4	Civil Engineering	15:1	----
5	Instrumentation Engineering	15:1	----
6	Electrical Engineering	15:1	----

29. Is the college applying for Accreditation : Cycle 1

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

NA

31. Number of working days during the last academic year.

32. Number of teaching days during the last academic year

(Teaching days means days on which lectures were engaged excluding the examination days)

33. Date of establishment of Internal Quality Assurance Cell (IQAC)

20/08/2014

34. Details regarding submission of Annual Quality Assurance Reports (AQAR) to NAAC.— NA

### **35. Any other relevant data**

- Infrastructure and ambience with well equipped laboratories and computing facilities.
- Qualified, motivated, dedicated, experienced and result oriented team of professionally inclined faculty
- Conducive environment for academics, coupled with overall personality development leading to placements, higher studies and entrepreneurship.
- Development of Robotics Lab. called E-yantra.
- Courses in Institute are NBA accredited in 2005 for the eligible departments.
- Green Educational Campus
- Programs like Techfiesta, General Championship (Sports Week), Parv (Annual Gathering), Alumni Meet are conducted every year.
- Students participate in Yuvarang, Avishkar competitions organized by North Maharashtra University Jalgaon.

### **Professional Chapters**

- ISTE Student Chapter.
- CSI Student Chapter

### **Industry-Academia Interface**

- MOU signed with Smart Engineering Solutions Pune
- MOU signed with Jaiprakash Narayan Spinning Mill Untavad Hol Shahada
- MOU signed with Shree Satpuda Tapi Parisar Sahakari Sugar Factory Purushottamnagar
- MOU signed with Stackmint Technologies Pune

### **Innovative Teaching Learning Practices:**

- Transparencies are widely used for delivering lectures
- Power Point Presentations using LCD projectors. Power point presentation banks are also available for several subjects.
- Teaching of the concepts by giving real life examples, case studies related to the subject.

- State-of-art Class Rooms with Audio / Visual Systems.
- Course Files and Lab Manuals for Effective Instructions.
- NPTEL Video Lectures.
- Employability Enhancement Training Programmes.

### **Entrepreneurship Awareness and Development Programmes.**

- Mentoring and Counseling Practices.
- Application Orientated Teaching.
- Learning resources from reputed institutions like IITs and International Universities.

### **Special Achievements:**

- Two UG programmes Accredited by NBA in 2005 (preparation is started for reaccreditation) AICTE, New Delhi.
- Two UG programmes Accredited by NBA in 2006 (preparation is started for reaccreditation) AICTE, New Delhi.
- First college in Nasik region awarded 'A' grade by DTE Maharashtra.

### **MOTIVATION**

- Academic Prizes to the students having the position 1st in every branch for each year.
- Encouraging students and staff for paper presentations and attending workshops.
- Guidance and support for competitive examination, GATE Examination.
- Guest lecturers from different reputed institute / industry for exposing to opportunity and challenges in Engineering.

### **ACTIVITIES:**

Our College organized activities like

- Plantation programme in & around of college campus.
- Health programme.
- Blood donation camp.
- National Level Conference
- Workshops
- Swachata Abhiyan

## **BLOOD DONATION CAMP IN OUR INSTITUTE**

DATE	UNITS OF BLOOD CONTRIBUTED
09/10/2012	509
09/10/2013	220
09/10/2014	225
09/10/2015	370
09/10/2016	256

## **ANNUAL CULTURAL FUNCTION (PARV):**

The College Cultural Committee organizes annually various Cultural Activities under the name of “ PARV “, which is aimed at the overall development of the students providing them an opportunity to interact amongst themselves and indulge in healthy competitions. The Decennial celebrations of the college on a grand scale witnessed large participation amongst the student community in the Maharashtra region.

## **INNOVATIVE PRACTICES**

- Employment Enhancement guidance for Final Year students of Engineering.
- Motivational/Inspirational Lectures from Reputed Industry and Organizations.  
Video Lectures from IIT's and reputed International Universities for advanced Courses to explore latest technologies.
- HR training programme for campus selection.
- Transparency in the Evaluation Process. (Best Practices)
- Introduction of Question Banks. (Best Practices)



## CRITERION I: CURRICULAR ASPECTS

### 1.1 Curriculum Planning and Implementation

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

##### *VISION*

To be recognized as an international leader in engineering education, research and the application of knowledge to benefit society globally.

##### *MISSION*

To mould young generation to the new technology of high order that can meet the challenges in the fast developing technological world by shaping discipline competence and character of technocrats.

##### *GOALS AND OBJECTIVES*

The goals and objectives of the college are as follows:

- To deliver the curriculum prescribed by the University in the best manner and to ensure that the students graduate with North Maharashtra University degree with a high CGPA.
- Maintain the teaching-learning process innovative, interactive and in-depth and to ensure an effective relationship between the curricular content and practical applications.
- Provide excellent academic ambience to the students and to identify and take care of the performance of every student.
- Encourage and maintain a serene campus with a scientific fervor.
- Promote co-curricular and extra-curricular activities for overall development of the students.
- Provide appropriate value addition programmes and to bridge the gap between academia and industry and to make the students globally competent and employable.
- Promote R & D activities and kindle creative thinking of the students

and to encourage their innovative ideas and projects.

- Provide a forum to imbibe ethical practices with a concern for the society.
- Build up knowledgeable and responsibility citizens for participating in nation building activities.
- Strive for continuous improvements in all the institutional endeavors.

The vision and mission of the college are made known to the students, teachers, staff and other stakeholders through:

- College Website
- College Prospectus, College Magazine
- Distribution of CD's containing the college profile
- Digital Poster within the campus
- Distribution of information brochures
- Sending information to other institutions of higher learning
- Career counseling programs for school students
- Students Orientation Programmes
- Boards displayed at strategic locations within the campus

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

The college is affiliated to North Maharashtra University. The curriculum and syllabi prescribed by the university are strictly adhered to. Apart from this prescribed curriculum, the college has strategized ways and means to strengthen the teaching-learning process in the following ways:

- Advance planning of Academic activities and calendar in alignment with the University issued calendar of events.
- Formulation of objective driven teaching plan at the beginning of the semester.
- Preparation of adequate learning materials (resources).
- Updated library facilities with E-journals.

- Maintenance of course files by all faculty members, which contains lesson plan, notes of lesson, questions bank and performance details of the students.
- Conduct of two Unit Tests and one model examination in each semester as per the academic calendar.

**Tentative Academic Calendar for 2016-2017(UG Program)**

**TERM-I**

Sr. No.	Business	Date	No. of Months/ Weeks/ Days
1	Starting of Semester for SE to BE	04/07/2016	15 weeks
2	End of Semester for SE to BE	13/10/2016	
3	Start of Practical/ Oral Examinations of SE to BE	15/10/2016	11 days
4	End of Practical/ Oral Examinations of SE to BE	25/10/2016	
5	Start of Theory Examination FE to BE( Starting withBacklogs)	07/11/2016	01 month
6	End of Theory Examination FE to BE	06/12/2016	
7	Starting of Semester for FE	20/07/2016	14 weeks
8	End of Semester for FE	25/10/2016	
9	Start of Practical/ Oral Examinations of FE	08/12/2016	05 days
10	End of Practical/ Oral Examinations of FE	13/12/2016	

**TERM-II**

Sr. No.	Business	Date	No. of Months/ Weeks/ Days
1	Starting of Semester for FE to BE	26/12/2016	15 weeks
2	End of Semester for FE to BE	08/04/2017	
3	Start of Practical/ Oral Examinations of SE to BE	10/04/2017	11 days
4	End of Practical/ Oral Examinations of SE to BE	20/04/2017	
5	Start of Theory Examination FE to BE( Starting withBacklogs)	24/04/2017	01 month
6	End of Theory Examination FE to BE	24/05/2017	
7	Start of Practical/ Oral Examinations of FE & Project Exam for BE	26/05/2017	05 days
8	End of Practical/ Oral Examinations of FE & Project Exam for BE	30/05/2017	

**Extra-Curricular / Co-Curricular Activity**  
**Tentative Programme Schedule Academic Year 2015-16**

Programme	Date
Independence Day	15/08/2015
Fresher's Day	22/08/2015
Teacher's Day	05/09/2015
Engineer's Day (Debate Competition )	15/09/2015
Mahatma Gandhi Swachata Abhiyan	02/10/2015
Kisan Din	09/10/2015
Dr. APJ Abdul Kalam Birth Anniversary (Essay Competition)	15/10/2015
Sardar Vallbhbhai Patel Birth Anniversary	31/10/2015
Republic Day	26/01/2016
Alumni Meet	21/02/2016
Techfiesta 2016	22/02/2016
Celebration of Days	23/02/2016 to 25/02/2016
PARV 2016 (Project Exhibition, Annual Gathering, Prize Distribution)	26/02/2016 & 27/02/2016

- Conduct of remedial classes for the slow learners (ITS).
- Adopting new and innovative teaching techniques, in addition to the traditional lecture method to get the students actively involved in the teaching learning processes and employing learner centric techniques such as peer learning, group discussion, use of NPTEL lectures, projects, surveys etc., in the delivery of the academic courses.
- Provision of well ventilated and spacious class rooms.

- Organizing suitable guest lectures and industrial visits to improve the effectiveness of implementation of the curriculum designed and specified by North Maharashtra University.
- Students of Mechanical attended a sequence of lectures delivered by experts from CAD/CAM GURU on subjects closely related to Modeling in the curriculum.

**1.1.3 What type of support (procedural and practical) do the teachers receive (from the University and/or Institution) for effectively translating the curriculum and improving teaching practices**

Institution provides

- Teaching aids such as LCD, OHP and computers with internet facilities.
- Facilities for the participation of faculty members in workshops, seminars, conferences, etc to enrich their knowledge.
- Provision of digital libraries, E-learning facilities to all the faculty members of the institution which help them in delivering good lectures.
- Wi-fi and Internet facility made available throughout the campus for better teaching learning process.
- Lectures on research methodologies by eminent academicians to promote research activities in the departments and also to enrich their potential to guide students' projects.
- Faculty Sabbatical to Industry

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

For an effective teaching learning process a learner centric pedagogy is

practiced in the following ways:

- Subject allotment based on proficiency matrix, experienced and performance in previous year.
- Time table framed with provision for Value Added Programmes (VAP), seminar and library hours.
- Preparation of proper lesson plan, notes on lesson, question bank, lab manuals well in advance.
- Monitoring of course delivery and syllabus completion through formal and informal feedbacks.
- Systematic examination process, standard question papers, proper and prompt evaluation and dispatch of reports to parents.
- Availability of MS-Office (Excel) software to monitor and aid student's performance and teaching and evaluation processes.
- Guest lectures, seminars, Industrial visits and training programmes to supplement the curricular inputs.
- Refresher courses, workshops, FDPs for skill up gradation of faculty.
- Motivating students for doing research work and present papers in seminars and conferences and to publish in journals.
- Bridging Industry –Institution gap with suitable value added programmes which are part of the regular time table.

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

The institution networks and interacts with other bodies in the effective implementation of the curriculum and other related activities in the following ways. The institute has established relations with various industries through specific activities with defined outcomes for each of these activities as given in the Table 1.1

**Table 1.1 Industry Institute Collaboration**

<b>Sr. No.</b>	<b>Name of the Industry</b>	<b>Areas of Collaboration</b>
1	Shri Satpuda Tapi Parisar Sahakari Sakhar Karkhana Ltd. Purushottamnagar.	- Guest Lectures, - Operation & Maintenance of Boiler, Turbine & Cane Conveyor.
2	Loknayak Jayprakash Narayan Sahakari Soot Girani Ltd. Kamalnagar	- Student training - Guest lectures

- The suitable guest lectures by industrial experts on topics of current interest in various specializations are arranged.
- Students are taken for industrial visits to expose them to the present industrial practices relevant to their branch of study.
- Experts are also invited from industries as judges for the quality assessment of students' projects.

**Research recognition /grants/ students' external projects**

- The research laboratory in Department of Mechanical Engineering is recognized by North Maharashtra University, Jalgaon & facilitates research facilities for UG & PG students.
- Grant received of 22.88 lacs for solar radiation resource assessment from Ministry of Non-Renewable Energy through centre for wind energy technology, CWET, Chennai is being installed at our place.

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

The curriculum designed by the affiliating University is adequate and it is dynamic. The last revision was done as latest as the academic year 2012-13. However, based on the systematic feedback of the students on course outcomes

and alumni on attainment of programme outcomes, teachers at the department level discuss the curriculum threadbare through the members, Board of Studies the required and suitable changes are recommended to the concerned bodies.

Details of the faculty of the College who are on the Syndicate/BoS/Academic Council/Syllabus Committee of the University

**Table 1.2 Staff Members in Various Committees**

Sr. No	Name of the Faculty	Position	Committee/Body	Discipline
1.	Dr. P. D. Patil	Member	BOS, NMU, Jalgaon	Mechanical
2.	Dr. N. J. Patil	Member	BOS, NMU, Jalgaon BOS, Government College of Engineering Jalgaon (Autonomous)	Instrumentation
3.	Dr. S. U. Chaudhari	Member	BOS, NMU, Jalgaon	Civil
4.	Prof. K. A. Patel	Member	BOS, NMU, Jalgaon	Electrical
5.	Prof. K. Y. Chaudhari	Ex Member	BOS, NMU, Jalgaon	Instrumentation
6.	Prof. H. B. Patel	Member	Syllabus committee, North Maharashtra University	Instrumentation
7.	Prof. B. R. Patil	Member	Syllabus committee, North Maharashtra University	Instrumentation
8.	Prof. A. S. Patel	Member	Syllabus committee, North Maharashtra University	Mechanical
9.	Prof. S. U. Patel	Member	Syllabus committee, North Maharashtra University	Mechanical
10.	Prof. V. S. Mahajan	Member	Syllabus committee, North Maharashtra University	Computer
11.	Prof. A. P. Khan	Member	Syllabus committee, North Maharashtra University	Computer
12.	Prof. V. K. Patil	Member	Syllabus committee, North Maharashtra University	E&Tc
13.	Prof. Mrs. J. H. Patil	Member	Syllabus committee, North Maharashtra University	E&Tc
14.	Prof. S. P. Patil	Member	Syllabus committee, North Maharashtra University	E&Tc

**1.1.7 Does the institution develop curriculum for any of the courses offered (other than those under the purview of the affiliating**



university) by it? No

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

Academic internal audit is conducted every year. The departments also submit teacher's diary (Plan, Implementation and Evaluation plan) which ensures that the curriculum objectives are achieved.

The stated objectives of the curriculum are achieved through –

- Departmental meetings held periodically to monitor the implementation of curriculum in all mediums
- University syllabus for every course in program is divided into five units.
- Class teacher meeting are conducted regarding the progress of course and if needed remedial actions are taken
- Two unit tests are conducted during each semester to analyze the performance of the student for the particular course. Also internal orals / discussions are conducted at the mid and end semester of the course.
- Principal reviews the syllabus completion progress report submitted by the HOD at the mid and end of the semester
- Guidance to new teachers in the teaching field by the HODs, Supervisors and senior faculty
- Centralized paper setting for college level exams results in fulfillment of curriculum objectives

## **1.2 Academic Flexibility**

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

Goals and Objectives – Refer 1.1.1

1. Value Added programs are arranged to bridge the knowledge gap between academia and industry and to strengthen the regular academic programmes prescribed by the University

- Microsoft Certification Program (DOT NET, MTA)
  - IBM software training programs (RSA)
  - Employability Training Programs
2. The gap between curriculum and the best industrial practices are bridged through industrial visits and in plant training.
3. Students are moulded to serve the society through
- Swachh Bharat Abhiyan programmes
  - Tree plantation activities.
  - Blood donation programme
  - Organ donation programme.

**1.2.2 Does the institution offer programmes that facilitate twinning /dual degree? No**

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

Range of Core / Elective options	: 4 to 6 Electives offered [UG]
Credit system and range of subject options	: As per North Maharashtra University Jalgaon
Courses offered in modular form	: Each course consists of 5 Units
Credit transfer and accumulation facility	: As per North Maharashtra University Jalgaon

Lateral and vertical mobility within and across programmes and courses:

- Lateral entries permitted for students who complete diploma to pursue their engineering degree from second year.
- Students have flexibility to change discipline at the second year on basis of pure merits.

- The students are given absolute freedom to move across various disciplines for their project work. The students may also use any laboratory equipment available on campus for the purpose of project work/research.

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

Yes. All the programmes offered are self financing. The programs are approved by the AICTE, New Delhi and the institute is affiliated to North Maharashtra University, Jalgaon. The courses offered are:

**Table 1.4 Intake Details**

<b>Under Graduate Courses</b>			
Sr. No.	Branch	Year of Establishment	Intake Capacity
1	Civil	1983	60
2	Electronics & Tele Comm.	1988	60
3	Instrumentation	1983	60
4	Mechanical	1996	60
5	Computer	1999	60
6	Electrical	1999	60
7	Information Technology	2000	60
<b>Post Graduate Courses</b>			
1	M.E. Mechanical (General)	2011	18
2	M.E. Electro. & Tele Comm.	2012	18

**ADMISSION**

The admission process is based on the policies and guidelines provided by Director of Technical Education (DTE), Maharashtra State, Mumbai.

**CURRICULUM**

The curriculum is designed by North Maharashtra University and implemented by the college through well designed teaching-learning processes.

#### *FEE STRUCTURE*

The fees for all the courses are fixed as per Shikshan Shulka Samittee formed by Government of Maharashtra. State/Central government Scholarships are made available. In deserving cases tuition fee is waived.

*TEACHER QUALIFICATION AND SALARY* - As per AICTE norms

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

Yes.

**Table 1.5 Skill Oriented Programs**

Sr. No.	Name of the program	Beneficiaries
1	Employability Training Camps	All UG students
2	Personality Development Programmes	All UG students
3	Debate	Third year students
4	Certification programmes	Third and Final year students

**1.2.6 Does the University provide for the flexibility of combining the conventional face-to-face and Distance Mode of Education for students to choose the courses/combination of their choice” If 'yes', how does the institution take advantage of such provision for the benefit of students? No.**

The affiliating University does not offer such a facility as of now.

### 1.3 Curriculum Enrichment

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

To ensure that the academic programs meet the institution's goals and objectives, the following initiatives are taken to supplement the university curriculum.

- The institute follows outcome based approach and measures the level of attainment of outcomes for all the academic activities quantitatively. Appropriate Value Addition Programmes are planned based on the analysis of level of attainment of various programme outcomes. A dedicated Training and Placement Cell works in tandem with academic departments and ensures that these Value Addition Programmes are implemented effectively.
- Guest lectures, Workshops, Training programme and industrial visits are arranged to create awareness on the current demands of industry.

Guest lecturers conducted by Electronics & Telecommunication Engineering Department and Civil Engineering Department in the year 2015-16 are given in Table 1.6

**Table 1.6 Industry Institute Collaboration**

Sr. No.	Date	Topic	Name of the speakers and organization
1	29/03/2015	Augmentation of lift irrigation civil engineering structure	Er. P. R. Patil M. D., SSTPSK Ltd. Purushottamnagar.
2	19/09/2015	Architectural Design & planning of residential banglows	Ar. D. D. Narase, Nandurbar

3	06/02/2016	General information of departmental works	Shri. J. U. Patel Retired deputy Engineer, P.W.D.Maharashtra State.
4	18/02/2016	Automation in Industry	Mr. Mahesh H. Navale Indo-German Tool Room, Aurangabad.
5	20/02/2016	Cloud Computing	Mr. Manoj P. Wadile Manager, Citi Corporation, Pune.
6	04/03/2016	Android Application Development	Mr. B. B. Patil, Sr. Software Engineer, Tech Play IT solution Pvt. Andheri, Mumbai

Assignments are given on all the subjects, in addition to arranging, written/oral tests, quiz, role play, etc.

- The College gives importance to Spoken English classes to inculcate good communication skills among students.
- Educational tours are organized for industrial visits and also to develop interpersonal relationships and to create awareness on the rich heritage and culture of our country.
- Various academic competitions like technical symposium, innovative project design contest are conducted for all round development of the students.
- Details of the few activities of Employability Training Camp organized during 2015-16 is cited below

**Table 1.7 Training Camps**

<b>Sr. No.</b>	<b>Date</b>	<b>Topic</b>	<b>Company's name</b>	<b>Trainer's Name</b>
1	16/10/2015 to 18/03/2016	Personality Development	Single Point HR. Solution Pvt. Ltd. Vadodara	Mr. Kishor Dubey
2	08/09/2015 to 24/09/2015	HR Training	YAP Concepts, Baroda	Mrs. Priti Dubey

3	18/03/2016	Facing Interviews	Will-N-Skill Mumbai	Mr. Sarang Yande
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- The College library is well stocked with books, journals, back volumes, e-books and e-journals. A library hour within the class time table is provided to encourage library usage by students. The library is kept open from 11.00 A. M. to 5.30 P. M. from Monday to Saturday.
- The institute has formed various committees such as tree plantation, blood donation to ensure that the students graduating from D. N. Patel College of Engineering have concern for society as stated in our vision. Through this centre students and faculty members are actively participating in different community development projects ranging from Green Campus project to Swachh Bharat Abhiyan.

**1.3.2 What are the efforts made by the institution to modify, enrich and organize the curriculum to explicitly reflect the experiences of the students and cater to needs of the dynamic employment market?**

- The college adheres to the syllabus designed by North Maharashtra University and the faculties enrich it with their own expertise and experience to enable students competes in the job market.
- Provision for special lectures, Industrial visits, in-plant training and innovative project cell competitions have been put in place.
- The college regularly organizes communication skills and life skill development programmes.
- Training and Placement Cell takes initiatives to cater to the needs of the changing employment market. The Cell regularly interacts with the HR managers of companies and collects first hand information about the demands and expectations of the corporate sectors regarding the required skill set of students. Based on these, special training and tailor made value added programmes are conducted during the academic year.
- The students are encouraged to take up mini projects and main projects in thrust areas. If necessary, students are sent to industries or

research organizations to collect the data, do the necessary design and analysis and suggest solutions for the technical improvement and cost effectiveness.

- Alumni meet is taken annually to understand the curricular gaps and recent market trends.

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

The institution is adopting North Maharashtra University curriculum. The efforts made by the institution to integrate the cross cutting issues such as Gender, Climate Change, Environmental education, Human Rights, ICT etc are as follows:

#### *GENDER*

- Equal opportunities are given to both the genders in terms of admissions, employment, training programmes, sports activities etc., and so gender issues do not arise.
- Girls and boys participate in various co-curricular activities such as paper presentations, organization of paper contests, group discussions and technical quiz programmes. Both boys and girls are made members of various clubs associated with academic, co-curricular and extracurricular activities.

#### *CLIMATE CHANGE AND ENVIRONMENTAL EDUCATION*

- Students have a compulsory course on Environmental Science and Engineering.
- Topics related to these issues are taken up for quiz and debates during Teacher's Day.



- They are taken for industrial visits, effluent and water treatment plants and places that educate them on environmental issues.

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

**Table 1.8 Value Added Programmes**

1	Moral and ethical values Programmes	Chinmayananda Mission and Bramha Kumaris Mission
2	Employable and life skills	Training programmes for personality development, communication skills and employability training camps
3	Better career paths	Career guidance by Training Placement and Cell Library resources Guidance by respective departments Education fairs
4	Community orientation	Tree plantation, Blood Donation Organ Donation activities

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

The Institute takes feedback from different stakeholders, including parents and people from industries. The students express their opinion on curriculum through response sheets/feedback. Our faculty takes regular feedback from stakeholders on academic, curriculum, trends and teaching methodology. The feedback collected is analyzed for improvement if there is any lacuna. The Principal present it to the college managing committee. The HOD's and Principal reviews the analysis reports and initiates interventions. The teachers collect the feedback from the graduates regarding learning processes after the end of academic session every year. The inputs are obtained from the

stake holders regularly and further used to improvise the overall competency of the students for employability.

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

- Based on the analysis of the feedback, the institution decides to roll out suitable modules of enrichment programmes
- The quality of enrichment programmes are evaluated by the
  - i. performance of the students in the internal and university examination,
  - ii. participation in technical quiz competitions,
  - iii. number of innovative projects carried out
  - iv. papers presented in seminars and prizes won
  - v. understanding shown in lab experimentation and answering viva questions.

## **1.4 Feedback System**

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

Faculty members from various departments are in the committees concerned with the curriculum design and development of the University (Syndicate, Academic Council, Board of Studies and Syllabus Committee)

Please refer to 1.1.6

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

Yes.

The college has a formal mechanism to obtain feedback on curriculum from students and stakeholders.

- It is communicated to the University through faculty members who are members of Board of Studies, Academic Council of the university etc.,
- If changes are required, faculty members also take initiatives to write to the university.

**1.4.3 How many new programmes/courses were introduced by the institution during the last four years? What was the rationale for introducing new courses/programmes?)**

Yes

- M. E. Electronics & Tele communication,
- Recognizing the increased need for post-graduate engineers proficient in Electronics & Telecommunication so M.E. programme in Electronics & Telecommunication Engineering was introduced in the academic year 2012-13.

**Any other relevant information regarding curricular aspects which the college would like to include**

- Being an affiliated type, the institution uses the curriculum provided by the university.
- The College makes all possible positive efforts to fill the gap between the existing curriculum and the changing actual needs, by suitably organizing course relevant value added programmes.

## CRITERION II: TEACHING - LEARNING AND EVALUATION

### 2.1. Student Enrollment and Profile

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

##### *Publicity of Admission Process*

The admission process for Under Graduate (UG), Direct Second Year (DSE), & Post Graduate (PG) engineering courses, as well as rules and regulations to be followed in the given Academic Year (AY), are decided by Directorate of Technical Education (DTE) Government of Maharashtra, and published on leading newspapers and website.

Along with the same information intake capacity, eligibility criteria, and documents to be submitted during the admission etc. are published on the institute website, institute brochure, and leading newspaper for a given AY.

In addition, Admission Committee (AC) for a given academic year is formed to disseminate information about information process in rural or backward areas of region by one to one counseling.

##### *Transparency in Admission Process*

The admission in a given AY is either from Central Admission Process (CAP) or from Institute Quota (IQ).

There is no question on the transparency of CAP admissions, since allotment letter of DTE offered to the student is on the basis of CET or JEE marks and merit score.

At institute level, the admissions from IQ are either in Management Quota and/or against CAP vacant seats. In either case, the admission process consists of publishing information on the notice board, institute website, newspaper that includes: available seats, fee structure, and admission policy, schedule of registration and seat allocation.

At the time of admission, the students submit the required documents which are scrutinized in his/her presence. Subsequently the admission is registered on the DTE website. The fees prescribed by Shikshan Shulka Samittee, (Constituted by Government of Maharashtra) are collected from the students. A General Registration (GR) number and Student Identity Card is given to the student after admission process.

DSE and PG admission process is similar to UG admission process with respective eligibility criteria for admission in the institute.

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

The admissions in UG, DSE, and PG are either by means of CAP or by IQ.

*Admission through CAP*

The process of admission through CAP and the eligibility criteria is specified, documented and published by DTE for given AY. The admission process through CAP changes from time to time.

As in the admission process from 2012 to 2014, merit list was based on the score obtained in CET. In the admission process for 2015-16, allotment is based on the composite score (combination of marks in the qualifying exam and JEE-Mains or CET) obtained by the candidate.

In general, admission process consists of following activities:

- Registration, document verifications, and confirmation at ARC.
- Display of merit list.
- Option form filling for institute of interest.
- Allotment of seats through CAP rounds.
- Reporting to institute.

*Admission through IQ*

At institute level, the admissions from IQ are either in Management Quota and/or against CAP vacant seats. The admission process consists of following activities:

- Invitation of applications for available seats.
- Generation and display of merit list.
- Notification for allotment of seats.
- Confirmation of admission by candidate.
- 

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

Following table shows the minimum and maximum cutoff marks for entry level of each of the programmes offered by institute.

**Table 2.1 Branch wise Cutoff Marks for FE CAP admission**

<i>Bachelor of Engineering: FE (CAP)</i>									
<i>Sr. No.</i>	<i>AY Branch</i>	<i>2012-13</i>		<i>2013-14</i>		<i>2014-15</i>		<i>2015-16</i>	
		<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
1.	Civil	38	110	49	110	46.62	31.90	49.33	97.24
2.	Instrumentation	55	78	42	51	46.43	46.82	---	---
3.	Mechanical	54	86	51	115	37.89	86.75	23.58	76.69
4.	Electrical	56	75	43	86	49.41	68.88	34.30	34.30
5.	E. & T.C.	14	65	09	68	32.25	32.63	38.92	69.67
6.	Computer	32	81	23	69	33.52	68.27	37.14	83.21
7.	Info. Tech.	49	72	47	55	97178	97178	---	---

**Table 2.2 Branch wise Cutoff Marks for FE IL admission**

<i>Bachelor of Engineering: FE (IL)</i>									
Sr. No.	AY Branch	2012-13		2013-14		2014-15		2015-16	
		Min	Max	Min	Max	Min	Max	Min	Max
1.	Civil	43	71	46	85	38.52	69.69	34.97	73.82
2.	Instrumentation	43	68	54	138	17.20	87.88	---	---
3.	Mechanical	42	60	---	---	31.82	43.77	50.61	65.71
4.	Electrical	39	63	37	53	28.31	53.43	26.97	63.38
5.	E. & T.C.	43	51	---	---	---	---	---	---
6.	Computer	51	65	47	70	41.62	93.45	41.67	64.15
7.	Info. Tech.	37	63	49	77.66	---	---	---	---

**Table 2.3 Branch wise Cutoff Marks for DSE CAP admission**

<i>Bachelor of Engineering: DSE (CAP)</i>									
Sr. No.	AY Branch	2012-13		2013-14		2014-15		2015-16	
		Min	Max	Min	Max	Min	Max	Min	Max
1.	Civil	56.72	76.73	55.09	77.30	57.92	81.24	52.79	71.44
2.	Instrumentation	57.78	69.49	54.46	71.89	57.94	87.49	58.51	67.43
3.	Mechanical	64.70	76.54	60.78	79.34	58.33	77.43	55.94	77.24
4.	Electrical	63.00	73.65	64.65	76.76	63.47	79.94	57.35	78.97
5.	E. & T.C.	58.40	75.77	60.00	79.71	59.26	79.03	64.06	75.31
6.	Computer	57.45	78.45	60.00	77.29	52.69	80.39	56.58	83.00
7.	Info. Tech.	62.42	65.07	59.40	59.40	65.81	69.74	---	---

**Table 2.4 Branch wise Cutoff Marks for DSE IL admission**

<i>Bachelor of Engineering: DSE (IL)</i>									
Sr. No.	AY Branch	2012-13		2013-14		2014-15		2015-16	
		Min	Max	Min	Max	Min	Max	Min	Max
1.	Civil	56.72	56.72	---	---	---	---	65.39	65.39
2.	Instrumentation	---	---	---	---	---	---	---	---
3.	Mechanical	---	---	---	---	---	---	---	---
4.	Electrical	---	---	---	---	---	---	---	---
5.	E. & T.C.	61.16	61.16	---	---	59.43	62.29	---	---
6.	Computer	---	---	57.94	65.79	65.16	65.16	---	---
7.	Info. Tech.	---	---	82.45	82.45	---	---	---	---

**Table 2.5 Branch wise Cutoff Marks for ME CAP admission**

<i>Master of Engineering (CAP)</i>									
Sr. No.	AY Branch	2012-13		2013-14		2014-15		2015-16	
		Min	Max	Min	Max	Min	Max	Min	Max
1.	Mechanical	---	---	28	41	4.48	12.89	4.7	4.7
2.	E. & T.C.	---	---	25	45	0.10	15.49	---	---

**Table 2.6 Branch wise Cutoff Marks for ME IL admission**

<i>Master of Engineering (IL)</i>									
Sr. No.	AY Branch	2012-13		2013-14		2014-15		2015-16	
		Min	Max	Min	Max	Min	Max	Min	Max
1.	Mechanical	48	86	61.53	73.50	60.00	72.80	58.00	64.93
2.	E. & T.C.	53	84	58.07	73.13	16.61	75.13	61.40	64.80



Following table shows the comparison of cutoff marks with other institutes in the region.

**Table 2.7 Comparative Cutoff with other institute**

<i>Bachelor of Engineering: FE (CAP)</i>									
Sr. No.	AY Institute	2012-13		2013-14		2014-15		2015-16	
		Min	Max	Min	Max	Min	Max	Min	Max
1.	DNPCOE	49	56	47	62	46.43	56.14	38.92	59.99
2.	JMIEMS	38	52	44	67	30.67	33.39	(1120623)	17.56

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

Since admission rules and regulations are decided by DTE and Government of Maharashtra and admission process (CAP) is governed by DTE Maharashtra, institute cannot review or change the admission process through CAP.

However, at institute level the admission process is carefully reviewed each year so that maximum students get benefited by IL quota for next year.

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

- ✓ **SC/ST**
- ✓ **OBC**
- ✓ **Women**
- ✓ **Differently abled**
- ✓ **Economically weaker sections**
- ✓ **Minority community**
- ✓ **Any other**

The institute is committed to provide a platform to the candidates from diverse sections of society so they can have opportunities to prove themselves. Since the institute is located in the rural area of the district where there is not so much awareness about professional education, extra care is taken. The institute provides one-to-one counseling for candidates to inform them about benefits of professional education, admission process, and any other relevant things.

The reservation in admission and scholarship is provided as per the policy of Government of Maharashtra and DTE. At institute level, candidates are helped personally to avail benefits of scholarship and other schemes of government.

Such initiatives results in the healthy participation from backward/weaker sections of society which is reflected in the statistics from the admissions of previous year in the institute as shown in the following table.

**Table 2.8 Category wise Male / Female Admissions**

Sr. No.	AY Category	2012-13		2013-14		2014-15		2015-16	
		Male	Female	Male	Female	Male	Female	Male	Female
1.	SC	60	25	63	25	53	24	43	22
2.	ST	31	11	34	18	35	07	41	11
3.	DT VJ NT	62	21	91	14	72	14	58	22
4.	OBC	610	203	636	322	566	331	442	275
5.	SBC	25	06	20	09	19	06	29	5
6.	OPEN	390	115	184	41	286	105	215	84
<i>Total</i>		1178	381	1028	429	1031	487	828	419

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

Following tables shows the demand ratio for each branch of each programme offered by the institute.

**Table 2.9 FE Branch-wise Demand Ratio**

<i>Bachelor of Engineering: FE (CAP &amp; IL)</i>													
Sr. No.	AY Branch	2012-13			2013-14			2014-15			2015-16		
		Intake	Admission	Ratio (%)	Intake	Admission	Ratio (%)	Intake	Admission	Ratio (%)	Intake	Admission	Ratio (%)
1.	Civil	63	55	87.30	63	61	96.82	63	63	100	63	58	92.06
2.	Instrumentation	63	59	93.65	63	40	63.49	63	28	44.44	63	09	14.28
3.	Mechanical	63	61	96.82	63	63	100	63	57	90.47	63	53	84.12
4.	Electrical	63	60	95.23	63	63	100	63	57	90.47	63	46	73.01
5.	E. & T.C.	63	58	92.06	63	27	42.85	63	10	15.87	63	09	14.28
6.	Computer	63	59	93.65	63	59	93.65	63	38	60.31	63	51	80.95
7.	Info. Tech.	63	38	60.31	63	17	26.98	63	02	03.17	---	---	---

**Table 2.10 DSE Branch-wise Demand Ratio**

<i>Bachelor of Engineering: DSE (CAP &amp; IL)</i>													
Sr. No.	AY Branch	2012-13			2013-14			2014-15			2015-16		
		Intake	Admission	Ratio (%)	Intake	Admission	Ratio (%)	Intake	Admission	Ratio (%)	Intake	Admission	Ratio (%)
1.	Civil	41	20	51.22	39	37	94.87	41	41	100	27	24	88.89
2.	Instrumentation	33	33	100	30	17	56.67	42	42	100	50	09	18
3.	Mechanical	21	21	100	21	21	100	20	20	100	30	30	100
4.	Electrical	14	14	100	39	38	97.44	25	25	100	44	42	95.45
5.	E. & T.C.	29	14	48.28	38	14	36.84	55	16	29.09	62	06	9.68
6.	Computer	34	20	58.82	31	24	77.42	39	39	100	48	25	52.08
7.	Info. Tech.	45	04	8.89	48	02	4.16	63	03	4.76	68	---	---

**Table 2.11 ME Branch-wise Demand Ratio**

<i>Master of Engineering (CAP &amp; IL)</i>													
<i>Sr. No.</i>	<i>AY Branch</i>	<i>2012-13</i>			<i>2013-14</i>			<i>2014-15</i>			<i>2015-16</i>		
		<i>Intake</i>	<i>Admission</i>	<i>Ratio (%)</i>	<i>Intake</i>	<i>Admission</i>	<i>Ratio (%)</i>	<i>Intake</i>	<i>Admission</i>	<i>Ratio (%)</i>	<i>Intake</i>	<i>Admission</i>	<i>Ratio (%)</i>
1.	Mechanical	18	15	83.33	18	18	100	18	17	94.44	18	06	33.33
2.	E. & T.C.	18	18	100	18	18	100	18	13	72.22	18	06	33.33

By analyzing the information shown in the table following points can be deduced about trends in admission.

- The admissions in engineering streams like Civil, Mechanical, Electrical, and Computer are not much varied during the past academic years.
- The admissions in E. & T.C., I.T. and Instrumentation are decreasing during the past years.
- The admissions in PG courses are also decreasing during the previous years.
- The reasons are identified for decreasing demands of respective engineering streams and counter measures are taken accordingly.
- Such as the institute has closed admissions in I.T. branch since it is not in demand among students.

## 2.2. Catering to Student Diversity

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

The DTE provide reservation to different-abled students in CAP. The institute is also committed to follow government policies for differently-abled students and it is ensured by

- Designing the institute buildings in such a way that they provide ease of access to such students.

- The institute does not discriminate such students from others in any manner, instead extra care is taken to make them comfortable and to help them whenever they require.

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

No formal procedures are adopted by institute for assessment of knowledge and skills need of students prior to programme commencement, but cutoff marks or merit numbers are taken as indicator for students requiring additional inputs in subjects. In addition, medium of instruction is also taken into account. An orientation meeting is held by principal and heads of different departments to motivate the students and make them familiar with the environment of institute and curriculum.

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

Since the institute is located in rural and backward area of the district, knowledge gap of enrolled students is a big concern here. The institute adopts following strategies to enable students to cope with the respective programme:

- Slow learner are facilitated with remedial classes during the programme.
- Expert lectures and Industrial Visits are arranged at department and institute level for students to make them familiar with industry environment.
- Co-curricular activities like technical or quiz competitions, project exhibitions, poster presentations, workshops and conferences are organized for knowledge improvement and personality development of students.

- H.R. training programs are conducted by experts to make student industry ready.
- The students are encouraged to take value added courses, internship and projects in industries.

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

The institute takes responsibility to make its staff and student aware of various social and environment issues. It is accomplished in following ways:

- The Women Grievance Cell is formed for security and welfare of and to address any grievance issues raised by female students and staff.
- It is ensured that participation of students in various curricular, co-curricular, extra-curricular, sports activities is free from any discrimination based on gender, economic or social background.
- The staff is appointed and allotted with various duties in institute without any gender or social bias.
- As per the curriculum of North Maharashtra University, Jalgaon the students from FE and DSE must complete the course of Environment Studies, where they learn about various environmental issues like pollution, global warming etc.
- In addition, the institute organizes various activities like Tree Plantation, Blood Donation Camps, Motivational Talks, Yoga Sessions and Marathon to spread awareness about social and environment responsibilities of students and staff and making them better citizen.

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

The institute identify advanced learners through direct interactions and their performances in class room or lab sessions, internal sessional examinations, university examinations, or other co-curricular activities. Such students are well supported and motivated by the following ways:

- They are encouraged to participate in various institute level quizzes, seminars, presentations for their personality development.
- They are also supported to participate various intercollegiate, state level, national level technical competitions, conferences, workshops to fulfill their special learning needs.
- They are also motivated to get higher ranks in the university examinations and such students are also honored in the annual prize distribution function for their achievements.
- They are also assisted for competitive examinations like GATE, GRE, TOFEL etc. in order to encourage them to pursue higher studies in reputed institutes in India and abroad.
- Expert lectures from industrial and academic persons are conducted for such students to give knowledge about current trends and technologies in respective engineering discipline.

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

The institute have set up a system to collect and analyze student results in university examinations to identify slow learners. Such students are guided with extra theory and/or lab sessions of respective subject to improve their performance and to ensure they should not drop out due to language problem or difficulties of subject.

The institute also monitors the attendance and performance of students in theory and practical sessions to identify if there is any other reason of their underperformance. Since there are various factors that can affect the performance

of student including economic condition, nutrition or health issues, language problem, homesickness, family problem, mental tension, etc.

- If the reason is economical, the student is allowed to submit the institute fee in installments as per their convenience and assisted with various scholarships of government.
- If the student is suffering from some nutrition or health issues then medical help is provided to him/her to recover if required. The parents are informed to take special care. During the recovering period the student are granted with special leaves and remedial sessions are taken after recovery, so that student's academic are not affected.
- If the student is not getting the subjects due to language problem, the theory and lab sessions are conducted in a such manner that they understand the subject.
- If the student is underperforming due to homesickness or family problem, the class teacher act as a mentor and conducts special personal meetings to counsel him/her, so that it won't result in drop out.
- If the mental pressure or tension is affecting the performance of the student then the class teacher tries to relieve the stress by frequent talks, with the help of his/her friends. If the problem persist the student is referred to psychological counselor.

### **2.3. Teaching-Learning Process**

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

##### *Academic Calendar*

At the commencement of each academic year, the NMU publishes academic calendar for respective year, which consists of dates for

- Commencement of the semester,
- End of the semester



- Oral, Practical Examinations
- Theory Examinations

Based on the academic calendar published by NMU, the institute plans its academic, co-curricular, and extra-curricular activities by preparing its own academic calendar which is displayed on notice board and circulated among staff members.

#### *Time Table*

Each department prepares its department level time table for lectures and practical sessions. Time Table coordinator of each department prepares Department Academic Calendar in consultation with Head of the Department.

#### *Teaching Plan*

Each teaching faculty prepares teaching plan based on the personal time table and syllabus specified by NMU for each assigned subject to plan its teaching activities. The Academic Monitoring Committee monitors and verify the teaching plan and its implementation from each faculty.

#### *Student Evaluation Schedule*

As per the guidelines of NMU, the students are evaluated through Internal Sessional Examination, End Semester Examinations (Theory and Oral/Practical). The details of these examinations are announced in advance to the students through time table notices.

### **2.3.2. How does IQAC contribute to improve the teaching -learning process?**

IQAC monitor and give suggestions to improve the effectiveness of teaching – learning process. All the departments send their feedbacks to IQAC highlighting the evaluation of attainment of Program Educational Objectives and Program Outcomes. Based on these feedbacks it take further actions such as faculty training, guest lectures, contents beyond syllabus, extra/remedial classes, value added training programs etc. Departments implement these remedial measures and ensure that teaching – learning process is enhanced.

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

The institute gives more emphasis towards increasing learning abilities of students. The institute defines course objectives and course outcomes for every course. The course objective and course outcomes enable students to understand the importance and purpose of the respective subject. Teachers continuously take feedback from students during the lectures to ensure that the course objective is attained. Based on this feedback, teachers refine their way to deliver the lectures, which improves the course outcomes.

Following initiatives are taken to develop the skills of teachers:

- They are encouraged to attend training programs to improve teaching and technical skills organized by the institute and by other organizations.
- They also use NPTEL videos which are available in the institute for teaching and share these videos with students to improve their learning.
- The departments organize project exhibitions for final year students which helps them to improve their collaborative learning. Such competitions also help students from lower classes to understand engineering concepts.

In addition for better learning experience, the students are also encouraged to participate in Technical Events, Seminars, Quizzes, Industry Visit, and to use Technical Magazines, News Letters.

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

The institute nurtures critical thinking, creativity and scientific temper among students by following means:

- Teacher uses real life problems, live demonstration, quizzes, seminars, assignments during theory and practical sessions.
- Students are suggested to read technical magazines and newsletters to get knowledge about latest technological innovations.
- The institute organizes Tech Fiesta every year for the exposure of students to develop their learning skill.
- The students are also encouraged to consider real life problems and to get sponsorships from various industries for their final year projects.

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

The institute always encourages faculty members to use methods other than traditional blackboard teaching for effective teaching and for the same purpose the following facilities are provided to teachers:

- NPTEL video lectures from IIT faculties.
- Internet connection to access digital resources such as power point presentations, course materials, video lectures from experts.

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

Following steps are taken by the institute to expose students and faculty to advanced level of knowledge and skills:

- They are encouraged to participate in national and international seminars, workshops and conferences.
- Faculty is encouraged to participate in FDPs STTPs etc.
- They have access to magazines, newsletters to know latest advancements.
- Students are encouraged to do internships in industries for relevant fields.

- Each department arranges Industry Visits for students to make them aware about technical innovations and industrial expectations.

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

The institute is located in a rural and backward region of the state, so it is obvious that students who take admission in the institute have varied social and economic background. Because of this, students require support and guidance to resolve their academic, personal and psycho-social issues. The institute provides such support and guidance by following means:

- Class teachers conduct meetings with students to understand their problems and try to solve them by contacting their parents or by any other way possible.
- If required class teacher can consult to or student can directly contact to higher authorities such as Head of Department or Principal to discuss their problems.
- Training and Placement officer arranges sessions for career guidance, personality development and soft skills to prepare them for current industrial needs.

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

The faculty of the institute always takes effort to improve student learning by innovative teaching approaches. This includes power point presentations, videos, real life problems, models, research materials, notes, multiple choice questions etc. Such kind of material is always shared with students and available to them.

The institute also encourage faculty to participate in faculty development and training programs to get aware of new advancements in teaching techniques. In

addition the institute also conducts sessions between senior and junior faculties so that juniors can discuss their difficulties in delivering lectures or teaching, and seniors can share their experience of teaching in order to enable them to use best teaching practice.

Such type of efforts enhances the learning ability of students which in turn create an impact on academic performance of students and employability of students.

### **2.3.9. How are library resources used to augment the teaching learning process?**

As per the institute's objective library is enriched with resources which augment the teaching learning process. Following are the facilities provided by library:

- The library has all the text books, reference books and other material as per the syllabus prescribed by the university.
- The library also has technical magazines and newspaper subscriptions to ensure uninterrupted supply of recent information.
- The library has Slim Library Software, which contain database of all books available in the library for easy and fast access to resources.
- The library contains university question paper sets for students and faculties, so that students are well prepared for university examinations and in turn performs well.
- The library also has Book Bank facilities for needy and scholar students which ensures no financial burden due to book purchases on economically backward students.
- During the university examination session, the library extends the reading room facilities as well so that students can use library facilities in night hours.
- In addition to central library, each department also maintains their own libraries to provide additional learning material to students respective to their engineering stream.

- Faculty have unlimited access to all type of books and research material with no time duration constraint.

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

Since the semester duration prescribed by university is normally 90 days and there are various co-curricular and extra-curricular activities carried out during the semester for development of students it is a bit difficult to complete the curriculum during the given period.

The final year students are likely to miss many theory and practical session during training and placement activities.

The DSE students join the academic session after almost two months of commencement of term, so they also miss most of the part of curriculum.

Following are the institutional approaches to overcome the challenges encountered:

- Each faculty prepares lesson planning for each subject he/she will teach during the semester which is verified by HOD and Principal. This plan is regularly monitored by Head, Principal or Academic Monitoring Committee to identify any missing lectures and direct the faculty accordingly.
- If faculty misses any lecture/ practical session he/she arrange extra sessions for missing portion of curriculum.
- If faculty is unable to take lecture/practical session due to his/her personal problems, leaves, other official duties necessary adjustments are done with the help of other faculties.
- For DSE students extra sessions are arranged during free hours or on week offs or on holidays to cope them up with the curriculum of regular students.

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

The quality of teaching learning is monitored and evaluated by institute by the following means:

- The teaching plan, notes and other learning material prepared by faculty is checked by Academic Monitoring Committee, HOD, Principal for its relevancy with curriculum and course objective
- Class teacher conduct meetings with students to discuss issues they face in learning a particular subject or their performances in lecture/practical sessions. The conclusion of such meetings is discussed with HOD and a summary report is sent to Principal for information and any action if required.
- Feedbacks are also taken from students to check teaching skills, behavior of concerned faculty and overall experience of students with the faculty. Based on these feedback report is prepared by HOD which is shared with faculty and also forwarded to Principal for information. HOD also talks with the faculty about these feedbacks and directs his/her if any improvement is needed in his/her teaching methodology, behavior or anywhere else.

## **2.4. Teacher Quality**

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

The institute always tries to recruit quality human resource and planning of the recruitment is always done prior to commencement of each academic year. Sometimes the recruitment can be done during the academic year if necessary.

The Principal together with HODs calculate the vacancy requirements for respective department for an academic year and discuss it with management to conduct interview to recruit human resource.

<i>Highest Qualification</i>	<i>Professor</i>		<i>Associate Professor</i>		<i>Assistant Professor</i>		<i>Total</i>
	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>	
<b>Permanent Teachers</b>							
D.Sc./ D.Litt.	---	---	---	---	---	---	---
Ph.D.	03	---	00	---	---	---	03
M.Phil.	---	---	00	---	01	---	01
P.G.	02	---	11	---	36	03	52
U.G.	---	---	---	---	04	---	04
<b>Temporary Teachers</b>							
Ph.D.	---	---	---	---	---	---	---
M.Phil.	---	---	---	---	---	---	---
P.G.	---	---	---	---	---	---	---
<b>Part-time Teachers</b>							
Ph.D.	---	---	---	---	---	---	---
M.Phil.	---	---	---	---	---	---	---
P.G.	---	---	---	---	---	01	01
U. G.	---	---	---	---	01	---	01

The recruitments are always done as per the guidelines of AICTE and NMU.

The institute tries to maintain overall student teacher ratio at 15:1. Maximum faculties of the institute are approved from NMU and have qualification as per the guidelines of AICTE.



The institute has adopted following strategies for planning and management of its human resources to meet changing requirements of curriculum:

- Encouraging faculty for higher qualification such as Ph.D. by providing them financial benefits.
- Inspiring faculty to attend various STTPs, workshops, conferences etc. to improve their skills and knowledge.
- Retaining senior faculty after retirement if required.
- Calling experts for some special subjects to train the faculty about the newer experiments or concepts due to change in curriculum.
- Providing infrastructure and facilities to create a research oriented environment.
- Running welfare schemes for faculty such as gratuity, credit cooperative society etc.

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

Recently the new fields of specialization have emerged and expanding day by day. This create necessity of being update in terms of knowledge about advancements in technological field.

The institute also promotes the faculty to update their knowledge and skills respective to needs of new era.

- The institute sponsors and encourages faculty to pursue Ph.D. or do research work to upgrade their knowledge.
- Experts and Industry persons are invited in institute to share their knowledge with faculty to make them aware of recent trends.

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

**a Nomination to staff development programmes**

<i>Academic Staff Development Programmes</i>	<i>Number of Faculty Nominated</i>			
	<i>2012-13</i>	<i>2013-14</i>	<i>2014-15</i>	<i>2015-16</i>
Refresher Courses	---	---	01	01
HRD Programmes	---	---	---	---
Orientation Programmes	---	---	---	---
Staff training conducted by the university	---	---	---	---
Staff training conducted by other institutions	---	---	01	---
Summer/Winter Schools, Workshops, etc.	---	01	---	---

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

- ✓ **Teaching learning methods/approaches**
- ✓ **Handling new curriculum**
- ✓ **Content/knowledge management**
- ✓ **Selection, development and use of enrichment materials**
- ✓ **Assessment**
- ✓ **Cross cutting issues**
- ✓ **Audio Visual Aids/multimedia**
- ✓ **OER's**
- ✓ **Teaching learning material development, selection and use**

<i>Sr. No.</i>	<i>Name of Faculty Training Programs</i>	<i>Description of Faculty Training Program</i>	<i>Academic Year</i>
1.	Research Methodology: Concepts & Tools	A workshop to encourage faculty members to innovate and increase their knowledge	2015-16

2.	Microsoft Technology Associate	A workshop to train faculty members about web development concepts	2014-15
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**c Percentage of faculty**

- ✓ **invited as resource persons in Workshops/Seminars/Conferences organized by external professional agencies**
- ✓ **participated in external Workshops/Seminars/Conferences recognized by national/ international professional bodies**
- ✓ **presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies**

<i>Type of Faculty Participation</i>	<i>Percentage of Faculty Participation</i>			
	<i>2012-13</i>	<i>2013-14</i>	<i>2014-15</i>	<i>2015-16</i>
invited as resource persons in Workshops/Seminars/Conferences organized by external professional agencies	01	01	01	03
participated in external Workshops/Seminars/Conferences recognized by national/ international professional bodies	18	15	23	32
presented papers in Workshops/Seminars/Conferences conducted or recognized by professional agencies	08	08	08	09

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

Followings are the policies implemented by institute to recharge teachers:

- The institute arranges fun sessions and get-togethers for all staff members, so they can refresh their minds after each academic year.
- The institute is always ready to provide research grant to a faculty who wants to do the research on real life problem.
- The institute provides study leave to the faculty members who are pursuing Ph.D. or any other higher education.

- The institute also supports faculty for their research and academics publications by providing funds and facilities.
- Faculty is encouraged to invite industrial persons to institute to get exposure to current trends and requirements of industries.

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

The institute always motivates the faculty who performed well in terms of academic, co-curricular, extra-curricular or any other activity by praising them, which also encourages other faculty members to perform well.

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

The institute has provision for feedback system for faculty members, where the feedbacks are collected by students at the start, during or end of every semester or academic year as possible.

Based on these feedbacks the faculty is advised to improve the shortcomings in their teaching methods if any and if faculty is performing well they are praised and articulated to maintain the same tempo.

## **2.5. Evaluation Process and Reforms**

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

Since the institute is affiliated to NMU the process of internal and external assessment and right to reform the process is under the control of university. The institute does its best to make the stakeholders, student and faculty aware

of the current evaluation process and whenever there is reform in the evaluation process, the institute takes following steps to do this:

- The circulars from university are circulated to students, faculty and stakeholders through institute website, notice board etc.
- If required orientation meetings or training are held by expert persons from or out of the institute for faculty members, so that there are minimum difficulties to adopt the evaluation process.

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

Before 2013-14, the evaluation of theory was done at the end of semester through university examinations and practical evaluation was done through term work assessment and oral/practical examinations by using marking system.

In 2013-14, the university introduced CGPA system which divides the theory evaluation in two parts: External Sessional Examination of 80 marks conducted by university at end of semester and Internal Sessional Examination of 20 marks conducted by institute at end of semester. In addition, the university also replaced the marking system with grading system.

In response to these reforms from university, the institute conducts two Internal Sessional Examinations, one at mid and one at end of semester. The better of two Internal Sessional Examinations are taken to submit the 20 marks of Internal Sessional Examination to university.

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

The institute ensures that all the evaluation reforms of the university are effectively implemented. The principal checks circulars, ordinance from university and conveys the information to all HODs. The HODs of different

departments spread out the information to faculty members and students for understanding.

Along with Principal all HODs make sure that the two Internal Sessional Examinations must be conducted for each class in each semester. The ISE in-charge will make the necessary arrangements for smooth and proper conduction of ISE. The HODs also monitors that the faculty must carefully evaluate the answer sheets of students. At each department the results of ISEs are submitted to ISE in-charge who generate the final ISE marks list and convey to faculty members.

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

Formative assessment approaches are used during semester for altering teaching and learning methods for improvement in students learning. The faculty uses multiple choice questions, feedback on concept description during theory sessions, ISE for theoretical concepts and performs Internal Continuous Assessment of lab work for practical concepts to check whether student is getting the subject or not.

Summative assessment approaches are used at the end of semester to measure student achievement. The university conducts External Sessional Examination for theoretical concepts and oral/practical examinations for practical concepts to check the level of knowledge the student acquired during previous semester.

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

As per the guidelines of university the faculty performs continuous assessment of performance of the student throughout the semester in both theory and

practical session. The process of ICA is transparent and informed to every student of the department by the HOD or Subject In-charge. The ICA mark which of either 25 or 50 are normally distributed as follows:

- Student's attendance in theory lectures
- Timely completion of assigned practical
- Oral performance at time of submission of lab work

**2.5.6. What is the graduate attributes specified by the college/affiliating university? How does the college ensure the attainment of these by the students?**

Graduate Attributes (GAs) are correlated with Program Outcomes (POs) as defined by National Board of Accreditation (NBA) for a specific engineering programme. GAs and POs specifies what is expected from a graduate after completion of an engineering programme. Following are the GAs correlated with POs for Computer Engineering discipline:

<i>Discipline: Computer Engineering</i>		
<i>Sr. No.</i>	<i>Graduate Attributes (GAs)</i>	<i>Correlated Program Outcomes (POs)</i>
1.	Engineering Knowledge	Knowledge of fundamentals of mathematics, science, computer & related engineering disciplines.
2.	Problem Analysis	An ability to design and conduct experiments, as well as to analyze and interpret data.
3.	Design/Development of Solutions	An ability to design and conduct experiments, as well as to analyze and interpret data. An ability to design a system ,component, or process to meet desired needs within a realistic constraints such as economic, environmental, social, political, ethical, health

		and safety, manufacturability, sustainability.
4.	Modern Tool Usage	Exposure to programming languages, communication skills, & modern engineering tools. An ability to use a technique, skill, and modern engineering tools for engineering practices.
5.	The Engineer and Society	An understanding of ethical & social responsibility. Impact of engineering solution in a global, economic, environmental, and social context. Knowledge of modern-day issues.
6.	Environment and Sustainability	Impact of engineering solution in a global, economic, environmental, and social context. An ability to design a system ,component, or process to meet desired needs within a realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, sustainability.
7.	Ethics	An understanding of ethical & social responsibility. An ability to design a system ,component, or process to meet desired needs within a realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, sustainability.
8.	Individual and Team Work	An ability to work as a team leader/member.
9.	Communication	Exposure to programming languages,



		communication skills, & modern engineering tools.
10.	Life-Long Learning	Recognition of the need for and an ability to engage in a lifelong learning.

As GAs are directly correlated with POs the attainment of respective POs will give the idea of attainment of a particular GA. Thus institute determine whether a PO is attained which helps in attainment of a GA.

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

At the institute level, the students are informed about the evaluation process of ISE and ICA.

- If student finds grievance in ISE evaluation they can check their answer sheet and discuss their doubts with the concerned faculty.
- Student can also discuss ICA marks with the concerned faculty if they want to know where they are lacking in performance.

At university level, the student can check for the grievances in ESE evaluation by following ways:

- Students can apply for the retotaling of the respective subject marks by paying necessary fees to university.
- Students can also apply for the photocopy of their answer sheet for the respective subject and if they want, they can request for reevaluation of the answer sheet by paying necessary fees to university.

## **2.6. Student Performance and Learning Outcomes**

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

The institute has stated learning outcomes in terms of Programme Educational Objectives (PEOs) and Programme Outcomes (POs) which are

specified by each department. PEOs are broad statements that describe the carrier and professional accomplishments that the programme is preparing graduates to achieve. POs are attributes that are expected to be attained by the time students complete their degree programme. Followings are the PEOs and POs for Computer Engineering department:

***Department of Computer Engineering***

***Programme Educational Objectives***

***Fundamental Knowledge***

To introduce students with fundamentals of mathematics, science, and computer engineering, so they can formulate, analyze and solve engineering problems and also use them to pursue advanced study or to do research.

***Career & Profession***

To prepare students, so they can use their knowledge to develop solutions for the real life problems with effective communication & technical skills, maintain high professionalism with disciplined behavior, being a good team leader or member, & be ready for lifelong learning.

***Ethics & Responsibilities***

To teach students about ethical standards, & their responsibilities to society, nation, & global economy.

***Programme Outcomes***

- a. Knowledge of fundamentals of mathematics, science, computer & related engineering disciplines.
- b. An ability to design and conduct experiments, as well as to analyze and interpret data.
- c. Exposure to programming languages, communication skills, & modern engineering tools.
- d. An ability to use a technique, skill, and modern engineering tools for engineering practices.
- e. An ability to work as a team leader/member.

- f. An understanding of ethical & social responsibility.
- g. Impact of engineering solution in a global, economic, environmental, and social context.
- h. Recognition of the need for and an ability to engage in a lifelong learning.
- i. Knowledge of modern-day issues.
- j. An ability to design a system ,component, or process to meet desired needs within a realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, sustainability.

The institute ensures that each student must be aware of these PEOs and POs, so the PEOs and POs are displayed on notice board of each laboratory of respective department.

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

The institute uses following parameters to monitor the progress and performance of students:

- Attendance and response in theory sessions
- Attendance and grasping level in laboratory sessions
- Result in ESE and oral/practical examinations

The value of these parameters is taken for analysis and if the student is lacking in any area then it is communicated to the student and parents to know the reason behind this. The student and parents are counseled in such cases to improve the performance of the students in next semester.

Following is an analysis of students' results/achievement in it shows significant improvement in performance of students because of counter measures taken for that purpose.

University Rank Holders					
Sr. No.	Name of Student	Class	Branch	Year	Rank
1.	Miss Sneha K. Patil	M.E.	E. & T.C.	2014-15	3 <sup>rd</sup>
2.	Miss UtkarshaChandrakant Chaudhari	B.E.	Electrical	2014-15	2 <sup>nd</sup>
3.	Miss Prachi Suresh Patil	B.E.	Instrumentation	2014-15	2 <sup>nd</sup>
4.	Miss JayshriHiralal Patil	T.E.	Electrical	2015-16	1 <sup>st</sup>

<b>Year: 2012-13</b>			
<b>Class: B.E.</b>			
<i>Branch</i>	<i>DNPCOE</i>	<i>NMU</i>	<i>Difference</i>
Civil	90.00	93.86	-3.86
Instrumentation	90.70	86.00	4.7
Mechanical	61.01	62.56	-1.55
Electrical	91.80	95.53	-3.73
E. & T.C.	96.72	93.67	3.05
Computer	76.00	91.55	-15.55
Info. Tech.	95.65	94.60	1.05

<b>Year: 2013-14</b>			
<b>Class: B.E.</b>			
<i>Branch</i>	<i>DNPCOE</i>	<i>NMU</i>	<i>Difference</i>
Civil	52.38	78.08	-25.7
Instrumentation	86.20	85.00	1.2
Mechanical	56.80	54.07	2.73
Electrical	95.78	94.55	1.23

E. & T.C.	79.45	81.83	-2.38
Computer	84.61	86.64	-2.03
Info. Tech.	100.00	93.17	6.83
<b>Year: 2014-15</b>			
<b>Class: B.E.</b>			
<i>Branch</i>	<i>DNPCOE</i>	<i>NMU</i>	<i>Difference</i>
Civil	53.90	77.73	-23.83
Instrumentation	84.21	82.00	2.21
Mechanical	62.02	67.08	-5.06
Electrical	97.22	91.44	5.78
E. & T.C.	81.00	79.23	1.77
Computer	75.32	88.62	-13.3
Info. Tech.	90.90	86.57	4.33

<b>Year: 2015-16</b>			
<b>Class: B.E.</b>			
<i>Branch</i>	<i>DNPCOE</i>	<i>NMU</i>	<i>Difference</i>
Civil	87.50	91.00	-3.5
Instrumentation	80.30	77.00	3.3
Mechanical	65.85	68.85	-3
Electrical	98.24	96.20	2.04
E. & T.C.	84.21	87.50	-3.29
Computer	82.89	93.19	-10.3
Info. Tech.	86.36	87.63	-1.27

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

The teaching, learning and assessment strategies of the institute are well structured, so the intended learning outcomes are achieved.

The teaching strategies are structured by following things:

- Academic Calendar
- Teaching Plan
- Course Curriculum

The learning strategies are structured by using:

- Lecturer Notes
- Power Point Presentations
- Video Lectures from Experts
- Multiple Choice Questions
- Assignments and Tutorials
- Industrial Visits, Trainings and Internships
- Value Added Courses and Workshops
- Soft Skill and Personality Development Training

The assessment strategies are structured with the help of:

- Internal Sessional Examinations
- In Lecture Feedbacks and Surprise Tests
- Internal Continuous Assessments of Lab Work
- External Sessional Examination
- Oral/Practical Examinations

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

The institute always tries to enhance courses social and economic relevance.

Following initiatives are taken up by the institute to make it possible:

- To increase the placements of students T&P cell organizes training sessions for soft skill and personality development and invites industries for recruitments.
- To develop entrepreneurs in students they are encouraged to participate in seminars and workshops organized by industry professionals and to learn business skills.
- To grow research aptitude in students they are suggested to study research papers from leading journals and try to develop projects on conclusions drawn from them.
- Students are also advised to choose their projects topics which are relevant to the social issues.

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

The institute collects data on student performance in T&P activities. The institute takes feedback from the trainer, expert persons are invited to conduct training of the student. The T&P cell also records the number of placements in an academic year, the package details and remarks of employer about students during interviews.

To collect data on students' learning ability the institute uses the performance of the students at institute level and university level evaluation process. That is how a student does in theory lectures, lab sessions, ISEs, ESE and oral/practical examinations.

After the data collection is completed the records are analyzed to identify learning barriers and to prepare plans to improve the students' performance in upcoming sessions. Following steps are taken for that purpose:

- By taking previous record as a reference, during T&P sessions the students' interaction level is increased by making them feel more comfortable, so that they can share their issues with the concerns.
- With reference to previous student performance in academics the teaching and learning methodologies are improved to make it more relevant to current trends.
- Questions asked in ESE or in oral/practical examinations are accounted and analyzed to identify tricky and uncommon questions. Based on this, theory and lab sessions are planned so the student performs well in such examinations also.

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

The institute collects data periodically in each semester relevant to student performance and based on this it is identified that whether the intended PEOs and POs are achieved or not.

This can be ensured by analyzing ESE, ICA, ISE, or oral/practical examination results, where the percentage of students passed/failed, no of students receiving higher grades or SGPA reflects whether the intended learning outcome is achieved or not.

Ensuring attainment of PEOs and POs can also be possible by taking feedbacks from students, parents, stakeholders, employers.



**2.6.7. Does the institution and individual teachers use assessment/evaluation outcomes as an indicator for evaluating student performance, achievement of learning objectives and planning? If 'yes' provide details on the process and cite a few examples. Any other relevant information regarding Teaching-Learning and Evaluation which the college would like to include.**

Yes. The institute and teachers uses results of assessment/evaluation as an indicator to assess student performance, attainment of PEOs and POs, and to plan the teaching-learning methodology in the forthcoming sessions.

The vision and mission of the institute and department is correlated to each other. After defining visions and missions, PEOs and POs are defined by each department, such that they are aligned with visions and missions of institute and department. These PEOs and POs are also used as an indicator for Graduated Attributes achievements for a course.

To monitor student performance the teacher uses formative assessment techniques during semester such as MCQs, Interaction Sessions, ICA and identify the weak learners and to apply preventive measures so that they can improve their performances in rest of sessions and in final examinations.

The faculty also uses result of summative assessment at the end of semester such as ESE, oral/practical examinations to detect the gaps in teaching and learning. The faculty can apply corrective measures based on the evaluation such as failed students are provided with remedial classes, the concerned faculty can take feedback on teaching methodology from students and discuss this feedback with senior faculty or HOD to improve its teaching skills for upcoming sessions.

## CRITERION III: - RESEARCH, CONSULTANCY AND EXTENSION

### 3.1. Promotion of Research

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

Yes, Institute has Research centre recognized by North Maharashtra University Jalgaon.

Sr. No.	Department	Recognition Details
1.	Mechanical Engineering	NMU/11/Lab.Recog./Engg/1363/2016

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

Yes, there is a committee consisting of faculty members from the college.

#### R&D CELL

Dr. N. J. Patil, Professor, Instrumentation Engineering	Coordinator
Dr. S. U. Chaudhari, Professor, Civil Engineering	Member
Dr. D. P. Patil, Professor, E& Tc, Sandip Foundation IET,Nasik	Member
Mr. K. N. Patel, KPIT Cummins Bangalore	Member
Prof. R. S. Chaudhary, NMIMS , Shirpur	Member
Prof. V. K. Patil, HOD, Electronics & Telecommunication Engineering	Member
Prof. P. R. Patil, Associate Professor, Computer Engineering	Member
Prof. H. G. Patil, HOD, Mechanical Engineering	Member
Prof. V. S. Mahajan, HOD, Computer Engineering	Member

**The Major Recommendations of Research Committee are**

- Identification of Thrust areas in core departments of engineering and science.
- Encourage UG and PG students to take up real time projects from industries and need based projects of societal concern.

**The Major Outcomes of the R & D promotion are**

- Number of Ph.D's increased from 1 to 3 in last four years; currently 8 faculty members are pursuing Ph.D.
- National and International Seminars/conferences/workshops related to research are conducted on regular basis.
- Laboratories are modernized with additional latest equipment, experimental set-ups and software to promote research activity in the campus.
- Faculty members of the institute participated in various seminars and conferences both national and international as a resource person/delegate.
- State level seminars and paper presentation events for students were organized in the college every year in the month of February / March.

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

- Institute encourages students and faculty to involve in research activities. To create research oriented environment and create interest in teachers and students, college has procured latest equipment's, updated the library facility and subscribed the research journals.
- Students are encouraged to take up innovative projects. Innovation and creativity form a part of the vision and mission of the college.

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

To develop scientific temper, quest for research and to promote research culture among students, institute organizes various events and has created facilities.

- Students are encouraged to develop minor projects in pre final year of their course.
- The teachers are encouraged to publish paper in refereed journals. Inculcating research in the mind of the student is the main motive of the institution.
- The institute motivates the students for higher education; the staff is always on its toes when it comes to encouraging the students to join higher education for research.
- To understand the basic needs of the present trends and to develop scientific temper and aptitude, the institution organizes industrial tours for final year students of all departments to interact with the industries to enable them to carry out a practical exposure.
- The college also organizing expert lectures, workshops, seminars for the students to enhance the learning process in their respective areas with the eminent personalities from Industries and Organizations.
- Students' chapters of professional organizations of national and international repute like ISTE, CSI, and ISOI etc.
- E- Yantra Lab in collaboration with IITB, Mumbai, in which students are allowed to work on Robotics, is in progress.

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

Some of the faculty members are involved in research activity at their own level. Faculty members from various departments have made their mark by completing their research attaining PhD degree while in course.

Sr. No	Name	Department	No. of research Scholar	
			Ph. D	P.G.
1	Dr. P. D. Patil	Mechanical	03	03
2	Dr. N. J. Patil	Instrumentation		02 ( E & TC)
03	Prof. V. K. Patil	Electronics and Telecommunication		08
04	Prof. S. P. Patil	Electronics and Telecommunication		06
05	Prof. Mrs. J. H. Patil	Electronics and Telecommunication		06
06	Prof. N. C. Patil	Electronics and Telecommunication		05
07	Prof. H. G. Patil	Mechanical		09
08	Prof. S. U. Patel	Mechanical		06
09	Prof. D. M. Patil	Mechanical		06
10	Prof. M. H. Patil	Mechanical		04
11	Prof. K. T. Patil	Mechanical		01

Sr. No.	Name	Department	Research activity	Specialization
1	Dr. N. J. Patil	Instrumentation	Ph.D. Completed	Instrumentation
2	Dr. S. U. Chaudhari	Civil	Ph. D. Completed	Civil
3	Prof. D. M. Patil	Mechanical	Ph. D. (Thesis submitted)	Mechanical
4	Prof. P. R. Patil	Computer	Ph. D. (Thesis submitted)	Computer
5	Prof. S. U. Patel	Mechanical	Ph. D. Ongoing	Mechanical
6	Prof. S. J. Dahiwelkar	Civil	Ph. D. Ongoing	Civil
7	Prof. H. G. Patil	Mechanical	Ph. D. Ongoing	Mechanical
8	Prof. Ashok S. Patel	Mechanical	Ph. D. Ongoing	Mechanical
9	Prof. C. P. Patel	Civil	Ph. D. Ongoing	Civil
10	Prof. M. N. Patil	Instrumentation	Ph. D. Ongoing	Mechanical

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

Seminar / Symposia/ Workshop organized. Seminar / Workshop organized by the Department.

<b>Department: Computer Engineering</b>				
<b>Name of Coordinator</b>	<b>Name of seminar/workshop organized</b>	<b>Date/Year</b>	<b>Sponsors / Collaborati on</b>	<b>venue</b>
A. P. Khan	National workshop on Ethical Hacking and Cyber Security	27 <sup>th</sup> , 28 <sup>th</sup> Jan 2017	Self	D. N. Patel COE shahada
A. B. Koli V. O. Patil	Java Technology	9th to 14th Feb 2017	Self	D. N. Patel COE shahada
P. R. Patil	Research Methodology & Tools	16-17 Jan 2016	self	D. N. Patel COE shahada
A. B. Koli	Oracle WDP	Aug 2012	self	D. N. Patel COE shahada
R. A. Shaikh A. I. Pathan	Workshop on Core Java	9 <sup>th</sup> Feb to 24 Feb 2013	self	D. N. Patel COE shahada
A. P. Khan	NCRTE 2013 (Tech Fiesta)	1st, 2nd March 2013	NMU Jalgaon	D. N. Patel COE shahada
A. I. Pathan V. T. Patil	Workshop on Hactrick	30 <sup>th</sup> , 31 <sup>st</sup> March 2013.	self	D. N. Patel COE shahada
S. H. Shaikh V. T. Patil	Workshop on Android Apps	27 <sup>th</sup> ,28 <sup>th</sup> Sep 2013	self	D. N. Patel COE shahada
A. P. Khan	Workshop on JAVA	9 <sup>th</sup> , 10 <sup>th</sup> March 2014	self	D. N. Patel COE shahada
A. P. Khan	Workshop on Asp.Net	23 <sup>rd</sup> ,24 <sup>th</sup> March 2014	self	D. N. Patel COE shahada
V. T. Patil S. H. Shaikh	Developing Windows and Web Application using Dot Net ( MTA)	Dec 2014 and FEB 2015	self	D. N. Patel COE shahada
P. R. Patil V. S. Mahajan	Types of Viruses and practical implementation of Spyware.	Dec 2014	self	D. N. Patel COE shahada

<b>Department: Electronics &amp; Telecommunications Engineering</b>				
<b>Name of Coordinator</b>	<b>Name of seminar/workshop organized</b>	<b>Date/Year</b>	<b>Sponsors / Collaboration</b>	<b>venue</b>
Prof. V. K. Patil Prof. J. H. Patil	NMU Syllabus Framing	05/03/2013	NMU	RCPIT Shirpur
Prof. J. H. Patil	Advances in Material Processing	08/03/2014	Self	NMU Jalgaon
Prof. J. H. Patil, Prof. G. G. Bhadane	PCB Manufacturing	07/10/2015	Self	Copper Track Industries Nashik
Prof. P. B. Patil, Prof. V. S. Mahajan, Prof. N. C. Patil, Prof. A. R. Patil	E Yantra	16/09/2016 to 17/09/2016	IIT Bombay, COE Shahada	Hyderabad

<b>Department: Civil Engineering</b>				
<b>Name of Coordinator</b>	<b>Name of seminar/workshop organized</b>	<b>Date/Year</b>	<b>Sponsors / Collaboration</b>	<b>venue</b>
Prof. S. J. Dahiwelkar	Execution of general civil engineering structures	16 Aug 2012	Self	COE Shahada
Prof. S. J. Dahiwelkar	Architectural design and planning of residential bungalows	19 Oct 2012	Self	COE Shahada
Dr. S. U. Chaudhari	General information of departmental works	19 Feb 2013	Self	COE Shahada
Prof. S. J. Dahiwelkar	Execution of lift irrigation civil engineering structures	8 April 2013	Self	SSTPSSK P' Nagar
Dr. S. U. Chaudhari	Execution of general civil engineering structures	14 Aug 13	Self	SSTPSSK P' Nagar
Prof. C. P. Patel	Architectural design and planning of residential multistory buildings	20Sept 13	Self	COE Shahada
Prof. S. J. Dahiwelkar	Repairing and maintance of lift irrigation civil engineering	04April 14	Self	SSTPSSK P' Nagar

	structures			
Dr. S. U. Chaudhari	Interior design and planning of residential structures	29 Sept 14	Self	COE Shahada
Dr. S. U. Chaudhari	Repairing and maintenance of Road works	14 Feb 15	Self	COE Shahada
Prof. S. J. Dahiwelkar	Augmentation of lift irrigation civil engineering structures	29 Mar 15	Self	SSTPSSK P' Nagar
Dr. S. U. Chaudhari	Execution of general civil engineering structures	12 Aug 15	Self	COE Shahada

**Department: Electrical Engineering**

Name of Coordinator	Name of seminar/workshop organized	Date/Year	Sponsors / Collaboration	Venue
Prof. K. A. Patel	NMU Syllabus Framing	14/02/2015	NMU Jalgaon & DNP COE Shahada	COE Shahada

**Department: Mechanical Engineering**

Name of Coordinator	Name of seminar/workshop organized	Date/Year	Sponsors / Collaboration	Venue
Prof. H. G. Patil	MESA	01/10/2016	Self	COE Shahada



<b>Department: Instrumentation Engineering</b>				
<b>Name of Coordinator</b>	<b>Name of seminar/workshop organized</b>	<b>Date/Year</b>	<b>Sponsors / Collaboration</b>	<b>Venue</b>
Prof. B. R. Patil	Workshop on Biomedical Instrumentation	3- 4 Sept. 2012	Self	Shushrut Hospital, Shahada
Prof. B. R. Patil	Workshop on Biomedical instrumentation	13-14 Sept. 2013	Self	Shushrut Hospital, Shahada
Prof. R. S. Patil	Workshop on Robotics	18-20 Oct 2013	Self	COE Shahada
Prof. B. R. Patil	Workshop on Biomedical Instrumentation	16 Oct. 2014	Self	Shushrut Hospital, Shahada.
Prof. B. R. Patil	Workshop on Biomedical Instrumentation	29 Oct. 2015	Self	Shushrut Hospital, Shahada
Prof. B. R. Patil	Seminar on Anatomy and Physiology	29 Oct. 2015	Self	D. N. Patel COE, Shahada.
Prof. K. Y. Chaudhari	NMU Syllabus Framing	14 Feb. 2015	NMU Jalgaon & DNP COE Shahada	NMU Jalgaon

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

All departments in the institute are reinforced with qualified and experienced faculty. Based on the specializations, research groups or individuals take up projects and publish papers in reputed journals and conferences. The research areas and the respective faculty expertise are shown in following table.

<b>Sr. No.</b>	<b>Department</b>	<b>Prioritised Research Areas</b>	<b>Expert Faculty Available</b>
1	Mechanical	Finite Element Analysis	Dr. P. D. Patil

2		Mechanical Vibration	Prof. H. G. Patil
3		CAD/ CAM	Prof. G. A. Chaudhari
4	Civil	Environmental Engineering	Dr. S. U. Chaudhari
5		Engineering Mechanics	Prof. S. J. Dahiwelkar
6		Construction and Management	Prof. C. P. Patel
7	Instrumentation	Signal & Image Processing, Control System	Dr. N. J. Patil, Prof. A. R. Patil
8		Unit Operations, Analytical Instrumentation & Control System Design	Prof. H. B. Patel
9		Biomedical Instrumentation, Digital Logic Design	Prof. B. R. Patil
10		Analog Electronics	Prof. R. S. Patil
11		Sensors & Transducers, Software Design, PLC, DCS	Prof. K. Y. Chaudhari
12		Microcontrollers	Prof. A. R. Patil
13	Computer	Object Oriented Technology	Prof. V. S. Mahajan
14		Data Mining, Machine Learning	Prof. P. R. Patil
15		Microprocessor and Microcontroller	Prof. D. B. Shukla
16		Software Engineering	Prof. A. P. Khan
17		Operating Systems & Computer Hardware	Prof. S. H. Shaikh
18	E & Tc	Image Processing and Communication Systems	Prof. V. K. Patil
19		VLSI and DSP	Prof. J. H. Patil
20		Embedded Systems and Software	Prof. N. C. Patil
21	Electrical	Electrical Power Systems	Prof. Smt. K. A. Patel
22		High Voltage Engineering	Prof. P. R. Patil
23		Power System Design	Prof. V. S. Kale

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

Regular conferences, seminars, workshops are conducted at state level and National level involving invited resource persons from different Industries and

Institutes. Invited talks on special topics are also arranged for the faculty and students.

- Dr. D. G. Regulwar, Interact with staff and students, “*Research Methodology & Tools*” in January 2016.
- Er. Avinash Patil, Cipla Ltd. Indore, MP delivered expert lecture on “*PLC and DCS in Pharmaceutical Industry*” in February 2015.
- Er. Mahendra Patel, TCS Ltd. Pune shared his experience with students on “*Software development of PLC and DCS*” in October 2014.
- Er. Onkar Patil, GACL, Vadodara delivered expert lecture on “*Industrial Automation*” in January 2015.
- Er. Rohit Patil, McDermott middle-east Dubai delivered expert lecture on “*Professional Career in Engineering*” in August 2016.
- Prof. R. S. Chaudhari delivered expert speech on “*Research through small experiments*” during National Conference Techfiesta in March 2015.
- Er. Subodhkumar Singh, Sudarshan Chemical Industries Ltd., Mumbai delivered lecture on “*Role of Mechanical Engineers*” in Chemical Industries in March 2015.

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

The institution provides duty leave and special leave to faculty instead of Sabbatical leave for participating and presenting papers at national and international seminars & conferences attending workshops. More than 25% of faculty has availed the facility. This helps the faculties to interact with researchers and academicians and boost their interest towards research.

Sr.	Department	PG	Faculty	Faculty Ph.D.
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No.		Completed	Pursuing Ph. D.	Completed
1	Civil Engineering	06	02	01
2	Instrumentation Engineering	06	01	01
3	E &TC Engineering	07	-	-
4	Mechanical Engineering	06	04	01
5	Electrical	06	-	-
6	Computer Engineering	08	01	-

**3.1.10. Provide details of the initiatives taken up by the institution in creating awareness/advocating/transfer of relative findings of research of the institution and elsewhere to students and community (lab to land).**

The awareness about the latest research available at institute level is shared among the students and faculty. Apart from imparting knowledge from text book, the teaching – learning activity is made practical by giving assignments on various research topics in Final year Project seasonal, so that the students get initiated in reading the journals, technical papers. The student is motivated into creative thinking process in all spheres. The college is also initiating to conduct various research workshops to create research inventions by their own. The institute was established with the primary objective of societal development with technological input. The staff members encourage the students to undertake seminar and project topics which have relevance for direct field applications. Some notable examples are as follows

Sr. No.	Name of the Project implemented in practice	Department	Faculty/ Guide
1	Instrumentation in Green House	Instrumentation	Prof. M. N. Patel
2	Particle board cutting Methodology		Prof. B. R. Patil
3	Dam Shutter control		Prof. B. R. Patil
4	Multi storage car parking		Prof. H. B. Patel

### 3.2. Resource Mobilization for Research

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

Institute has a financial provision for research in the annual budget. Partly amount from Budget is allocated for each department in the annual budget for research. These funds are utilized for high end equipment, internet facility and e-journals as per the demand of the research scholars. Some money is also spent on filing patents, registration fees for participating in conferences and workshops. Moreover for vital expenditure, additional provision is accommodated. Expenditure details for Print and e- journals and library resources are as below

Library holdings	2012-2013		2013-2014		2014-2015		2015-2016	
	No.	Total Cost (Rs)	No.	Total Cost (Rs)	No.	Total Cost (Rs)	No.	Total Cost (Rs)
Reference Books	567	206300	702	249930	1590	320499	145	54077
Journals/ Periodicals	45	89000	45	95000	46	110000	40	120000
e-books	-	-	-	-	-	-	-	-
e-journals	-	-	-	-	-	-	-	-
<b>Total</b>	612	295300	747	344930	1636	430499	185	174077

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

Institute encourages research culture for various research activities like filing patents, participating in conferences and workshops.

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

Students are encouraged to take part in various competitions. Some have won awards in these.

Following provisions are made by the Institute to support students' research.

- Institute provides equipment and components required for students in their research projects.
- Students are permitted to utilize all the research facilities to carry out

research projects under the guidance of research guides beyond working hours also.

- The library resources are also made available to students during extended college hours.
- Along with this, Institute also provides consumables, components and software to carry out research as per the need of the students.

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

There are interactive sessions and seminars given by the faculty to discuss the work being done and all faculty and students are thus exposed to the work being done in the college. The institute has been conducting basic degree programs and in these degree programs there is no provision for research work. However, for the inculcation of research aptitude in the students, institute takes several initiatives like interdisciplinary seminars on the current, relative and burning issues in Electronics, Computer, Mechanical, Electrical, Civil and Instrumentation. Many industrial experts come and interacts with the students on current issues for technical and non technical for all trades of B.E., M.E. students. In syllabus of NMU, Jalgaon concept of Interdisciplinary elective is introduced in final year so the students can gain the knowledge of particular subject of their interest from other branch. It also provides necessary skill sets that help engineers to cope up with the global changing environment. At the starting of the academic year, HOD's, senior faculty meet together and identify the interdisciplinary areas of research.

Interdisciplinary subjects offered during AY 2015-2016 are given below

Sr. No.	Offered by		Taken by	
	Branch	Subject	Branch	No. of Students
1	Instrumentation	PLC/DCS	Electrical	72
2	Electrical	Energy Audit and Conservation	Instrumentation	51
3	E&Tc	Image Processing	Computer & IT	71+13
4	Computer	ERP & SAP	E & Tc	46
5	Mechanical	Energy Audit and Conservation	Electrical	72
6	Electrical	Energy Audit and Conservation	Mechanical	60

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

The Institute has a well stocked library which includes latest syllabi as well as reference books of all relevant subjects and disciplines and the institute is always eager to purchase new edition of books every year. The college has plenty of learning resources and specialized hardware and software for the staff and students to expose new technologies in-vogue in industry. The serene atmosphere and the facilities provided in the library encourage/ motivate the staff and students to take a forward step to pursue research in their relevant field/interests. Basic research facilities are available in all Technical departments. Each department has relevant infrastructure and instruments for basic research work. Provision of internet to individual staff member is available in many departments to help them review their academic as well as research programs. Institute also ensures that the deserving students should be



facilitated to use the equipments, books, Journals, Magazines beyond the college timing. The major and latest instruments are made available to the faculty and students (with faculty assistance) at any time even beyond the working hours. Institute ensures optimal use of research facilities in various ways.

- By sharing the equipment among various departments
- By sharing the facility with other institutes and industries.

Some of the laboratories and equipment shared in the Institute are given below:

<b>Sr. No.</b>	<b>Equipment/ Lab name</b>	<b>Facility available</b>
1	PLC, Process Control Loops, DSP Kits, Microcontroller Kits	Instrumentation
2	Strength of Material	Civil
3	Matlab, DSP kits	E & T/C
4	Open Source Softwares, RSA, Core i3 PC's	Computer
5	Load bank , High voltage , Oil Test Setup, Electrical Machine Lab	Electrical
6	Fluid Mechanics	Mechanical
7	Workshop	Mechanical

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

The college was established in the year 1983 and it is more than 33 years old institution. Taking into consideration the college is having huge infrastructure & equipment facilities, big play ground etc., some of the instruments became obsolete. To update and to conduct the research programs, the college sanctions funds to develop the research facilities for faculty and students community.

Details of earlier grants awarded to the Institute

Sr. No.	Grant Received/Data	Grantee Organisation	Purpose	Amount Received
1	For Assessment of Solar Radiation and availability demographically generation ability of solar electricity, program under National Institute of Solar Energy Program	CWET, Chennai (through MNRE)	Assessment of solar radiation resources	Rs. 22.88 Lacs
2	To organize National Level conference on Recent Trends in Engineering and Technology	NMU, Jalgaon	National Level Conference	Rs 10000/-

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

As mentioned in 3.2.6, College got sanctioned Rs. 22.88 lacs from the CWET, Chennai Assessment of Solar Radiation and availability demographically generation ability of solar electricity under National Institute of Solar Institute development program. The college is also taking initiation to conduct the research activities on present burning issues, in case of expenditure incurred by the research activities they are utilizing the fund which has sanctioned by AICTE and also from its own resources. The institution is planning to have a separate fund @ Rs 1,00,000/- for research activities and will increase as per the demand ratio.

### **3.3 Infrastructure for Research (Research Facilities)**

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

Institute has created number of research facilities to motivate, encourage and facilitate students for research. Some of the facilities available are as follows-

- Separate PG and research laboratory at Mechanical, Electronics & Telecommunication Engineering department having research programmes.
- Latest equipments, software
- High speed broadband internet connection.
- Wi-Fi.
- Library resources like digital library, national and international journals (both print and e-journals).
- Expert lectures on research methodology and guidance.

#### List Major equipments/software

Sr. No.	Major Equipments/software	Purpose
1.	Non conventional Energy equipment Lab	Solar radiation resources data
2.	Auto CAD 2005	Computer aided drawing
3.	CATIA V5 R13	3D modeling
4.	Ansys version 13	Designing analysis
5.	Siemens PLC	Automation
6.	TMS 320 C 6748	DSP Simulation
7.	ADC Data Card	Interfacing
8.	RSA, Satellite Trainer Set Up	Programming
9.	Matlab@2013 Software	Programming
10.	Allen Bradely PLC 1400 A	Automation in Industry

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

User friendly infrastructural facilities are available in the campus with hi-end library, Canteen, in-campus Boys and Girls hostel, Guest room, 24 hours security, well equipped laboratories, Girls common room, lavatory and R&D cell. Institution is planning to provide a separate room for the research activity through IQAC cell. A separate Research and Development Cell has been established to facilitate research and promote research culture among the students and faculty. The faculty and students regularly visit the industries to get acquainted with industrial problems.

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

Assessment of solar radiation resources grants received from CWET, Chennai through MNRE of Rs. 22.88 Lacs.

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

Institute facilitates R & D by providing additional facilities through various associations as given below:

- The faculty is in contact with IIT Bombay, IIT Chennai, RAIT, Mumbai, DYPCOE, Pune, Cummins COE, Pune, KK Wagh IET, Nashik, Sandip Foundations COE, Nashik on personal levels. Attempt is on to have a memorandum of understanding with these organizations.
- The college is also having sister institutes having advanced laboratories which are helpful in giving awareness of the research in particular area to the students such as agriculture college, college of pharmacy, science

college etc.

- MOU / Linkages: Institute is a consortium member of ISTE wherein a platform is provided for interaction for organizing various technical programs. College has MOU with some of industries and institutes in their core area through which research facilities are provided for the faculty and students of the Institute.
- Library: Institute has linkages / memberships with leading libraries as IITB- Mumbai, NPTEL, National Digital library for the benefit of the staff and students.

### **3.3.5. Provide details on the library/ information resource centre or any other facilities available**

College is having computerized library has modern catalogue and e-journal facilities. The library consists of 46,503 books. Being one of the biggest libraries in the Eastern region, the researchers within the region and outside make use of this facility.

#### **Library facilities for researchers**

- Reading rooms for boys and girls.
- Computers with 10mbps internet connectivity to access online resources.
- e-journals & e-books
- Printer
- Xerox facility available in office and nearby college campus.
- IT-Zone for accessing e-resources.
- Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources)

Course Name	Volumes	Titles	National Journals
Civil Engineering (UG)	5901	1809	12
Computer Engineering (UG)	10594	3210	6
Electrical Engineering (UG)	4015	983	6
E & TC (UG)	6701	873	7
E & TC (PG)	225	105	-
Information Tech.	765	415	6
Mech. Engineering (UG)	4826	985	13
Mech. Engineering (PG)	155	104	-
Instrumentation Engineering (UG)	7766	519	-
Applied Science (UG)	1828	673	6
<b>Total</b>	<b>42776</b>	<b>9676</b>	<b>56</b>

**3.3.6. What are the collaborative researches facilities developed / created by the research institutes in the college? For ex. Laboratories, library, instruments, computers, new technology etc.**

Efforts are being made to have collaborative research facilities in the college campus as per the curriculum of NMU, Jalgaon. The following infrastructure exists in the college, which can be utilized effectively by the faculty and students from time to time.

- Laboratories
- Library
- Computers

- Instruments
- Seminar Hall
- Play ground

### **3.4. Research Publications and Awards**

#### **3.4.1 Highlight the major research achievements of the staff and students in terms of**

- Patents obtained and filed (process and product)

Ans:- NA

- Original research contributing to product improvement

Ans:- Students from each department have developed various project models in their pre-final and final year of engineering.

- Research

Ans:-. Students and staff members have presented and published research papers in National and International Conferences, National and International Journals. Students and Staff have also participated in competitions organized by Reputed Institutions. Some of the prizes have been bagged by students in competitions.

- Research inputs contributing to new initiatives and social development

Ans: NA

#### **3.4.2. Does the Institute publish or partner in publication of research journal(s)? If 'yes', indicate the composition of the editorial board, publication policies and whether such publication is listed in any international database?**

NA.

**3.4.3. Give details of publications by the faculty and students: (Conferences)**

\* Publication Department wise

<b>Sr. No.</b>	<b>Department</b>	<b>International</b>	<b>National</b>	<b>Total</b>
1	Civil	10	04	14
2	Instrumentation	03	03	06
3	E & T/C	02	01	03
4	Mechanical	03	--	03
5	Electrical	02	10	12
6	Computer	29	11	40
	<b>Total</b>	<b>47</b>	<b>44</b>	<b>91</b>

Number of papers published by faculty and students in **peer reviewed journals** (national / international)

<b>Sr. No.</b>	<b>Department</b>	<b>Journals (National/ International)</b>
1	Civil	05
2	Instrumentation	09
3	E & T/C	56
4	Mechanical	32
5	Electrical	07
6	Computer	21
	<b>Total</b>	<b>131</b>

Books with ISBN/ISSN numbers with details of publishers:-ISSN numbers are mentioned in the departmental EV report.



Name of the faculty	Title of the book	ISBN / ISSN No.
Dr. N. J. Patil	Design of Adaptive Fuzzy Controllers: Some Issues in Structural and Tuning Parameters	3639706439

\* Citation Index:- Mentioned in the Departmental Evaluation report.

\* SNIP: Nil

\* SJR: Nil

\* Impact factor:- Mentioned in the Departmental Evaluation report.

\* h- index: Nil

#### 3.4.4 Provide details (if any) of

- Research awards received by the faculty

**Nil**

- Recognition received by the faculty from reputed professional bodies and agencies, nationally and internationally

**Nil**

- Incentives given to faculty for receiving state, national and international recognitions for research contributions.

Sr. No	Name of the Faculty / Student	Honor / Award details
1	Prof. S. U. Chaudhari	Received fellowship for research work from Maharashtra Pollution control in collaboration with VNIT Nagpur for four years in 2011-2012.

## 3.5 Consultancy

### 3.5.1 Give details of the systems and strategies for establishing institute – Industry interface?

Institute industry interface is established by our T&P cell. T&P cell is headed by Training and placement officer and members. The placement cell takes the students to the job fairs where different companies come and select the students according to their requirements. The Training and Placement Officer (TPO) makes a liaison with the H.R departments of different companies. The institute keeps in touch with the passed out students of the college who are presently working in the companies. These students are also very helpful in arranging the visits of the companies for industrial visits and placements. As per requirement, bio-data of the eligible students is also mailed to different companies directly by the Institute.

The objectives of the cell are

- To bridge gap between the Institute and Industry.
- To undertake joint research projects for UG / PG students based on technical challenges in the industry.
- To facilitate the in-plant training in industries for faculty and students to comprehend the work culture and advanced technology at work.
- To extend teaching – learning process beyond campus by sharing our expertise to train employees of industry.

### 3.5.2 What is the stated policy of the institution to promote consultancy? How is the available expertise advocated and publicized?

The institute believes in a strong bonding between institute and industry. This bonding is established and executed by following steps:

- The Institute has a Placement Cell and Training and Placement Officer (TPO) forms a link with various companies/Industries regularly, so as to select the best visiting companies a representative of the Industries.

- The Students are being placed as per their ability and awareness to meet the standards of recruiting agencies.
- Every Year institute organizes alumni meet. It provides an interface between institute and industry where our alumni serve, and are entrepreneurs

The efforts taken to promote the consultancy are

- The College offers consultancy services to industry as well as Government sectors. This helps in strengthening bond between institutes.
- Organize the interactive sessions of faculty and industry experts to understand current challenges in technology and scope for research.
- Inviting experts from various industries to visit the Institute for delivering lectures on current trends and issues in industry.
- Joint training programs are organized for sharing of knowledge.
- Updated laboratories are established in the Institute

### **3.5.3 How does the institution encourage the staff to utilize their expertise and available facilities for consultancy services?**

The Institute promotes consultancy activities. It encourages senior faculty to offer their expertise to clients from different sectors to establish credibility in the society in their respective domains.

- The faculty undertake consultancy through the college authority with the organizations.
- Consultancy is mostly based on revenue sharing where the major share is allocated to concerned faculty.
- Institute provides all laboratory facilities and institutional resources along with human resources at extended hours to faculty members for consultancy work.

- Faculty members are also encouraged to carry out on-site consultancy.

Institution is encouraging the staffs to attend seminars, publication of papers in various journals etc. The Institute makes every effort to encourage the staff for utilization of all human resources, intellect and available facility in the campus to promote liaison with industries/companies so as to thicken the ties between the two in a very flexible manner by which the consultancy services gets a boost. The college motivates the professionally qualified faculty to utilize their expertise for consultancy services with the consent of the institute.

#### **3.5.4 List the broad areas and major consultancy services provided by the institution and the revenue generated during the last four years.**

The College has offered consultancy services mainly in the following areas:

Concrete Mix Design

- Determination of onsite bearing capacity by Standard penetration test, plate load test and Terzaghi's method
- Cross verification of structural designs
- Material Testing
- Calibration of Gauges and meters
- Repairing of the Instruments

#### **3.5.5 What is the policy of the institution in sharing the income generated through consultancy (staff involved: institution) and its use for institutional development?**

As per the decision taken by management income generated by the staff through consultancy is shared by the institute and staff is as follows

<b>Sr. No.</b>	<b>Position</b>	<b>Share %</b>
1	Institute	50
2	Principal	8

3	HOD	5.5
4	Lab In charge	27
5	Concerned Teacher	-
6	Lab Assistant	5
7	Lab Peon	3
8	HOD Peon	0.5
9	Deputy Registrar	-
10	Accountant	1
11	Cashier	-
	Total	100

### 3.6 Extension Activities Institutional Social Responsibility (ISR) and Extension Activities.

#### 3.6.1 How does the College promote College-neighborhood network and student engagement, contributing to holistic development of students and sustained community development?

Institute promotes the Institute-neighborhood network by encouraging the faculty and students in community development work on a regular basis. The Institute always takes lead to reach out to the society in many relief activities during natural calamities.

PARV, TECHFIESTA, AVISHKAR (University Level), General Championship annual Cultural, technical, University Level Technical and sports events respectively are organized by the Institute which provides platform for the students to show their talent, skills and responsibility leading to holistic personality development as good citizen.

The Institute has three basic cells namely Co-curricular, Extracurricular and Students' welfare. Under the wing of co - curricular activities, two working compartments exist namely: professional bodies and technical events. Under

professional bodies, the Institute has students' chapter like ISTE, CSI, MESA, EESA where-in students organize and participate in many activities like seminars, guest lectures, paper presentations & project exhibitions. Under technical events students organize National level national event "TECHFiesta".

Under extracurricular activities there exists two compartments one for extracurricular and other for extension activities. Annual events like General Championship, a sports event, PARV, a cultural event, Art Gallery display, a showcase of various arts is organized as extracurricular activities. Every wing has a Chairman and committee members for smooth and effective working.

In addition, numbers of events aiming towards Institute-neighborhood network are organized. Some of the activities are mentioned below

- Plantation programme in & around college campus
- Health programme
- Blood donation
- Rally e.g. organ donation rally
- Celebration of national and religious festivals
- Celebration of Teachers Day, Engineers Day

### **3.6.2. Does the College have a mechanism to track the students' involvement in various social movements / activities which promote citizenship roles?**

The organization is encouraging and motivating the students for developing the society as a whole for better future and for better country. The students are participating in many social activities like plantations, awareness regarding environment, blood donation camps, etc. The university curriculum has emphasized on co-curricular and extra-curricular activities. The students are awarded audit points for participation in these activities. Minimum audit points required to qualify for degree are specified by the curriculum. The class teachers keep Xerox copies of participation of such activities.

### **3.6.3 How does the institution solicit stakeholder's perception on the overall performance and quality of the institution?**

The college recognizes following stakeholders Students, Staff, Alumni, and Parents. The college is making clear to everyone who is attached to the institute about the vision and objectives. Details of the activities and information are mentioned in our website and anybody can get any information and can communicate to any one at any moment. The first day in the college i.e. on the orientation programme the new comers are well informed about the college's aim and their duties in the college. The college is having many committees, and activities to develop the student's standard. The college always takes the opinions of all the stakeholders for increasing the effectiveness of the institute.

The stakeholders are:

#### **Student:**

- We consider the suggestions of the students
- Our college has one grievance cell for the students for solving the problems inside the college.
- Students can approach any faculty during the working hours of the college.
- Under mentorial system, students are interacting with the faculty regarding their matters in mentorial class.
- Student representatives from each stream meet with the authority for the development of academic activities.

#### **Parent:**

- Every year parents are informed by SMS or through letter about their wards progress.
- Parents are always in touch with the mentors for their child's growth.
- Parents can contact any faculty for any kind of information.

- Parents can meet the HODs of different departments for the discussion of their wards performance, problems and future action.

**Staff:**

- The staffs are motivated in the staff council meeting held every year.
- Principal meeting with staff members is held twice a semester to discuss about the planning and outcome of the semesters.

**Alumni:**

- We organize alumni meet every year to enhance the knowledge and opportunities.
- Alumni suggestions are considered while taking decisions.
- Alumni are invited to the institute to motivate the students for technical education.

**3.6.4 How does the Institution plan and organize its extension and outreach programmes? Providing the budgetary details for last 4 years, list the major extension and outreach programmes and their impact on the overall development of students.**

The college organized many activities related to society, education, environment, health, promotional activities, for the development of person and the society as a whole.

- Readiness for job, to face technical world and vertical growth
- Mind set for higher education and learning Technology application for real time and societal problems
- Willingness to work for environment and under privileged



### **3.6.5 How does the College promote the participation of students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International agencies?**

Institute executes all the extension activities through the Extra-Curricular and Co-Curricular Committee's

- During the orientation program, the functioning and advantages of the details of the various activities are brought to the notice of the first year students.
- Faculty and students are made conscious about environment, and related issues through a number of activities like seminars, posters and notices etc. The faculty and students are encouraged to attend in-house as well as by well known social activists about the awareness programs and lectures are arranged regarding the extension and outreach activities.
- This in turn awakens the spirit of citizenship (national integration) in the faculty and students and they enroll themselves in the wings of their choice.
- Students who enroll derive a number of benefits via personality development, managerial skills, teamwork, leadership traits and adapt (social harmony).
- They also avail weightage in attendance, internal assessment, gain credits in university exam as per NMU rules and receive certificates.
- Institute also provides its infrastructure and funds to carry out such activities to motivate the faculty and students.
- Celebration of Republic Day on 26<sup>th</sup> January, Independence Day on 15<sup>th</sup> August in the College Premises.
- Celebration of 31<sup>st</sup> Oct as Birth Anniversary of Sardar Vallabhbhai Patel in college premises.
- Celebration of Kisan Din and Vichar Manthan Din, during 02<sup>nd</sup> Oct (Birth Anniversary of Mahatma Gandhi) to 09<sup>th</sup> Oct (Birth Anniversary of Sahakar

and Shikshan Maharshi Annasaheb P. K. Patil), various programs are arranged in the college premises organized by Purushottam Foundation Shahada.

- Celebration of Teachers day on 5<sup>th</sup> Sept every year by departments on birth anniversary of Dr. Sarvapalli Radhakrishnan.
- Celebration of Engineers day by college on 15<sup>th</sup> Sept., as birth anniversary of Sir Mokshagundam Visvesvaraya.

**3.6.6 Give details on social surveys, research or extension work (If any) undertaken by college to ensure social justice and empower students from underprivileged and vulnerable sections of society.**

The organization has developed the meaning of education in the society by implementing some volunteer activities in the interior rural areas. Woman empowerment programmes are organized by the woman grievances redressal committee.

**3.6.7 Reflecting on objectives and expected outcomes of the extension activities organized by the College, comment on how they complement students' academic learning experience and specify the values and skills inculcated?**

**Objectives:**

The college is trying to inculcate the knowledge, skill and experience in students for their better future and career by means of number of extension activities. To make the students aware of about the emerging trends, how to deal with the changing situation and achieving the expected aim. The college is trying to attain the organization's aim as well as the stakeholder's aim. The aim is to provide world class education to our students to develop their knowledge and moral values for making them a good human being. For achieving the expected aim the college is concentrating on the following parameters as:

- Having experienced faculty members.

- Experts from outside for personality development of students.
- Organizing department functions for energizing the students.
- Organizing sports and cultural programmes for enhancing the student's interest.
- Study tours to different industries for more experience.
- Organizing seminars and competitions for student's development.
- Involving the students in social works to realize the responsibilities towards the society.
- Maintaining the industry academia relationship.

**Outcome:**

- The performance of the institute has been developed by doing the above activities in terms of result and opportunities for the students.
- Participating in different social activities creating belongingness in students.
- Students are motivated for their better future and life.
- The performance of the institute increased in competitive era.

**3.6.8 How does the College ensure the involvement of the community in its outreach activities and contribute to the community development? Detail the initiatives of the College which have encouraged community participation in its activities.**

The institution is participating in all the extension activities which develop the community and the institute as a whole. Students, staff and local people are encouraged to participate in following activities:

- Blood donation camp.
- Plantation.
- Awareness programme like Organ Donation, Environmental Pollution etc.
- Cleanliness of the surrounding society.

- Awareness regarding importance of technical education.

**3.6.9 Give details on the constructive relationships (if any) with other institutions in the nearby locality in working on various outreach and extension activities.**

Institute has developed close relationships with its neighbors, local authorities and beneficiaries during community and outreach activities.

- Institute always is supported by its sister concern in the form of knowledge, labs and finance for testing projects which are basically aimed for differently-abled.

With the help of sister institution (College of Pharmacy), Navjeevan Blood Bank, Dhule and local authorities, the college could able to contribute in the blood donation camp

DATE	UNITS OF BLOOD CONTRIBUTED
09/10/2012	509
09/10/2013	220
09/10/2014	225
09/10/2015	370
09/10/2016	256

Apart from the Blood donation, other activities took place in the locality, which are:

- Organized a road safety awareness programme with the help of RTO Shahada.
- Awareness program on organ donation at Mohida T.H. village, where more than 150 nos of students and staff members participated.

- Awareness program on district soldier welfare fund.
- Awareness program on save girl child.

**3.6.10 Give details of awards received by the institution for extension activities and/contributions to the social/community development during the last four years.**

- Received certificate from Collector Nandurbar for highest collection of funds for Armed forces Flag Day fund.
- Received a trophy from Navjeevan Blood Bank, Dhule for blood donation.
- Received certificate of appreciation from National Creativity aptitude test 2013 for providing support.

### **3.7. Collaboration**

**3.7.1 How does the institution collaborate and interact with research laboratories, institutes and industry for research activities. Cite examples and benefits accrued of the initiatives - collaborative research, staff exchange, sharing facilities and equipment, research scholarships etc.**

As it has been stated earlier, the college has been running UG and PG courses. Hence the research activities of the students' are high especially B.E. and M.E. Students for their project works, students are choosing our college is on the basis of providing research facilities. Institution will sign MoU for institutional tie-up to interact with research laboratories, institutes and industry for research activities by knowledge exchange programme, sharing facilities, equipment and exchange of scholarship. The institute is inviting eminent researchers from other institutes for lecture sessions for faculty members and students. The collaboration with the industry helps students to undergo in plant training in various types of industries.

<b>Collaborations</b>		
<b>Industrial</b>		<b>Institutions/ Organizations</b>
<b>Research</b>	<b>Training and Placement</b>	
Laboratories	Personality Development Program	E Yantra
Equipments / Kits	Training on Latest Technology	Remote Centre
Software	Training on Software	Knowledge Sharing
Students Projects	Placement Assistance	Expert Lectures
In Plant Training		Access to Library
Consultancy		

**3.7.2 Provide details on the MoUs /collaborative arrangements (if any) with institutions of national importance/other universities/ industries / Corporate (Corporate entities) etc. and how they have contributed to the development of the institution.**

- MOU signed with Stackmint Technologies, Pune
- MOU signed with Smart Engineering Solutions, Pune
- MOU signed with SSTPSSK Ltd., Purushottamnagar. Students get exposure to application in sugar industry and automation of equipment and machines.
- MOU signed with PushpKamal particle board, Purushottamnagar. Students get exposure to application in hard board industry and automation of equipment and machines.
- MOU signed with LJNSS ltd., Untawad. Students get exposure to application in cotton industry and automation of equipment and machines.

**3.7.3 Give details (if any) on the industry-institution-community interactions that have contributed to the establishment / creation/up-gradation of**

**academic facilities, student and staff support, infrastructure facilities of the institution viz. laboratories /library/ new technology /placement services etc.**

Interaction with eminent personalities from various institutes and industries is very useful for the creation of establishing better academic facilities for staff and students. As stated above the firms are providing assistance in all the problems which are related technically and theoretically. The labs are being upgraded for the upkeep of latest electronic equipments, computers etc. The placements process got a boost by such interactions. Though our institution cannot change the syllabus on its own we take value added courses like .NET, soft skill training, AUTOCAD, PLC and Automation keeping in mind the need of the industry.

**3.7.4 Highlighting the names of eminent scientists/participants, who contributed to the events, provides details of national and international conferences organized by the college during the last four years.**

D. N. Patel College of Engineering invites people from reputed academic and R&D institutions to share their experience and encourage the faculties and students for research work. Some of the eminent persons visited the institute on different occasions are:

- Shailesh Dave and Naresh Patel, NASHA Automation Pvt. Ltd. Vadodara
- Dr. M. D. Patil, RAIT Mumbai
- Dr. D. G. Regulwar, GCOE, Aurangabad
- Prof. P. B. Patel, D. Y. Patil COE Pune
- Dr. D. P. Patil, Sandip Foundation Nasik
- Mitesh Dave and Maulik Patel, Tol Control Pvt. Ltd., Ahemdabad, Gujrat
- Prof. A. M. Potgantwar Sandip Foundation Nasik
- Dr. R. K. Munje, K. K. Wagh IE&T Nasik
- Dr. K. S. Holkar, NDMVP COE Nasik
- Dr. R. D. Kokate, GCOE, Jalgaon

- Prof. R. S. Chaudhari, NMIMS, Shirpur
- Er. Vilas Patil, Jasubhai Engineers, Vadodara

**3.7.5 How many of the linkages/collaborations have actually resulted in formal MoUs and agreements? List out the activities and beneficiaries and cite Examples (if any) of the established linkages that enhanced and/or facilitated-**

**a) Curriculum development/enrichment**

Staff members from various departments are members of BOS, NMU Jalgaon

**b) Research**

Faculty and students are presenting / publishing papers in National/ International Conferences, National / International Journals.

**c) Consultancy**

College offers consultancy services to industry as well as Government sectors. This helps in strengthening bond between institutes.

**d) Extension**

Enhanced team-work, managerial skills, entrepreneurship skills, accountability and social responsibilities leading to overall personality development

Readiness for job, to face technical world and vertical growth

Mind set for higher education and learning technology application for real time and societal problems

Willingness to work for environment and under privileged

**e) Publication**

Significant rise in publications in the last 4years in reputed journals by staff members

**f) Student Placement**



Training and placement cell is trying their best for the placement of the students during their final year of course and after completion of the course.

**g) Introduction of new courses**

PG – 01 ME( E & Tc)

**3.7.6 Detail on the systemic efforts of the institution in planning, establishing and implementing the initiatives of the linkages/collaborations. Any other relevant information regarding Research, Consultancy and Extension which the college would like to include.**

- Faculty of the departments work on the recent developments in the technology and motivate the UG students to take innovative projects
- Faculty is motivated to attend important workshops and seminars arranged by leading organizations.
- Faculty members publish papers in reputed journals and Institute sponsors them to present papers at conferences / symposiums at national and international level.

## CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

### 4.1 Physical Facilities:

#### 4.1.1 What is the policy of the Institution for creation and enhancement of infrastructure that facilitate effective teaching and learning?

The policy of the institute is to create and enhance the infrastructure that facilitates effective teaching and learning to follow the norms laid down by the AICTE, New Delhi.

The following strategies are adopted for creation and enhancement of infrastructure:

- Periodical review of infrastructure availability as per the need of development.
- Approval of the infrastructural requirements by Local Management Committee and Governing Body.
- Provision of budget as per the requirements.
- Execution of the approved requirements.

Accordingly, the institute carries out maintenance of existing infrastructure, creation and enhancement of facilities in the laboratories, strengthening of Computer and Internet surfing Laboratories, purchase of books/e-books/ periodicals/Journals/e-journals, play ground, sports facilities and other student centric activities etc.

#### **4.1.2 Detail the facilities available for**

**a) Curricular and co-curricular activities–classrooms, technology enabled learning spaces, seminar halls, tutorial spaces, laboratories, botanical garden, animal house, specialized facilities and equipment for teaching, learning and research etc.**

**b) Extra-curricular activities–sports, outdoor and indoor games, gymnasium, auditorium, cultural activities, public speaking, communication skills development, yoga, and health and hygiene etc.**

The college has an Administrative Building with modern amenities. The institute is having state of the art infrastructure to meet the requirements of curricular and

- co- curricular activities, viz.
- Well ventilated classrooms
- Well-equipped laboratories
- Computer Center
- Training and Placement Department
- Seminar Hall, Conference Halls & ICT tools (LCD projector, White board, Interactive board)
- Internet facility, Stationary store
- Open Auditorium
- Girls common room, Staff rooms, Central Workshop, Drawing halls, Reprographic facility, Hostels for boys and girls

#### **The specialized facilities include:**

- Recognized research laboratories
- Language laboratory
- Virtual classroom
- Innovation & Entrepreneurship Development Centre (IEDC)

- Wi-Fi

**Others:**

- Canteen and Cafeteria
- Bank of India in the vicinity
- Health center
- Vehicle parking
- Telephone
- Transport facility
- The Institution has a built up area 31660 Sq. m. with sprawling green campus.

**Drinking Water:**

Centralized water cooler is located at D. N. Patel College of Engineering. R. O. water is available in hostel & library. DTP and reprographic facilities are available within the campus.

**Infrastructure facilities for academic activities are as Follows:**

Sr. No	Details	Required Nos. as per AICTE	Available Nos.	Required Area as per AICTE Sq. m.	Available Area Sq. m.
1	Class Rooms	28	29	66	2257
2	Labs	66	67	66	5701.69
3	Drawing Hall	1	2	132	264
4	Seminar Hall	6	9	132	528
5	Tutorial Room	9	9	33	297
6	Workshop	1	1	200	1026.38
7	Computer center	1	1	150	415.68
8	Central Library	1	1	400	400
<b>Total</b>					<b>10889.8</b>

**Administrative area - infrastructure facilities are as follows:**

Sr. No.	Details	Number	Required area Sq. m	Available Area Sq. m.
1	Principal Room	1	30	33.58
2	Conference Halls	2	200	308
3	Administrative office	1	150	157.8
4	Department office	6	108	146
5	HOD Rooms	6	54	99.54
6	Central Store	1	30	135
7	Maintenance Rooms	1	10	22.13
8	Security	1	10	10
9	House Keeping	1	10	15
10	Pantry for staff	1	10	14.04
11	Examination office	1	30	99
12	Placement office	1	30	23.2
<b>Total</b>				<b>1063.29</b>

**Amenities area - infrastructure facilities are as follows:**

Sr. No.	Details	Number	Required area Sq. m	Available Area. Sq. m.
1	Toilets Ladies & Gents	25	515	522
2	Boys common room	1	100	81
3	Girls common room	1	100	66
4	Cafeteria/ Canteen	2	150	278.81
5	Stationary store	1	10	22.13
6	First Aid Room	1	10	14.7
7	Gymnasium & Sport Club	1	-	194.25
8	Open Air Auditorium	1	-	708
9	Other amenities	-	-	1206
10	Boys Hostel ( 210 Students capacity)	1	-	5360.48
11	Girls Hostel ( 120 Students capacity)	1	-	4461.67
<b>Total</b>				<b>12915.04</b>

**Total built up area is as follows:**

Sr. No.	Details	Required area Sq. m	Available Area. Sq. m.
1	Instructional Area (Carpet area )	8241	10903
2	Administrative Area (Carpet area )	575	735
3	Amenities Area ( Carpet area )	1500	3678
4	Circulation Area ( Carpet area)	-	4218
	<b>Total built up area</b>	<b>10316</b>	<b>19534</b>

**Books in central library are as follows:**

Course Name	Volumes Available Nos.	Titles Available Nos.	National Journals ailable
Civil Engineering (UG)	5901	1809	12
Computer Engineering (UG)	10594	3210	6
Electrical Engineering ( UG )	4015	983	6
E & TC (UG)	6701	873	7
E & TC (PG)	225	105	-
Information Tech.	765	415	6
Mech. Engineering (UG)	4826	985	13
Mech. Engineering (PG)	155	104	-
Instrumen. Engineering (UG)	7766	519	-
Applied Science (UG)	1828	673	6
<b>Total</b>	<b>42776</b>	<b>9676</b>	<b>56</b>

**Cultural activities, public speaking, communication skills, development yoga, health and hygiene etc.**

For the overall development of the students institute conducts various extra-curricular activities as follows.

**Sport facilities**

Total area available for sports is	12798.14	Sq. m.
Out of which area for outdoor games is	75300	Sq. m.
and area for indoor games is	1646.14	Sq. m.

**a) List of outdoor games:**

Sr. No.	Games	Area available
1	Football	102m*68m
2	Cricket	50 Yards (45m radius)
3	Volleyball	9m*18m
4	Basketball	28m*15m
5	Kho-Kho	29m*16m, 25m*14m
6	Kabaddi	13m*10m, 12m*10m
7	Handball	40m*20m
8	Athletics	400mtrack
9	Hockey	45m*90m

**b) List of indoor games**

Sr. No.	Games	Area available (Sq. m.)
1	Badminton	<b>1646.14</b>
2	Gymnasium	
3	Table Tennis	
4	Chess	
5	Carom	

**Gymnasium:**

- Hi-tech Gymnasium is available in the institute to help students maintain their fitness.

**Auditorium:**

- Open air theatre
- AC seminar hall (110sq.m.)
- Air cooled seminar hall (198 sq. m.)
- Departmental seminar halls (9 nos.)
- Multipurpose hall- Sardar Vallabhbhai Patel Hall
- Multipurpose hall-Mahatma Gandhi hall

**Cultural activities:**

The institute has facilities for following cultural activities:

- Social gathering, PARV
- Drama
- Music
- Traditional day
- Mimicry
- Singing
- Dancing
- Photography
- Debate
- Painting
- Rangoli
- Mono acting
- Ramp show

Cultural Committee plans, coordinates and conducts all above cultural activities.

The committee consists of faculty members and students.

**Public speaking:**

Adequate equipment's and instruments are available.



**Communication skills development:**

Language laboratory with adequate equipments is available.

**Yoga: (NO)****Health:**

- Medical care centre with medical officer
- Cardiac ambulance for emergency
- First aid boxes in every department and hostels
- Medical checkup camp for students and staff

**Hygiene:**

- Permanent staff for cleaning
- Fly catchers **(NO)**
- Mosquito nets **(NO)**
- Exhaust system
- Vending machine and destroyer for sanitary napkins**(NO)**
- RO water systems

Hygiene is ensured throughout the campus specially mess, canteens, hostels, staff quarters. The committee of faculty members ensures food quality and hygiene in mess.

**4.1.3 How do the institution plan and ensure that the available infrastructure is in line with its academic growth and is optimally utilized? Give specific examples of the facilities developed/augmented and the amount spent during the last four years (Enclose the Master Plan of the Institution/ campus and indicate the existing physical infrastructure and the future planned expansions if any).**

Institute has its perspective plan to start new programs and increase in intake. As per the perspective plan, to start new programs to increase in intake in a particular year, the infrastructural equipment's and machinery requirements are identified as per AICTE norms by discussion of concerned faculty members and the Principal. The same is

placed before the Governing Body through LMC for approval so that the necessary infrastructure is ready in time for occupation at the beginning of academic session.

The institute plans requirements of infrastructural facilities as per the AICTE norms. Keeping in view of sanctioned intake, infrastructural facilities are developed more than the requirements of AICTE norms. Accordingly the class rooms, laboratory rooms, faculty rooms/cabins etc. are constructed and put in place for utilization.

Further, the management with the help of Principal ensures that all the infrastructural facilities available are used to its maximum potential. The institute also ensures that at no point of time it deviates from the minimum prescribed norms of AICTE.

For the laboratories, based on the University syllabus, the equipments required for conducting the laboratory experiments are finalized. After that, the duly constituted purchase committee receives quotations from the leading suppliers and the purchases are made from the supplier which matches the specifications and quality norms. The details of the facilities which have been added are as under:

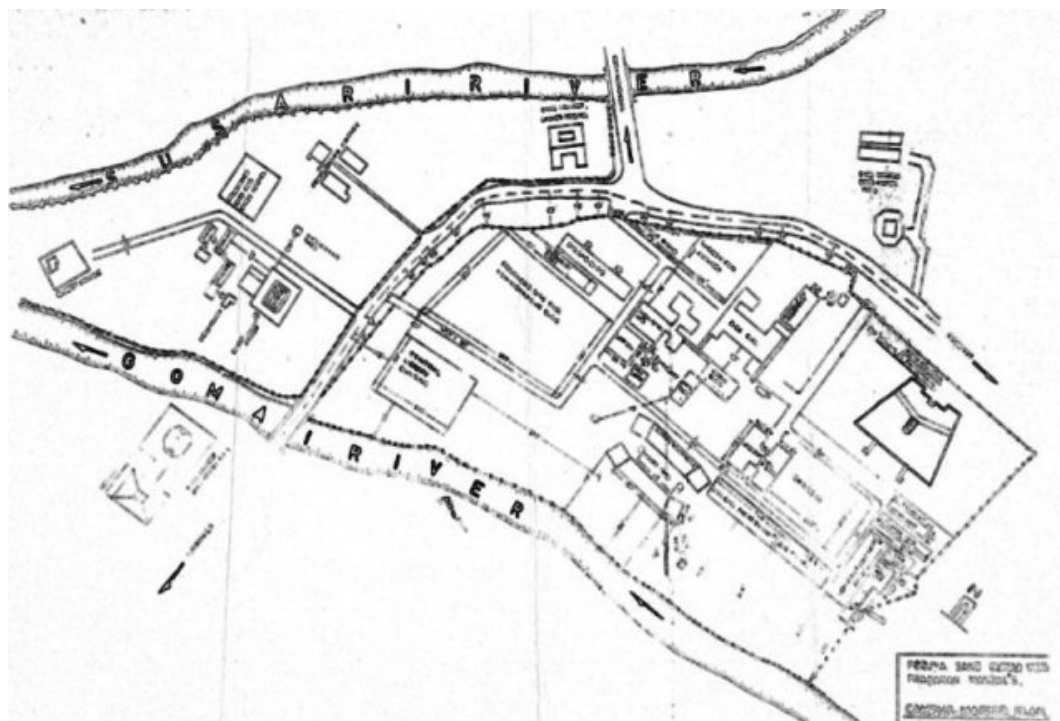
#### **Chronological infrastructural development:**

<b>Sr. No.</b>	<b>Academic Year</b>	<b>Increase in intake</b>	<b>Infrastructural development</b>	<b>Amount spent in lakhs</b>
1	1983	1) Civil Engineering- 60 2) Instrumentation Engineering- 60 (Establishment year of Institute)	Civil and Applied mechanics dept.	36.86
2	1984	-----	1) Workshop shed 2) Boys hostel no.1	30.20 60.04
3	1988	Electronics & Telecommunication-60	Smithy shop	9.30
4	1990	-----	Classroom building	71.70
5	1991	-----	Boys hostel no 2	103.9
6	1996	Mechanical Engineering	Ladies hostel-1	97.74
7	1999	1) Electrical Engineering- 60 2) Computer Engineering- 60	-----	-----
8	2000	Information Technology- 60	-----	-----
9	2002	-----	New Administrative building	55.9
10	2004	-----	New Building	302.00

11	2009	-----	Ladies hostel-2	103.90
12	2013	-----	New Building (West side)	250.00

#### Major additional infrastructure developed:

- Open air theatre for cultural activities,
- Orientation/Induction programme etc.
- R & D laboratories **(NO)**
- Overhead storage tanks for all buildings
- Administrative building
- Cafeteria



**Master Plan of Institute**

**4.1.4 How does the institution ensure that the infrastructure facilities meet the requirements of students with physical disabilities?**

Rarely students with physical disabilities opt for admission into professional colleges. Till date no such student has sought admission into any of the courses of the college. However, the college has planned to install some basic requirements like ramps to meet the needs of the disabled foreseeing the situation in future.

**4.1.5 Give details on the residential facility and various provisions available within them:**

- Hostel Facility – Accommodation available
- Recreational facilities, gymnasium, yoga center, etc.
- Computer facility including access to internet in hostel
- Facilities for medical emergencies
- Library facility in the hostels
- Internet and Wi-Fi facility
- Recreational facility-common room with audio-visual equipments
- Available residential facility for the staff and occupants
- constant supply of safe drinking water
- Security

**Hostel facility- accommodations available:**

- Boys hostel-1 hostel with 70 rooms with capacity of accommodating 210 students.
- Girls hostel-1 hostel with 40 rooms with capacity of accommodating 123students.

**Recreational facilities, gymnasium, yoga center, etc:**

- Indoor games: Carrom, Chess, Badminton, Table Tennis etc.
- Television with DTH facility
- Yoga centre

**Facilities for medical emergencies:**

- First aid box
- Cardiac Ambulance

**Internet and Wi-Fi facility:**

- Internet leased line 10+2 Mbps and Wi-Fi.

**Recreational Facility– common room with audio-visual equipments:**

- Common room with Television having dish facility
- Audio system

**Available residential facility for the staff and occupancy, Constant supply of safe drinking water:**

- Rented Quarter for Principal
- Staff quarters available for hostel rector
- Quarters are well furnished with constant supply of safe drinking water.

**Security:**

- Adequate security staff
- CCTV cameras at prime locations

**4.1.6 What are the provisions made available to students and staff in terms of health care on the campus and off the campus.****Health care on the campus:**

- Medical care centre with medical officer
- Vehicle for emergency
- First aid boxes in every department and hostels
- Medical checkup camp for students and staff

**Health care off the campus:**

- Institute has long term association with private hospital in Shahada city. In emergency the students/staff are taken to these hospitals in ambulance available in the campus.
- Student's accident insurance policy through NMU. Through this insurance policy students can claim for reimbursement of expenses incurred for any kind of accident.

**4.1.7 Give details of the Common Facilities available on the campus –spaces for special units like IQAC, Grievance Redressal unit, Women's Cell, Counseling and Career Guidance, Placement Unit, Health Centre, Canteen, recreational spaces for staff and students, safe drinking water facility, auditorium, etc.**

- IQAC of the institute is functioning from last two years. For the smooth functioning of the same space is provided.
- Institute has constituted and provided space for proctorial board and students grievance redressal committee which sort out the grievances related with discipline.
- As per UGC and AICTE guidelines, Institute has Women Grievances Redressal Committee including girl students. This facilitates ladies faculty members and girls students to organize awareness programmes about women empowerment, gender equity, health related issues etc.
- The institute has Teacher guardian scheme for student counseling and career guidance. This scheme is to provide conducive environment to the students in counseling and taking some burden off the parents and lessens their anxiety. This facilitates career guidance to the students.
- Institute has well established training and placement cell to conduct student trainings related with personality development, soft and technical skills. This cell works towards establishing industry institute interaction,

organizing industry meet and getting employer's feedback. The cell also organizes campus placement activities.

- Institute has health care centre with medical officer. Institute has provided cardiac ambulance vehicle for emergency. Institute has a cafeteria with recreational facilities at prime location. A canteen is also available to satisfy the needs of inmates. These places are more favorable for students due to delicious and hygienic food.
- The institute has recreational spaces for staff and students in the form of lush green lawns, hi-tech gym, yoga centre, cafeteria, boys and girls common rooms etc.
- Institute has the provision for safe drinking water facility through four RO units at college building and hostels.
- The institute has Open air theatre, AC seminar hall, Air cooled seminar hall with necessary facilities.

## 4.2 Library as a Learning Resource

### 4.2.1 Does the library have an Advisory Committee? Specify the composition of the committee. What significant initiatives have been taken by the committee to render the library student/user friendly?

Yes,

The Library Advisory Committee consists of the Chairman, (Librarian) and one faculty member from each department. Based on the initiatives of the committee following activities are carried out.

- Open access to the students
- Web based E-Resources in the campus
- Library remains open beyond institute timings
- Air cooled library
- KIOSK machine for Online Public Access Catalogue (OPAC) facility.

**4.2.2 Provide details of the following:****Master Plan of Central Library**

Sr. No.	Particulars/Details	Size Maximum In mtr.	Carpet Area in Sq. m.
1	Reading Room	9 x5	45
	PG/Staff		
	Reading Girls Students	11x9	99
	Reading Boys Students	11x9	99
2	Entrance Lobby	17 x3	51
	Counter Clock Room	6 x3	18
	Issue Counter	11x3	33
3	Librarian Cabin	3 x 4	12
4	Stack Room	11x9	99
5	Reference Section	6 x9	54
	E-Library	2.8x6	16.8
6	Book Bank Section	3x9	27
7	Store	5x3	15
8	Pantry for Library Staff		
9	Xerox	3x3	09
10	Toilets a)Ladies	9.46x2.46	23.27
	b) Gents	9.46x2.46	23.27
11	Drinking Water	3x3	9
12	Passage	45x3	135
	<b>Total</b>		<b>777.34</b>



**4.2.3 How does the library ensure purchase and use of current titles, print and e-journals and other reading materials? Specify the amount spent on procuring new books, journals and e-resources during last four years. ?**

The library ensures the purchases of number of books, current titles, e-journals etc. as per AICTE norms and University curriculum.

The requirements obtained from the departments, students, research scholars and faculty members are summarized, verified by the librarian and put up to the library advisory committee. After the recommendation of library advisory committee, the estimated annual cost is put up to LMC through the Principal for budgetary provision. As and when requires purchases are made after due sanction by purchase committee.

The amount spent on procuring new books, journals and e-resources during last four years.

Library Holdings	2011-12		2012-13		2013-14		2014-15	
	Nos.	Total Cost Rs.	Nos.	Total Cost Rs.	Nos.	Total Cost Rs.	Nos.	Total Cost Rs.
Text Books	749	393487	653	255197	285	100812	480	193015
Reference Books	567	206300	702	249930	1590	320499	1566	454928
Journals/ Periodicals	45	89000	45	95000	46	110000	47	115000
e- resources	-	-	-	-	-	-	-	-
Any other Membership of IIT, Pawai and DELNET, New Delhi					Delnet	11500	Delnet	11500

**4.2.4 Provide details on the ICT and other tools deployed to provide maximum access to the library collections?**

- OPAC
- Electronic Resource Management package for e-journals
- Federated searching tools to search articles in multiple databases
- Library Website

- In-house/remote access to e-publications
- Library automation
- Total number of computers for public access
- Total numbers of printers for public access
- Internet bandwidth/speed 2mbps 10 mbps 1 gb (GB)
- Institutional Repository
- Content management system for e-learning
- Participation in Resource sharing networks/consortia (like Infflibnet)

**OPAC:**

SLIM software: Online Public Access Catalogue (OPAC) is to find the availability of books and printed journals located at various sections of the Library.

**Electronic Resources management package for e-Journals:**

IEEE, J-GATE

**Federated searching tools to search articles in multiple databases:** No

**Library Website:**

NO

**In-house/remote access to e-publications:** Institute has IP based access to e- journals like J-GATE.

**Library Automation :**

The Library is automated using SLIM software with KIOSK machine.

**Total number of computers for public access:** 14 nos.

**Total number of printers for public access:** 1 no.

**Internet band width/speed:** 12 Mbps

**- Institutional Repository:**

The Library has developed Institutional Repository with reference to the Research Papers published by College Faculty, University Question Papers, Project Report of Students and syllabus of various courses.

**- Content management system for e-learning:**

Following content management system for e-learning are made available.

NPTEL

Videos with CM Sand Moodle-- ---NO--

**Participation in Resource sharing networks/Consortia (like Infflibnet):**

-- NO---

DELNET is available.

#### 4.2.5 Provide details on the following terms:

- Average number of walk-ins: 153 per day.
- Average number of books issued/returned: 145 to 165 per day.
- Ratio of Library books to students enrolled: 16 books per student.
- Average number of log into opac (OPAC): OPAC is made available to all as
- open access, without user authentication.----NO---
- Average number of log into e-resources: IP based access to e-resources- Yes
- Number of information literacy trainings organized: ---- NO--
- Details of “weeding out” of Books and other materials : --NO---

#### 4.2.6 Give details of the specialized services provided by the library

- Manuscripts
- Reference
- Reprography
- ILL(Inter Library Loan Service)
- Information deployment and notification (Information Deployment and Notification)
- Download
- Printing
- Reading list/Bibliography compilation
- In-house/remote access to e-resources
- User Orientation and awareness
- Assistance in searching Databases
- INFLIBNET/IUC facilities

**Manuscripts:** Nil

**Reference:** The library has a reference section in which 3723 titles are available.

**Reprography:**

Reprography facility is available in the library forth benefit of faculty members and students

**ILL (Inter Library Loan) :**

The institution has tie-ups with DELNET & IIT Bombay Libraries, faculty members and students avail this facility.

**Information deployment and Notification:**

The important and latest notifications are displayed on notice boards. The important information is hosted on a separate web page on institute website

**Download**

14 computers are available in the library for downloading web based e-resources. On an average more than downloads/year has been recorded.

**Printing:** Printout facility is provided.

**Reading List / Bibliography Compilation:**

Reading list/Bibliography compilation is provided whenever requested by the users.

**In-House/remote access to e-resources**

In-house access to e-journals is available. The institute has in-house e-resources through intranet.

**User Orientation and Awareness**

User Orientation and Awareness programs are arranged regularly.

**Assistance in searching Databases**

Library staff helps students and staff for searching databases.

**INFLIBNET/IUC Facilities:** DELNET facility is available.-

**4.2.7 Enumerate on the support provided by the library staff to the students and teachers of the college**

The support provided by the library staff to the students and teachers of the college are as follows:

- Orientation programme for students is organized by the library staff about its facilities.
- The library organizes the expert lecture of renowned persons, like use of e-resources, which benefits the faculty members and research scholars.
- The library staff assist the students and teachers for accessing of books in OPAC and e-journals, if required and also supports for locating the books on the OPAC/shelf and searching required contents in the e-resources.
- Students and staff are made aware about the arrival of books by keeping them in a special rack at prominent location in library for 15 days.

- Whenever special book is required by students and faculty members the librarian makes it available.
- Library staff supports the students and faculty members in searching the on line database through DELNET.

**4.2.8 What are the special facilities offered by the library to the visually/physically challenged person? Give details.**

Library staff helps physically challenged persons for the issue of books and other procedures of library.

**4.2.9 Does the library get the feedback from its users? If yes, how is it analyzed and used for improving the library services. (What strategies are deployed by the library to collect feedback from users? How is the feedback analyzed and used for further improvement of the library services?)**

Yes, feedback is received through questionnaire. The data received are analyzed and the findings are submitted to the authorities along with the recommendations for further improvement of the library services.

In the month of September/January feedback are collected from its users. The feedback is analyzed by librarian and referred to authority through library advisory committee for scope of improvement.

- A suggestion box is available for the library users, in which the students/faculty may drop complaints or suggestions. Any such complaint/suggestion received is addressed by librarian immediately, discuss in advisory committee meeting if necessary then recommendations of committee are in-formed to the Principal for necessary action.
- Number of computers with Configuration ( provide actual number with exact configuration of each available system)
- The library staff assists the students and teachers for accessing of books in OPAC and e-journals, if required and also supports for locating the books on the OPAC/shelf and searching required contents in the e-resources.
- Students and staff are made aware about the new arrival of books by keeping them in a special rack at prominent location in library for 15 days.
- Whenever special book is required by students and faculty members the

librarian makes it available.

- Library staff supports the students and faculty members in searching the online database through DELNET.

### 4.3 IT Infrastructure

#### 4.3.1. Give details on the computing facility available (hardware and software) at the institution.

- Provide the different configuration and number of systems available for each System Configurations
- Number of Computers With configuration ( provide actual number with exact configuration of each available system
- Computer- student ration
- Stand-alone facility
- LAN Facility
- Wi-Fi Facility
- Licensed Software
- Number of Nodes/Computers with internet facility
- Any one

The Institute has adequate computer facility. Details are as follows.

**Number of Computer with Configuration: 812**

Sr. No.	Configuration of Computer	Total
1	Lenovo Think Center Desktop Computer Intel Core i3 -4170, 3.70 GHz, 4GB RAM, 500 GB SATA HDD, 10/100 Ethernet, Multimedia Keyboard, Optical scroll mouse, 17" LED Monitor	100
2	Lenovo Think Center Desktop Computer Intel Dual-Core E-5800, 3.20 GHz, 2GB RAM, 320 GB SATA HDD, Ethernet, Keyboard, Optical scroll mouse, 17" LED Monitor	200
3	i-ball Desktop Computer , Intel Dual-Core, 2.2 GHz, 1 GB RAM, 160 GB SATA HDD, Logitech Keyboard and Optical scroll mouse, Benque 15" wide LCD Monitor	125
4	Lenovo H22-57 Dual core 3.0 /2GB/320HDD desktop	15

	computer	
5	Lenovo Desktop Computer , Intel Pentium Dual-Core 2140, 1.6 GHz, 2 GB RAM, 80GB SATA HDD, Lenovo Keyboard, Optical scroll mouse, 17" CRT Display Monitor	60
6	Laptop Dell Dual Core 2.0, 1GB DDR2 RAM DVD R/W web camera, 160 GB HDD, 15.4" wide screen LAN, Wi-Fi, Modem, and Sr. No. B1FB2B9	06
5	HCL LX-Infinity Pro BL Desktop Computer , Intel Pentium P-4 1080, 1.6 GHz, 256 RAM, 40GB HDD, Multimedia Intel Keyboard and Optical scroll mouse, 15" HCL Color Monitor, 52x CD ROM	50
6	IBM Desktop Computer Think Center, Intel Pentium P-4, 1.6 GHz, 256 RAM, 40GB HDD, Intel Keyboard and mouse, 15" Digital Color Monitor, 52x CD ROM	84
7	Zenith Desktop Computer Think Center, Intel Pentium P-4, 1.8 GHz, 128RAM, 20GB HDD, Intel Keyboard and mouse, 15" Digital Color Monitor,	109
8	IBM Netfinity X200 Server P-3 GHz, 128 MB, 18GH, Intel Keyboard and mouse E 54 Back Color Monitor ,	1
9	Desktop Computer, Celeron Zenith, 400MHz, 32 MBSDRAM, 6.5 GB HDD	5
10	Zenith Premium Computer Notebook	1
11	Zenith Computer, Intel Pentium P-3, 450 MHz, 32 MB SD RAM, 20GB HDD, Intel Keyboard and mouse, 144 & 12 MD FDD, 15" Digital Color Monitor, Samsung 15" Monitor, 32-X CDROM Drive, Sound Card, 180 Watt Stereo Speaker	23
12	Wizard Computer, Intel 8088 based CPU 640 KB, RAM 640 KB, Floppy drive , 20 MB HDD with Controller Card And above	33
	<b>Total</b>	<b>812</b>

**Computer Student ratio: 0.64**

- 300 computers in the campus are connected in LAN

- Wi-Fi facility is available in the campus. Areas within the range of servers are automatically connected by Wi-Fi. The out of range areas are connected to Wi-Fi through modems.
- Licensed software: The following table lists the licensed software installed for various applications:

S.No	Department	Licensed Software Quantity	Quantity
1	Computer Engineering	<b>Application Software :</b> a. Office Automation Software b. EPF Mgt Software c. Educational Administration Software d. MS Office professional 2003 e. SLIM 21 Software f. Oracle 9i g. Turbo C++ h. MS Office 2000 i. Visual Studio j. IBM Rational k. Oracle WD Program <b>System Software:</b> a. Microsoft win 98 OEM b. Win2000 server + 15 users c. Microsoft DOS 6.00 d. Microsoft Win XP Home Addition e. Microsoft Win NT 4.0 server + 5 user f. Open source Ubuntu 14.04lts g. Microsoft win pro7 snl upgrade academic h. Microsoft Win strtr 7 snl academic	1 1 1 1 1 1 10 1 1 30 users Full use 50 user 1 5 5 1 300 100 100
2	Mechanical Engineering	a. Auto CAD 2004 b. CATIA V5 R13 c. Ansys 13.1	5 5 5
3	Electronics & Telecommunication	<b>MATLAB</b> MATLAB R2013, Image Processing Toolbox, Signal Processing Toolbox, Communication Toolbox mark,	10 users
4.	Instrumentation	Siemens Simatic Step 7 Basic V13 VSIM 5.1 ABB PLC S/W Allen Bradley PLC S/W	1 1 1 1
5	Library	Auto lib software (SLIM)	



**Printers/Scanners**

Sr. No.	Printers/Scanners	Type	Make	Model	Quantity
1.	Printer	DMP	-	132 Col	1
		DMP	-	132 col L&T	2
		DMP	Epson	LQ 1070	1
		DMP	Epson	LQ 1070	1
		DMP	HP	6L gold	1
		DMP	HP	610C desk jet	1
		DMP	Epson	LX-300+	1
		Laser	HP	640 inkjet	1
		DMP	Epson	LX-300+	1
		Laser	Epson	LQ 1150	4
		Laser	HP	656 inkjet	1
		Laser	HP	Jet 1000	1
		DMP	Epson	LX-300+	10
		Laser	HP	Jet 1010	2
		Laser	HP	PSC 1420	1
		DMP	Epson	LX300+	3
		Laser	Xerox	Phaser 3117	2
		Laser	Epson	Lx300+	1
		Laser	Canon	2900	4
		DMP		LX 300+	1
		PRINTER	CANON		1
		Printer	HP	HP1020	1
		Color printer			1
Laser	HP	1020+	2		
DMP	Epson	300+	2		
Laser	Canon	2900	10		
2	Scanner	Scan jet	HP	2410	1
		Scan jet	Canon	Lide 120	1
		Scan jet	HP	SJ200	2
3	Projector	Projector	Epson	EBS-9	7
		Projector	Epson	EBS-31	1
4	Photocopier	Photocopier	Canon	IR 2200	2

**4.3.2 Faculty and students on the campus and off-campus?****On Campus:**

Internet facility with 12 Mbps speed is made available to students and faculty. Well-equipped laboratories with the latest configuration computers with servers are provided in all departments and also Central Computing Facility available in the campus for all the faculty and students.

**Off Campus:**

Extending Wi-Fi facility to the hostels is on the anvil.

**Any one****Social Networking**

The institute is already active on social networking sites Facebook and Twitter. CTS will introduce the institute in some other popular networking sites and video-sharing sites to be in touch with the students, faculty, staff and parents.

**Identity and Access Management (IAM)**

Define, develop and adopt a shared suite of IAM services to reduce duplication in our campus IT environment.

**Campus Collaboration Tools**

Define and implement a set of collaboration tools and services to address teaching, learning, research, outreach and campus service's needs. (Eg. Webcast the lectures live and host recorded lectures in the website).

**Offer a Suite of Instructional Technologies e-Learning Roadmap**

Informed by research, surveys, broader campus initiatives, and the campus community, the Campus e-Learning Roadmap Group will consider traditional and innovative teaching approaches to be shared in the teaching and learning challenges and develop a suite of appropriate instructional technology solutions for campus.

**4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?**

Institute is optimistic about infrastructural up-gradation in the near future. The college intends to:

Deploy e-governance through expansion of ERP software.

- Develop e-learning facilities.
- Provide video conferencing within the campus.
- Upgrade computing facility.

**4.3.4 Provide details on the provision made in the annual budget for procurement, up-gradation, deployment and maintenance of the computers and their accessories in the institution (Year wise for last four years)**

Provision made in the annual budget for procurement, up-gradation, deployment and maintenance of the computers and their accessories in the institution are as follows:

Academic Year	Procurement (Rs.)	Up gradation (Rs.)	Deployment (Rs.)	Maintenance (Rs.)
2015-16	55000	Nil	45620	4000
2014-15	900000	Nil	700588	115000
2013-14	550000	Nil	368360	50360
2012-13	750000	Nil	550062	74000

**4.3.5 How does the institution facilitate extensive use of ICT resources including development and use of computer-aided teaching/ learning materials by its staff and students?**

The institute facilitates usage of ICT tools, such as Presentation tools like LCD projectors, whiteboard, interactive board etc., power point presentations, course materials through web pages, NPTEL videos, Student Management System through ERP, Moodle – Learning Management System, virtual class room, android application for staff –student interaction etc.

**4.3.6 Elaborate giving suitable examples on how the learning activities and technologies deployed (access to on-line teaching- learning resources, independent learning, ICT enabled classrooms/learning spaces etc.) by the institution place the student at the center of teaching-learning process and render the role of a facilitator for the teacher.**

Suitable examples that place the student at the center of teaching-learning process and render the role of a facilitator for the teacher are NPTEL videos, Course materials through web pages, Moodle – Learning Management System, Interactive board, Spoken tutorials by IIT Bombay etc.

**4.3.7 Does the Institution avail of the National Knowledge Network connectivity directly or through the affiliating university? If so, what are the services availed of?**

No

## 4.4 Maintenance of Campus Facilities

**4.4.1 How does the institution ensure optimal allocation and utilization of the available financial resources for maintenance and upkeep of the following facilities (substantiate your statements by providing details of budget allocated during last four years)?**

- Building
- Furniture
- Equipment
- Computer
- Vehicles

**(garden, electricity, playground, water supply, campus networking)**

Every year on an average the institute allocates 3 to 4 % of available financial resources for maintenance and upkeep of various facilities in the campus.

**Details of budget allocated and utilized are as follows:**

Sr. No.	Description	CFY (2015-16)		CFY (2014-15)		CFY (2013-14)		CFY (2012-13)	
		Allocated budget	Budget Expensed	Allocated budget	Budget Expensed	Allocated budget	Budget Expensed	Allocated budget	Budget Expensed
1	Building	8575000	8393110	75000	72497	55000	53784	15000	13777
2	Furniture	1150000	1116066	55000	53482	2800000	243037	1800000	14145541
3	Equipment	1650000	1624675	850000	815588	450000	418360	6500000	624062
4	Computers	50000	49620	110000	108889	650000	569905	250000	203810
5	Vehicles /travel	250000	212757	220000	210148	800000	751098	300000	289287
6	Any other	605000	598456	6050000	5959858	550000	5022065	280000	2487531
	Total	1280000	11994694	7360000	7220462	20155000	13010825	13915000	10949593

**4.4.2 What are the institutional mechanisms for maintenance and upkeep of the infrastructure, facilities and equipment of the college?**

Every year budget proposal is submitted by each department and section to the Principal which includes recurring expenses. Then these are discussed in HODs meeting and the management sanctions the budget at the beginning of every financial year. Every department and section ensures that the respective work is done. Institute has assigned responsibilities to the faculty members of the concerned departments to supervise the work and specialized supporting staff is appointed for maintenance and upkeep of the infrastructural facilities and

equipment. Also specialized agencies are hired for maintenance on AMC/rate contract/call basis as per the requirements.

**4.4.3 How and with what frequency does the institute take up calibration and other precision measures for the equipment/ instruments?**

The institute takes up calibration and other precision measures for the equipment/ instruments as per the technical requirements specified by the manufacturer. Calibration of the major equipment/instruments is done by certified agencies. The precision level of the instrument is checked and verified from time to time by the lab in charge and lab assistant.

**4.4.4 What are the major steps taken for location, upkeep and maintenance of sensitive equipment (voltage fluctuations, constant supply of water etc.)?**

Institute has 11 kV substation and is equipped with automatic voltage regulator to keep constant voltage at supply end. In addition to this some sensitive equipments are connected with UPS and Voltage stabilizer. Following are the major steps taken for location, upkeep and maintenance of sensitive equipment.

- The sensitive equipment's are located at proper places considering the working requirements and safety measures. e.g. machineries at the workshop (Ground floor), computer labs (away from transformer), air compressor (basement) etc.
- Electricity backup is provided through 250 KVA diesel generator set.
- MCBs (Miniature Circuit Breakers) have been installed to prevent from high voltage fluctuation.
- Lightning arrestors are installed.
- The institute has its own overhead water tank (2.25 lakhs liters capacity) for continuous supply.
- Maintenance of sensitive equipments through AMC.

## CRITERION V: STUDENT SUPPORT AND PROGRESSION

### 5.1 Student Mentoring and Support

#### 5.1.1 Does the institution publish its updated prospectus/handbook annually? If “yes”, what is the information provided to students through these documents and how does the institution ensure its commitment and accountability?

Yes, the institution publishes the information brochure annually. This brochure is given along with the application form to every candidate who takes admission to the institute. The information provided through this are as follows:

- The Vision and Mission statements
- Objectives of the institute
- Profile of the institute and departments
- Facilities and amenities available in the institution
- UG and PG Courses offered
- Eligibility criteria for admission
- Admission procedure
- Major activities and achievements
- Placements details
- Fees structure and Scholarships
- Canteen facility
- Hostel facilities
- Cultural activities conducted and innovative practices followed in the departments

Institute ensures its commitment and accountability in the following ways:

- Admission procedure is as per the norms published in the prospectus.
- Facilities and amenities mentioned in the prospectus are fulfilled.
- The Institute adheres to the Shikshan Shulka Samittee, Government of Maharashtra fees structure.

- Courses offered in the institute are approved by AICTE, New Delhi and affiliated to North Maharashtra University, Jalgaon.

**5.1.2 Specify the type, number and amount of institutional scholarships / free ships given to the students during the last four years and whether the financial aid was available and disbursed on time?**

Institution spends significant amount for the students in the form of

- Training / Workshops / Soft skill fees

**5.1.3 What percentage of students receives financial assistance from state government, central government and other national agencies**

Students receive financial assistance from state government, central government and other national agencies on the basis of eligibility criteria that are laid down by the regulatory bodies. Central government offers minority scholarships for students and institute students avail the same. Students belonging to SC/ST/OBC categories avail scholarship/free ship from state government. Scholarships/free ships are given by state Government of Maharashtra on the basis of parental annual income. Details are shown in following table

Year	State Government			Government of India		
	Number of students received scholarship	Total numbers of the students	Percentage (%)	Number of students received scholarship	Total numbers of the students	Percentage (%)
2015-16	509 received 281 (applied but not received yet)	1247	40.81% (63.35% all )	53 received 108 (applied but not received yet)	1247	4.25% (12.91% all)
2014-15	976	1516	64.37%	157	1516	10.35%
2013-14	1038	1717	60.45%	275	1717	16.01%
2012-13	925	1559	59.33%	204	1559	13.08%
<b>Average Percentage</b>			56.24% (61.87%all)	<b>Average Percentage</b>		10.92% (13.08% all)

#### 5.1.4 What are the specific support services/facilities available for

- **Students from SC/ST, OBC and economically weaker sections**
- **Students with physical disabilities**
- **Overseas students**
- **Students to participate in various competitions/National and International**
- **Medical assistance to students: health centre, health insurance etc.**
- **Organizing coaching classes for competitive exams**
- **Skill development (spoken English, computer literacy, etc.)**
- **Support for “slow learners”**
- **Exposures of students to other institution of higher learning corporate /business house etc.**
- **Publication of student magazines**
- **Students from SC/ST, OBC and economically weaker sections**

##### **a) Students from SC/ST, OBC and economically weaker sections**

Students from SC/ST, VJ, SBC, OBC, NT-B, C, D and economically weaker sections receive scholarship/free ship from the Social Welfare Department as per Government regulations. Economically Weaker Section students get EBC concession in fees from Govt. of Maharashtra through Directorate of Technical Education (DTE). Book bank scheme is also provided to these students.

##### **b) Students with Physical Disabilities**

The facilities provided by the institute to differently disabled students are as follows:

They are given extra time during examinations as per university norms. Administrative support is provided to the students to avail concessional travel to attend conferences, seminars, and industrial visits etc. from state and central government agencies

##### **c) Overseas students**

The institute has no overseas students.

##### **d) Students to participate in various competitions/National and International:**

Students are encouraged to participate in extracurricular and co curricular activities such as technical fests, cultural events and sports events etc. which are



organized by reputed institutions such as Universities and other colleges. All necessary support and services are provided by the institute like Wi-Fi facility and library facility. Faculty members are assigned to guide and assist the students for various technical activities

**e) Medical assistance to students: health centre, health insurance etc.**

Medical check-up is carried out for all newly admitted students by the institute. For medical assistance to students institute has health centre with medical officers. In case of medical emergency the vehicle (ambulance) is provided by the institute to the students. First aid boxes are available in every department and hostel. The institute facilitates students to avail accident insurance policy (Students Group Insurance for student's safety scheme) by NMU. Through this insurance policy students can claim for reimbursement of expenses incurred for any kind of accident.

**f) Organizing coaching classes for competitive exams**

The institute has a separate cell for competitive examinations where the students are made aware of various competitive examinations. The cell provides the required guidance and support to prepare students for the examinations. The institute supports the student by conducting guest lectures and by arranging aptitude lectures conducted by the internal faculty and external experts. To support the students for such examinations institute procures the required books and magazines, study material, question bank etc.. Coaching for Gate examinations is also provided to the students.

**G) Skill development (spoken English, computer literacy, etc.) Soft skill development**

Communication skills are taught as a part of the curriculum and practical sessions are conducted in a dedicated language laboratory. In addition, guest lectures by eminent and distinguished personalities are arranged by the Training and Placement department and every department takes efforts to enhance soft skills such as spoken English, resume writing, personality development etc

**Support for “slow learners”**

Special mentoring is provided for weak students not only to help them in academics but to provide guidance for career development, help them tackle personal and social problems and to guide them for their overall development.

Weak students are identified on the basis of qualifying/University examinations. Additional lectures and practicals are conducted to bring them at par with other students.

**5.1.5 Describe the efforts made by the institution to facilitate entrepreneurial skills, among the students and the impact of the efforts**

Various activities are conducted throughout the year to equip the members with qualities of leadership, professional ethics and create awareness of current and future trends of the industry. Institute organizes expert lectures of eminent industrialists/industry persons, scientists, administrators, technocrats to inculcate and nurture entrepreneurship/ managerial/ leadership qualities amongst the students.

**5.1.6 Enumerate the policies and strategies of the institution which promote participation of students in extracurricular and co-curricular activities such as sports, games, Quiz competitions, debate and discussions, cultural activities etc. additional academic support, flexibility in examinations, special dietary requirements, sports uniform and materials, any other**

The policies and strategies of the institution in promoting these activities include:

- Special provision in the budget is made for sports and cultural activities.
- Provision of funds are made to conduct extracurricular and co-curricular activities such as Quiz competitions, Debate and Discussions, Cultural activities etc. through departmental students associations.
- T.A., D.A., leave, sports uniforms, sports materials etc. are provided to the students, participating in intercollegiate tournaments at different places.
- Constitution of sports and cultural committees to facilitate extracurricular activities.
- State of the art sports complex and Open Air Theatre.
- Motivational prizes to winners in various competitions.
- Organizing interactive sessions of students with renowned personalities of sports/social service sector.

Institute has extended motivational support to students by several means, to enhance their active participation in co-curricular and extracurricular activities. Apart from good academic record, sports play a very important role in building one's personality. Institute encourages students to participate in a variety of

sports activities at intercollegiate, university, state and national levels. Apart from this, yoga classes are organized under the supervision of yoga teacher to improve physical and mental health. Meditation programs to enhance concentration of students are conducted. Institute organizes intercollegiate tournaments for sports like basketball, table tennis, hockey, football etc.

**5.1.7 Enumerating on the support and guidance provided to the students in preparing for the competitive exams, give details on the number of students appeared and qualified in various competitive exams such as UGC-CSIR- NET, UGC-NET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central /State services, Defence, Civil Services, etc.**

The institution encourages the students to prepare for various competitive examinations through awareness programs, special coaching and training. The institute has a cell for competitive examination and motivates its students for higher studies and for research. Its main objective is to create awareness about competitive exams among the students and to provide academic facilities to students aspiring for the Civil Services Examinations, GATE, GRE and other such competitive examinations. Students are given tips on choosing right strategies and selecting suitable study material. Aptitude tests and mock tests are arranged for the students.

The activities conducted by the competitive cell are:

1. Survey of students appearing for various examinations.
2. Establishing a dedicated library with a reading room facility.
3. Arranging Guest/Expert Lectures.

	2012-13	2013-14	2014-15	2015-16
<b>GATE</b>	<b>06</b>	<b>05</b>	<b>01</b>	<b>03</b>
<b>CAT</b>	--	--	--	--
<b>GRE/TOEFL</b>	<b>05</b>	<b>05</b>	<b>06</b>	<b>06</b>
<b>Civil Services</b>	--	--	--	--
<b>Defence Services</b>	--	--	--	<b>01</b>

**5.1.8 What type of counseling services are made available to the students (academic, personal, career, psycho-social etc)**

The institute has batch guardian/class teacher scheme to provide guidance for academic and career related issues. Staff is appointed to help students to solve their personal problems and to provide counseling. Individual counseling is provided for tackling various personal and psycho-social problems faced by the students. In addition, career counseling services are provided by T&P cell, Alumni and Industry experts.

**5.1.9 Does the institution have a structured mechanism for career guidance and placement of its students? If “yes”, detail on the services provided to help students identify job opportunities and prepare themselves for interview and the percentage of students selected during campus interviews by different employers (list the employers and the Programmes).**

Yes, the institute has a structured mechanism for career guidance and placement of students. There is a separate training and placement cell headed by Training and Placement officer with two coordinators and faculty from each department as a member. T&P cell conducts various sessions to provide career guidance for third year students. These sessions provide information regarding competitive examinations like GRE, GMAT, GATE etc.

Students are also trained for Aptitude, logical reasoning to enable them for placement. Sessions are organized by HR personnel of various companies to make the students aware of current industrial trends and requirements.

Training and placement officer looks after:

1. Liasoning with industries for training and placement of students.
2. Training of students by HR managers.
3. Need based training for students.
4. On campus placement.
5. Collecting feedback from industries while visiting campus for placement

Efforts are also being made by the departments to organize various training programs for the placement. The department ensures interaction with alumni, during their visits to the campus, to share their experiences about the industry needs and guide the students for their placements.

Sr. No.	Year	Number of Companies Visited	% Placement	Programmes
1	2012-13	05	21% 14% -- -- 25% 10% 02%	Civil Engineering, Computer Engineering, Electrical Engineering, Electronics and Telecommunication, Information Technology, Mechanical Engineering, Instrumentation Engineering
2	2013-14	04	-- 11% -- 04% 24% 04% 05%	Civil Engineering, Computer Engineering, Electrical Engineering, Electronics and Telecommunication, Information Technology, Mechanical Engineering, Instrumentation Engineering
3	2014-15	19	03% -- 08% 04% 02% 08% 13%	Civil Engineering, Computer Engineering, Electrical Engineering, Electronics and Telecommunication, Information Technology, Mechanical Engineering, Instrumentation Engineering
4	2015-16	01	-- 01% -- -- -- -- --	Civil Engineering, Computer Engineering, Electrical Engineering, Electronics and Telecommunication, Information Technology, Mechanical Engineering, Instrumentation Engineering

Major Recruiters are:

Sr.No.	Name of Company	Sr.No	Name of Company
1	Neptunes Power Plank Services Pvt. Ltd. Mumbai	10	Wipro (Oxia)
2	Accordshine , Nagpur	11	Baroda informatics Pvt. Ltd. Baroda
3	Tristar, Mumbai	12	Variotional Technologies (L&T)(Reliance)(HAL)
4	Toshniwal Systems and Instruments Pvt. Ltd. Mumbai	13	Adicon Engineering Pvt. Ltd.
5	Ajinkya Electronics	14	Luna Chemical Industries pvt. Ltd.
6	Tech Anugraha Pvt. Ltd.	15	Autisys ,pune
7	Systel, Pune	16	Pune Elevators, Pune
8	Blue Star , Selvasa	17	Elegance Switches,Baroda
9	Servo Tech, Baroda	18	Endurance Technology,Aurangabad

**5.1.10 Does the institution have a student grievance redressal cell? If yes, list (if any) the grievances reported and redressed during the last four years.**

Yes, the institute has a student grievance redressal cell comprised of the head of the institute, head of all departments, senior faculty members and class teachers. The cell takes care of students grievances. Students can apply to the cell for redressal of grievances. The cell solves issues related to inadequate facilities, recess timings, sanitation, etc.

**5.1.11 What are the institutional provisions for resolving issues pertaining to sexual harassment?**

The following committees carefully monitor and address the grievances of staff and students in the institute:

1. Anti-ragging committee
2. Women grievance redressal committee

The cell holds periodic meetings and strives to create awareness amongst faculty, staff and students. Grievances, if any, are thoroughly investigated and efforts are taken to ensure that justice is meted to the victim/complainant.

Sr. No.	Name of staff member	Responsibility
1	Prof. Mrs. M. S. Chaudhari	Chairman
2	Prof. Mrs. J. H. Patil	Member
3	Prof. Smt. K. A. Patel	Member
4	Shri D. N. Patil	Member
5	Mrs. Shakuntala M Patel	Member
6	Smt. Usha C.Patil	Member
7	Ladies Hostel Rector	Member

**5.1.12 Is there an anti-ragging committee? How many instances (if any) have been reported during the last four years and what action has been taken on these?**

Yes, the institute is very much cautious regarding this menace. The institute has set up a committee, the anti-ragging committee, for this purpose as per UGC guidelines. As per guidelines undertaken from students and parents are taken every year. Anti-ragging slogans and important clauses of anti-ragging act are promulgated at prominent places along with phone numbers of concerned authorities including Chairman, anti-ragging committee, Rectors and Hostel Superintendents. As a part of awareness programs anti-ragging videos are shown to students in college as well as hostels.

Till date, no incident of ragging of any kind has been reported or noticed in the institute.

**Anti-ragging committee for institute**

Sr. No.	Name of staff member	Responsibility
1	Prof. Dr. N. J. Patil	Chairman
2	Prof. R. G. Patil	Member
3	Prof. R. S. Patil	Member
4	Prof. Pankaj R. Patil	Member
5	Prof. K. A. Patel	Member
6	Shri. D. N. Patil	Member
7	Ladies Hostel Rector	Member

### 5.1.13 Enumerate the welfare schemes made available to students by the institution.

Following are the welfare schemes available to the students:

Book bank facility for students.

### 5.1.14 Does the institution have a registered Alumni Association? If 'yes', what are its activities and major contributions for institutional, academic and infrastructure development?

Institute has functioning Alumni Association.

Following are the activities carried out by Alumni.

- Guide the students in placement and higher studies.
- Provide employment to the students
- Awarding the best outgoing students with a cash prize every year
- Sponsoring various prizes for extracurricular events, co-curricular events like student conferences etc.
- Conducting mock interviews and resume writing sessions for enhancing placements
- Arranging guest lectures by alumni members and other prominent people for students on current technical and non-technical topics
- Helping students to get sponsored projects and internships
- Donating books to library

## 5.2 Student Progression

### 5.2.1 Providing the percentage of students progressing to higher education or employment (for the last four batches) highlight the trends observed.

Student progression	No of Students			
	2012-13	2013-14	2014-15	2015-16
UG to PG				
Civil	18.18%	5.74%	8.10%	8.33%
Computer	3.84%	2.5%	2.59%	5.76%
Electrical	7.69%	10.81%	8.33%	14.03%
Electronics and Telecommunication	18.46%	13.15%	10.93%	6.66%
Information Technology	0.00%	0.00%	0.00%	0.00%



Mechanical Engineering	3.27%	2.43%	0.00%	0.00%
Instrumentation Engineering	25.53%	31.03%	21.05%	23.52%
PG to M.Phil	--	--	--	--
PG to PhD	--	--	--	--
Employed :				
- Campus selection	7.93%	5.60%	5.13%	0.32%
- Other than campus recruitment	50.70%	40.42%	29.97%	22.22%

**5.2.2 Provide details of the programme wise pass percentage and completion rate for the last four years (cohort wise/batch wise as stipulated by the university)? Furnish programme-wise details in comparison with that of the previous performance of the same institution and that of the Colleges of the affiliating university within the city/district.**

The programme wise details of the institute in comparison with the performance of previous years are given below:

UG Branch	Year 2012-13		Year 2013-14		Year 2014-15		Year 2015-16	
	College Result %	Univer sity Result %	College Result %	Univer sity Result %	College Result %	Univer sity Result %	College Result %	Univer sity Result %
Civil	90.00	93.86	52.38	78.08	53.90	77.73	87.50	91.00
Computer	76.00	91.55	84.61	86.64	75.33	88.62	82.89	93.19
Electrical	91.80	95.53	95.78	94.55	97.22	91.44	98.24	96.20
Electronics and Telecomm.	96.72	93.67	79.45	81.83	81.00	79.23	84.21	87.50
Information Technology	95.65	94.60	100.00	93.17	90.90	86.57	86.36	87.63
Mechanical Engineering	61.01	68.86	56.80	54.07	62.02	67.08	65.85	68.85
Instrumentation Engineering	90.70	86.00	86.20	85.00	84.21	82.00	80.30	77.00

### **5.2.3 How does the institution facilitate student progression to higher level of education and/or towards employment?**

The institution facilitates student progression to higher level of education and employment by following means –

- The institute has well established library with adequate books for GATE examination and CDs for self-training. It organizes seminars and lectures on opportunities for higher education, and interaction with alumni for education abroad etc.
- The T&P cell organizes Personality development program, technical training/workshops, foundation course for UPSC/MPSC examinations, industrial visits and industrial trainings.
- T&P cell conducts various training sessions to brief the students about the current scenario in industries and industrial requirements as fresh graduate trainee engineer.

### **5.2.4 Enumerate the special support provided to students who are at risk of failure and drop out?**

Special support is provided by all departments to students who are academically weak. Additional practice sessions and mock tests are conducted for these students. The subject teacher identifies the students who are at risk of failure through internal and end semester exam of University. These students are given extra assignments and remedial lectures. The institute organizes remedial classes for such students. If needed, the faculty members interact with the parents also.

## **5.3 Student Participation and Activities**

### **5.3.1 List the range of sports, games, cultural and other extracurricular activities available to students. Provide details of participation and program calendar.**

Institute conducts various sports, games, cultural and other extracurricular activities for students

Students had participated and won prizes in inter collegiate / university / national level games. Range of sports and games available to students are Football, Cricket, Volleyball, Basketball, Kho-Kho, Kabaddi, Handball, Athletics, Archery, Hockey, Badminton, Table Tennis, Chess, Carom, Billiards, Fencing etc.

The range of cultural activities available for students are Annual cultural event, Music, Traditional day, Mimicry, Singing, Dancing, Photography, Debate, Painting, Rangoli, Mono acting, fashion show etc.

The extra-curricular activity includes tree plantation, blood donation, cleanliness drive, etc

Name of Event	Number of Students Participated		
<b>Year 2015-16</b>			
	Inter collegiate	Inter group	Inter university
Basketball (Men)	07	--	--
Volleyball (Women)	09	--	--
Volleyball (Men)	12	--	--
Kabbadi (Men)	12	--	--
Cricket (Men)	16	03	--
Chess (Mix)	05	04	01
Table Tennis (Women)	04	02	--
Table Tennis (Men)	06	03	--
Badminton (Women)	04	--	--
Badminton (Men)	07	04	--
Singing competition	13	--	--
<b>Year 2014-15</b>			
Basketball (men)	11	02	--
Basketball (Women)	06	02	--
Hockey (Men)	15	07	01
Volleyball (Men)	12	--	--
Football (Men)	14	04	--
Baseball (Men)	12	01	--
Chess (Mix)	04	01	--
Cricket (Men)	16	03	01
Softball (Men)	10	01	01

Poem competition	01	--	--
Singing competition	04	--	--
Year 2013-14			
Basketball (men)	11	--	--
Hockey (Men)	16	04	--
Volleyball (Men)	12	--	--
Kabbadi (Men)	10	01	--
Football (Men)	16	05	--
Baseball (Men)	15	04	01
Chess (Mix)	04	01	--
Table Tennis (Men)	05	02	--
Cricket (Men)	16	01	01
Badminton (Men)	10	04	--
Softball (Men)	15	01	01
Athletics	06	01	--
Khandesh ideal	01	--	--
Year 2012-13			
Basketball (men)	09	01	--
Basketball (Women)	07	02	--
Hockey (Men)	16	03	--
Volleyball (Men)	12	--	--
Football (Men)	16	04	--
Baseball (Men)	01	01	--
Table Tennis (Men)	05	03	--
Chess (Mix)	04	04	--
Cricket (Men)	16	02	--
Badminton (Men)	07	--	--
Judo (Men)	01	01	--
Dance competition	13	--	--

## Tentative Sports Calendar (2015-16) table

Sr. No.	Particular	Date
01	Starting of college	14/07/2015
02	Registration of students for different sports activities	25/07/2015 To 08/08/2015

03	Practice session	01/08/2015 onwards
04	Selection of team for different events	Before 1 month as per event schedule
05	Inert college ,group, inert university	03/09/2015 to 28/02/2016
06	Annual sports	09/02/2016 to 12/02/2016
07	Prize distribution	14/03/2016

**5.3.2 Furnish the details of major student achievements in co-curricular, extracurricular and cultural activities at different levels: University / State / Zonal / National / International, etc. for the previous four years.**

Students of the institute participate actively in a large number of extracurricular, co-curricular activities and have won accolades for the same. The representative list of their participation and achievements at different levels in the past four years is given below:

Name of Event	Level	Awards (Number of Students)
<b>2015-16</b>		
Paper Presentation	National /University	11
Poster Presentation	National /University	2
Project Exhibition	National /University	1
Avishkar	University	-
Other if any		35
<b>2014-15</b>		
Paper Presentation	National /University	01
Poster Presentation	National /University	-
Project Exhibition	National /University	-
Avishkar	University	-
Other if any		12
<b>2013-14</b>		
Paper Presentation	National /University	02

Poster Presentation	National /University	-
Project Exhibition	National /University	-
Avishkar	University	-
Other if any		06
<b>2012-13</b>		
Paper Presentation	National /University	03
Poster Presentation	National /University	-
Project Exhibition	National /University	03
Avishkar	University	-
Other if any		10

Some of the student achievements in Extra-curricular activities

Students selected for Inter-University Sports

Name of Event	Year	Number of Students Participated
Chess (Mix)	2015-16	01
Hockey (Men)		01
Cricket (Men)	2014-15	01
Softball (Men)		01
Baseball (Men)		01
Cricket (Men)	2013-14	01
Softball (Men)		01
Badminton (Men)	2012-13	01

Some of the student's achievements in Cultural Activities

Cultural Activities University / State / National Level Events:

- University Level Events:
- National Level Events:

**Medals / Prizes won by the students in Cultural Activities:**

Achievements	2015-16	2014-15	2013-14	2012-13
Gold medal /I prize	--	--	--	--
Silver medal/ II prize	--	--	--	--
Bronze medal/ III prize	--	--	--	--

**5.3.3 How does the college seek and use data and feedback from its graduates and employers, to improve the performance and quality of the institutional provision**

The college seeks the written and verbal feedback from its alumni and employers. It also collects the feedback from recruiters, who visit the campus for placement. These feedbacks serve as essential tool for the institution to augment technical and soft skills of the students and to nurture their diverse talents through systematic and planned activities.

**5.3.4 How does the college involve and encourage students to publish materials like catalogues, wall magazines, college magazine, and other material? List the publications/ materials brought out by the students during the previous four academic sessions**

The college encourages all the students to publish their articles/papers in magazines /journals. The college organizes student technical paper presentation under the name “tech fiesta” series every year. The department also organizes paper and poster presentation competition

**5.3.5 Does the college have a Student Council or any similar body? Give details on its selection, constitution, activities and funding.**

Every department has its student association consisting of two students from each class, a student coordinator, two faculty advisors and Head of the department. The association is responsible for conduct of various activities like fresher’s welcome, teacher’s day celebration, aptitude test, quiz, debate competition, group discussion etc. Provision of funds is made to conduct these activities in the institute budget.

The student council is constituted as per the university norms which include a class representative from each class on merit basis, a student representative nominated by sports committee, a student representative nominated by cultural committee, a girl student from backward category. From these students a University Representative (UR) is elected who represents students of the college

at university level. He/ She is responsible for putting up the students related issues at university level.

#### **5.3.6 Give details of various academic and administrative bodies that have student representatives on them organized by students**

Student representation and participation has been an integral part of academics as also of the various activities of the college. Student representation is also in the following :

- IQAC
- All organizing committees for seminars, conferences and workshops conducted for students by the institute
- All Department Association activities of students and annual festivals are organized by students
- Student Council
- Library Committee
- Student Chapters of Professional Society
- Cultural & Extra-co-curricular activity
- Sports activity

#### **5.3.7 How does the institution network and collaborate with the Alumni and former faculty of the Institution.**

The institute organizes Alumni Meet every year. Heads of the Departments, faculty and staff are in constant touch with the alumni through e-mail, social media and various activities conducted by alumni association. Alumni are invited to deliver expert lectures and evaluate student projects. Faculty members are in personal touch with former faculty and collaborate for conducting faculty development programs, workshops etc.

The institute has good relation with its former faculty members, which has resulted in joint paper publications, organization of industrial visits and expert lectures etc. Some of the alumni are former faculty member of this institute.



## CRITERION – VI GOVERNANCE, LEADERSHIP AND MANAGEMENT

### 6.1 Institutional Vision and Leadership

**6.1.1 State the vision and mission of the Institution and enumerate on how the mission statement defines the institution's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, institution's traditions and value orientations, vision for the future, etc.?**

VISION : "To be recognized as an international leader in engineering education, research and the application of knowledge to benefit society globally."

MISSION : To mould generation to new technology of high order that can meet the challenges in the fast developing technological world by shaping discipline, competence and character of technocrats.

Both the vision and mission of the institution are in tune with the objectives of the Technical Education policies of the Nation. The institution is covering basic as well as technical knowledge. The institution admits students from reserved categories, open categories and minority status. Through its academic policy, extension activities and extra and co-curricular activities it helps the students in acquiring knowledge, good citizenship, culture, developing life skills as well as training them for successful careers. It tries to sensitize the youth to the needs of the marginalized sections of society and constantly strives for community and social development. With the objective of inclusive growth it tries to reach out and help socially and economically backward and differently-able students, by constituting various measures in its operations.

Quality education, as characteristic of the institute, is provided by recruiting and retaining experienced and quality faculty of good repute, exposing to practical applications and industry, continuous evaluation of students, interaction of students with eminent personality from industry and academics, conducting training and workshops, implementing mentoring system etc.

Institute provides conducive environment through its green and clean campus, well equipped and ventilated class rooms and laboratories, facilitating transportation, hygienic canteens, sports, yoga hall etc. Cordial and friendly atmosphere is

maintained through cultural activities. Various committees like anti ragging, sexual harassment etc. ensures the congenial atmosphere.

Institute prepares competent, value added and patriotic engineers by organizing various workshops and training programs, activities like Techfiesta, experts/guest lectures etc. Patriotism is inculcated through celebration of Independence day, Republic day etc.

Well-equipped library, Wi-Fi campus, subscription of e-journals, Entrepreneurship Awareness Camp, paper presentation, virtual class room, self-study material, robo club etc. increases the competency of the students and faculty members.

### **6.1.2 What is the role of top management, Principal and Faculty in design and implementation of its quality policy and plans?**

The role of top management, Principal and Faculty in design and implementation of its quality policy and plans is as follows:

The management, the Principal and faculty members are always working together for designing and implementing the quality policies and plans. The Principal of the college is the head of the institution and ensures that all provisions of the AICTE, University by laws, the statutes and the regulations are followed. The Head of Departments (HoDs) and faculty members are actively involved in the decision making process. The faculty members in the capacity of teacher representatives are members of the Local Management Committee (LMC). The Principal frequently interact with the management on the account of proposals on infrastructural facilities, funds received and the expenditures incurred for better financial management and accountability. Hence, the management, the Principal, HoDs and faculty members are actively involved in the decision making process to sustain and enhance the quality of education imparted by the institution.

The recommendations of HoDs approved in LMC's are put up to Governing Body (GB) for ratification. After confirmation by GB the plans are implemented by the Principal through the concerned.

The management always takes step to provide quality infrastructure and updates facilities for better learning. The management has introduced new program- M.E. Mechanical Engineering and ME- Electronics and Telecommunication Engineering in 2011-12 and 2012-13 respectively. For this an additional infrastructure viz. two

Laboratories and two tutorial rooms are provided for each. Provision of books and e-journals are also made.

### **6.1.3 What is the involvement of the leadership in ensuring?**

- 1. The policy statements and action plans for fulfillment of the stated mission.**
- 2. Formulation of action plans for all operations and incorporation of the same into the institutional strategic plan.**
- 3. Interaction with stakeholders.**
- 4. Proper support for policy and planning through need analysis, research inputs and consultations with the stakeholders.**
- 5. Reinforcing the culture of excellence.**
- 6. Champion organizational change.**

The head of the College has long term vision for both, academics and administration. He guides, initiates, persuades and convinces the staff to actively involve themselves in realizing the goals and objectives of the Management of the College. In addition to this, he also co-ordinates with outside agencies like University authorities, DTE office, Joint Director's office and other government bodies to comply with necessary regulations. The Principal also follows an open door communication system and often allows the staff to come up with their constructive suggestions and grievances if any and goes out of the way to address them. The policy statements and action plans are formulated after careful consideration of all by the Principal.

The action plans for operations are prepared under the supervision and guidance of the Principal and Heads of the Departments. Teaching Plans, time table arrangements, various committees are initiated into their defined roles in formulating and achieving the strategic plan

The institute organizes meets with stake holders such as alumni, parent and industrialists. The feedback, opinions of these stake holders are taken into consideration wherever necessary. The leadership plays the role of mediator and coordinator between the external and internal members contributing to the process of designing and implementation of the policy and plans.

The academic terms, co-curricular and extracurricular activities, review of action plan are considered while formulating the policy statement and action plans. The major

policy decisions are taken in the meeting of management and key persons once in two months.

Following are activities of the leadership showing its involvement in reinforcing the culture of excellence.

The leadership appreciates the faculty / staff for their achievements. The leadership invites eminent academicians, scientists, industrialists and others to enlighten the staff on issues of the invitee's expertise. The leadership also organizes orientation programs for teachers.

Following are the activities of the leadership showing its involvement in championing the organization change.

The leadership has inculcated a sense of belonging towards the Institute among the staff. The leadership makes the staff aware and persuades them about the need in organizational changes and before initiating the changes takes the staff into confidence.

#### **6.1.4 What are the procedures adopted by the institution to monitor and evaluate policies and plans of the institution for effective implementation and improvement from time to time?**

There are clear cut procedures in place in the College to monitor and evaluate policies and plans for effective implementation and improvement from time to time. Our College has a duly constituted Local Management Committee, College Committee etc. which enables the Management/ Head of the institution to get adequate information in order to review the activities of the College. Staff members have to fill in the Academic Performance Indicators (API) forms annually according to UGC regulations. The Head of the College gives them constructive feedback regarding the same. Monthly staff meetings are held to take stock of the activities undertaken by the various Committees.

#### **6.1.5 Give details of the academic leadership provided to the faculty by the top management?**

The top management is always supportive towards academics and academic work in the College. The faculty members are invited for meetings and discussions about various issues. This creates a healthy working atmosphere. The staff is given the authority and responsibility to complete the desired academic task in the best possible manner within the stipulated time. The Principal is very vigilant about

discipline, commitment and devotion towards the work allotted to the staff. This blend of control with active participation of the staff is the distinguishing feature of our College which has allowed the head to get the spontaneous and unrequited support from the staff. This kind of leadership has generated a sense not only of belonging but also of dedication among the staff members.

#### **6.1.6 How does the college groom leadership at various levels?**

All the staff members are involved in different activities in the College. The senior staff members are appointed as conveners of various committees and are given full autonomy in decision making. Various co-curricular and extra-curricular activities are conducted through student committees with office-bearers. In this way the College grooms leaders at higher levels, teaching staff, non-teaching staff and students.

#### **6.1.7 How does the college delegate authority and provide operational autonomy to the departments / units of the institution and work towards decentralized governance system?**

The Management gives sufficient freedom to the Principal, who is the academic head of the institution to function in order to fulfill the vision and mission of the institution. Academic responsibilities are fairly divided among all the staff members. Committees are appointed for the various academic and co-curricular activities to be conducted in the course of the academic year. The list of committees is displayed at the beginning of the year on the staff notice-board. This ensures transparency in policy execution. The responsibilities are communicated to the faculty members through regular staff meetings. Various co-curricular and extra-curricular activities are conducted through student committees having a lecturer-in-charge. The Principal of the College holds regular meetings with the teaching and non-teaching staff. In these meetings, various issues are taken up for discussion before arriving at a final decision. The Heads of Departments monitor the functioning of the various departments. The participative decision-making ensures total participation of all the people concerned. The office administration of the College is headed by the Registrar under whom there are Office Superintendents, Head Clerks, Senior Clerks, Junior Clerks and other Class III and Class IV Staff. The Registrar in consultation with the Principal coordinates the day-to-day activities.

**6.1.8 Does the college promote a culture of participative management? If yes, indicate the levels of participative management.**

The Management is always open to discussion with the teaching and non-teaching staff which, in turn, encourages the involvement of the staff for the improvement of effectiveness and efficiency of the institutional process. There are regular meetings of office bearers and Management representatives. There is a Local Managing Committee in the College.

The constitution of the Local Managing Committee is  
 President/Chairman of Governing Body or his nominee: **Mr. Dipakbhai P. Patil**  
 Secretary of the Management or his nominee: **Mr. Makarand N. Patil**  
 A Representative of Management: **Mr. Pandurang R. Patil**  
 Local Members representing different areas nominated by the Management:

**Mr. Haiderbhai Noorani**- Social Worker

**Mr. Kishorbhai N. Patil**- Educationist

Teachers elected by the staff: **Mr. S. J. Dahiwelkar**

**Dr. S. U. Chaudhari**

**Mr. H. G. Patil**

Non-Teaching employee: **Mr. S. D. Patil**

Principal - as Secretary of Local Management Committee: **Dr. P. D. Patil**

Vice-Principal: **Prof. S. U. Patel**

The function of the Local Managing Committee is to ensure improvement and up gradation of existing curricular or co-curricular activities.

## **6.2 Strategy development and deployment**

**6.2.1 Does the Institution have a formally stated quality policy? How is it developed, driven, deployed and reviewed?**

Our College is committed to impart Quality education to the youth enabling them to develop the right attitude, professional competence and inculcating the right ethical values. We have a formally stated Quality Policy

**Quality policy**

We at D. N. Patel college of Engineering are committed to impart Quality Education to youth, enabling them to develop right attitude, professional competence and enabling right ethical values

**This Shall Be Achieved By .....**

- Providing excellent infrastructure and conducive learning environment
- Building a harmonious work culture and motivating everybody to contribute the best.
- Proactively responding to changing needs of industry, parents and the society by embracing latest technological trends in the field of education.

The College has very effective internal co-ordination and monitoring mechanisms. The Principal of the College takes initiative to ensure effective co-ordination between and among the functionaries of the college. On the basis of various policies formulated, objectives are laid down and plans made, a regular follow-up is maintained, thereby encouraging greater support and co-ordination. The Heads of Departments and teachers co-ordinate and plan their individual departmental activities and report to the Principal accordingly. The non-teaching staff also works under the instructions of the Principal and the Registrar, thereby coordinating the entire administration work. The Internal Quality Assurance Cell established in the academic year 2012-13 on the basis of the guidelines set forth by NAAC, helps the Principal and Registrar to coordinate and monitor the various activities. The different reports such as departmental reports, performance appraisal reports, self-appraisal reports, College annual reports, directives from government etc. become the base for analyzing and evaluating the overall performance of the institution. This also forms the basis for the future plan of action.

**6.2.2 Does the Institute have a perspective plan for development? If so, give the aspects considered for inclusion in the plan.**

The perspective institutional plan is developed by the Principal in consultation with members of the Management, Vice Principal, Heads of various Departments and the Registrar, who is the administrative head. The Academic Committee comprising the Principal, Vice Principal and Heads of Departments meet twice during each academic year. On the basis of the admission schedule, the number of teaching days and

examination schedule, the professor-in-charge of the Academic Committee prepares Academic Calendar for the academic year. This calendar includes a list of the pre-planned lectures, programmes and activities to be conducted. It is prepared in consultation with teachers and administrators, and hence they are automatically involved in the planning process. These plans are improved regularly to ensure development of the College.

Following are the perspective plans for development:

- To implement rain water harvesting scheme.
- Solar electrification for library reading room.
- Solar water heater for institute hostels.

### **6.2.3 Describe the internal organizational structure and decision making processes.**

#### **PSGVPM's Management**

Our College is managed by Pujya Sane Gurugi Vidya Prasarak Mandal, which has its governing body to take care of various educational institutions. However, the administration of D. N. Patel Engineering College is the responsibility of the Principal who is directly accountable to the parent body. The Managing Council of PSGVP Mandal controls and plans the finance and approves the schemes of development.

#### **Principal and Vice Principal**

The Principal and Vice Principals are involved in overlooking the implementation of the plans of the College. They ensure that regular day to day operations are properly conducted through feedback from conveners, teaching and non-teaching staff.

#### **Local Management Committee (LMC)**

The Local Management Committee is the Statutory Body, formed as per Section 85 of the Maharashtra Universities Act, 1994. The powers and duties of LMC are stated in the same. The LMC comprises elected representatives of teaching and non-teaching staff, Chairman, Secretary and a representative of Management and



experts from various fields. This Committee can make recommendations for the improvement and up gradation of existing academic and extra- curricular activities.

### **Heads of Departments**

The Heads of Departments ensure that the plans communicated to them by the Principal are implemented systematically.

### **Committees for Co-curricular and Extra- curricular activities**

The committees are formed at the beginning of the year and are assigned the tasks according to the institutional plans, for the co- curricular activities that enhance overall development of students.

### **Administrative Committees [ Examination, Unfair Means Inquiry, Scholarship, Purchase, Discipline, Gymkhana, Admission, library etc]**

For the smooth conduct of all administrative activities according to requirements of academic bodies and government rules, there are committees headed by senior faculty to guide the function.

### **6.2.4 Give a broad description of the quality improvement strategies of the institution for each of the following**

- **Teaching & Learning**
- **Human resource management**
- **Industry interaction**
- **Teaching- Learning**

Teaching plans are prepared for a semester. These get verified and checked at different stages in accordance with syllabus and scheme of examination given by North Maharashtra University.

The teaching – learning process is facilitated through qualified, trained and experienced faculty. Apart from class-room teaching, students are encouraged to use library and internet facilities. The teaching staff maintains diary and record daily instruction delivered, practical conducted and other such activities performed. Any short time responsibilities (Extra lecture, duties for seminar etc.) are properly recorded and informed to concerned authority. The teaching plan is drawn up month wise by each department and it is strictly monitored by the Heads of Department with the help of Monthly Monitoring Sheets. The effectiveness of teaching – learning process is reviewed on regular basis. The

inputs for such review may be from:

- Students' feedback.
- Results of internal tests.
- Quality of assignment submitted.
- Final results of term / year.

The teaching and learning process is reviewed by head of the department for the concerned teaching faculty and the feedback is communicated. The concerned faculty then plans for improvements which are monitored on a regular basis for their effectiveness.

- **Human resource management**

The College has adopted a mandatory Self-Appraisal Method to evaluate the performance of the faculty in teaching, research and extension programmes. At the end of the academic year every teacher is given an Academic Performance Indicator (API) form on the basis of the UGC regulations. The form requires the teacher to give his/her self-evaluation of the academic, co-curricular and extra-curricular work done during that year. It also requires the teacher to enumerate the papers presented at conferences, seminars, refresher courses and orientation programmes he/she has attended. The report to be filled in by each teacher is also evaluated and it analyses the duties performed with respect to lectures completed as per the teacher's planned lecture schedules, lectures taken. The Principal appreciates during monthly staff meetings notable performance of any faculty member and then persuades the other faculty members to follow such best practices in the interest of the College and self- development. The evaluation of teaching faculty by the student and the peers has been adopted in our college which helps in self-evaluation and development.

- **Industry interaction**

Experts are invited from various fields to deliver guest lectures and industrial visits are arranged. Many students are placed every year in different organizations through campus interviews conducted in our college, in collaboration with prominent industries.

**6.2.5 How does the Head of the institution ensure that adequate information (from feedback and personal contacts etc.) is available for the top management and the stakeholders, to review the activities of the institution?**

The student's feedback on various aspects of College facilities is regularly gauged and improvement plan as per the comments received are initiated. The institute collects on regular basis feedback from students on Quality of Education, Provision of resources etc. The feedback forms collected from students are analyzed and improvement plan to enhance Quality of Education are initiated. The students feedback related to teaching learning process is communicated to faculty for improvement. Wherever possible, the institution plans for meeting with parents for briefing them regarding progress of students. The brief summaries of feedback received are discussed in the IQAC meetings.

**6.2.6 How does the management encourage and support involvement of the staff in improving the effectiveness and efficiency of the institutional processes?**

The Management through the Principal involves the staff members in various activities related to the development of the college. While introducing anything new to the teaching and non-teaching staff, the objectives of the College are communicated. A monthly appraisal of achievements in accordance with the objectives ensures that every individual employee makes constructive contribution for the development of the College.

**6.2.7 Enumerate the resolutions made by the Management Council in the last year and the status of implementation of such resolutions.**

The Management of our College has been indeed very active, supportive and co-operative. The office-bearers are available on the College premises every Wednesday and Saturday, where staff members can meet them and freely express their views, suggestions and grievances. The Management refers these to the appropriate committees/ office, through the Principal, for necessary action. The meeting of the Management with the Staff has always been purpose-oriented. Generally, at least twice a year, such meetings take place. Some of the resolutions that were taken to enhance institutional performance were:

- To modernize and upgrade facilities in the Auditorium.
- To renovate the office and painting the building.
- To have an interior painting.
- To apply for awards offered by various authentic academic bodies.

**6.2.8 Does the affiliating university make a provision for according the status of autonomy to an affiliated institution? If yes, what are the efforts made by the institution in obtaining autonomy?**

Yes, University has a provision for according the status of the autonomy to the affiliated institution; however, the college is not opting for the status of autonomous institute.

**6.2.9 How does the Institution ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyze the nature of grievances for promoting better stakeholder relationship?**

The institution has grievance redressal committee to resolve the grievances/complaints. The meeting is held every month. If there are any grievances, they are put up in this committee through proper channel. After discussion appropriate decisions are informed to the concern through the Principal. The institute has sexual harassment committee for addressing the issues related to the girls students and female faculty members

There is a separate student's grievance redressal committee which takes care of students grievances.

Grievances addressed in the last four years are:

- Provision of sufficient number of computers with internet in the library.
- Provision of laptops to each department.
- Provision of mobile mike system to individual teachers.
- Housekeeping was told to clean washrooms and classrooms more frequently.
- Blackboards, benches and fans are repaired timely as per the Problem reporting forms.

**6.2.10 During the last four years, had there been any instances of court cases filed by and against the institute? Provide details on the issues and decisions of the courts on these?**

No

**6.2.11 Does the institution have a mechanism for analyzing student feedback on institutional performance? If yes what was the outcome and response of the institution to such an effort?**

As per the recommendations of the NAAC Peer Team, the College has introduced a system of feedback from the students. A Committee has been formed for this purpose. It includes the Principal, and Senior teachers from various departments. The feedback is analyzed and corrective measures are taken.

### **6.3 Faculty Empowerment Strategies**

**6.3.1 What are the efforts made by the institution to enhance the professional development of its teaching and non-teaching staff?**

The College regularly conducts seminars and conferences at the state/national/international level. At these seminars and conferences, the faculty gets an opportunity to interact with experts from different fields.

Faculty members are encouraged to attend seminar and conferences. Experts from the industry and academia are called to address the staff. Monetary incentives to staff members who complete their Ph.D.

Faculty members are encouraged to take up Minor and Major research projects.

**6.3.2 What are the strategies adopted by the institution for faculty empowerment through training, retraining and motivating the employees for the roles and responsibility they perform?**

The College maintains the record of the faculty in Faculty Profile detailing education, experience and training. The institution also works out Competency Based Skill Matrix for different levels vis-à-vis area of operation.

Staff members also work as members of committees under a senior staff member. In due course of time the staff member may be made in charge of the given committee. Once a

staff member is made in charge of a committee, complete freedom is given to him/her to plan and execute programs. Reasonable financial freedom is also given. The Principal holds regular meetings with faculty to get feedback on the progress made on the planned programs. Monthly reviews of activities planned and executed by the committees are regularly conducted.

**6.3.3 Provide details on the performance appraisal system of the staff to evaluate and ensure that information on multiple activities is appropriately captured and considered for better appraisal.**

Performance appraisal system is implemented as per the guidelines from UGC. The appraisal report of the faculty is submitted to the Principal through the respective heads of the departments. API forms are given to faculty every year.

Student feedback is taken on an annual basis and staff members are given a summarized report of the feedback. Staff members meet the Principal along with the HOD and necessary corrective measures are discussed.

**6.3.4 What is the outcome of the review of the performance appraisal reports by the management and the major decisions taken? How are they communicated to the appropriate stakeholders?**

The management plays an active role in the performance appraisal of the faculty. Student's feedback is taken and analyzed every year and the necessary steps are initiated. The parents are also involved in the feedback system. During mentor meetings a problem reporting form is circulated and action is initiated on the basis of their feedback. Feedback is taken from the parents during the tutor-mentor meetings through Parents feedback form. The feedback is examined and a report is compiled there from. On the basis of the report suitable changes are made in the College.

**6.3.5 What are the welfare schemes available for teaching and non teaching staff? What percentage of staff have availed the benefit of such schemes in the last four years?**

The welfare schemes available for teaching and non-teaching staffs are group gratuity scheme, group insurance scheme, medical aid in severe illness, free medical check-up, salary advance to non-teaching staff.

All retired staff members are benefited by group gratuity scheme. Salary advance is given to needy non-teaching staff.

**6.3.6 What are the measures taken by the Institution for attracting and retaining eminent faculty?**

Various measures are taken by the College for attracting and retaining eminent faculty. Faculty is encouraged to take both Minor and Major Research projects and full support is extended by the College. Faculties are encouraged to attend seminars and conferences. The institutional work is divided into various committees and autonomous headship is given to the faculty.

## **6.4 Financial Management and Resource Mobilization**

**6.4.1 What is the mechanism to monitor effective and efficient use of available financial resources?**

The College has very effective mechanism to monitor effective use of financial resources.

Expenses are first sanctioned by the Principal. The Principal of the College ensures that expenses are incurred for the purpose of implementing institutional plans.

For any requirement for equipment or other major items, requisition is submitted to purchase committee which is headed by the Principal. Purchase committee invites tenders from various suppliers. Their quotations are evaluated, comparative statement is prepared, suppliers are called for personal discussion and after comparing all aspects from various suppliers, orders are placed. This ensures that right equipment is purchased at most competitive price.

Further accounts of the institution are subject to audit-internal and external. Internal audit is conducted every quarter and any discrepancy noticed is brought to the notice of Principal.

Further budget is prepared at the beginning of the year and actual expenses incurred during the year are compared with budget and any major variation is discussed by the principal with concerned person.

#### **6.4.2 What are the institutional mechanisms for internal and external audit?**

**When was the last audit done and what are the major audit objections? Provide the details on compliance.**

The accounts of the College are audited regularly as per the Government rules. An internal auditor audits our accounts every quarter. The internal auditor checks receipts with fee receipts and payments with vouchers and necessary supporting. He also ensures that all payments are duly authorized. The external auditor conducts statutory audit at the end of financial year. The report of external auditor for last two years along with audited Balance Sheet and Income & Expenditure account is enclosed. The last audit for the year 2015-16 was completed in September, 2016 and there were no major audit objections in the same.

#### **6.4.3 What are the major sources of institutional receipts/funding and how is the deficit managed? Provide audited income and expenditure statement of academic and administrative activities of the previous four years and reserve fund/corpus available with institutions if any**

The major source of institutional receipts is student fees and there was no financial deficit. The details of audited income and expenditure statement of academic and administrative activities of the previous four years and the reserve fund/corpus are available with Institute.



**Table 6.1**  
**Details of Fees**

Sr. No.	Academic year	Amount Received
1	2012-13	6,23,73,597
2	2013-14	6.47.92.184
3	2014-15	6,91,79,765
4	2015-16	6,84,45,728

**6.4.4 Give details on the efforts made by the institution in securing additional funding and the utilization of the same (if any).**

The institute also receives the funds through testing.

**Table 6.2**  
**Details of funds from testing**

Sr. No.	Academic year	Amount Received
1	2012-13	21,375
2	2013-14	98,000
3	2014-15	46,870
4	2015-16	1,19,210

## **6.5 Internal Quality Assurance System (IQAS)**

### **6.5.1 Internal Quality Assurance Cell (IQA)**

- A. Has the institution established an Internal Quality Assurance Cell (IQAC)? If yes, what is the institutional policy with regard to quality assurance and how has it contributed in institutionalizing the quality assurance processes?**

The institutional policy with regard to quality assurance is reflected through the objectives of IQAC. The objectives of the IQAC are:

1. To develop a system to improve the academic and administrative performance of the institution.
2. To enhance research activities in the institute.
3. To optimize and integrate modern methods of teaching and learning.
4. To develop Quality culture in the institution.

IQAC meets once in a year and discusses about the improvement in teaching learning process. The resolutions passed in the meetings are circulated to all HoDs for effective implementation. Director of Academics (DoA) periodically takes feedback from the HoDs/ Faculty Members/ Students about the effective implementation of the resolution passed in IQAC about teaching – learning process. Contributions of IQAC in academics, administrative, research, usage of ICT are as follows:

- Encouragement to enhance Co-curricular and Extracurricular activities such as workshops, symposium, conferences, Student technical training programs, educational tours, motivational activities for students, faculty members and other staff.
- Suggestion for systematic planning of academic activities for teaching-learning and evaluations.
- Motivating faculty members to develop study material, lab manuals and to increase involvement in research activities.

**B. How many decisions of the IQAC have been approved by the management/ authorities for implementation and how many of them were actually implemented?**

All the decisions of IQAC are approved by the management for implementation and all are implemented. Some of the decisions implemented are as follows:

- To promote research and consultancy activities
- To provide financial assistance to innovative projects
- To use ICT tools for effective teaching-learning process

**C. Does the IQAC have external members on its committee? If so, mention any significant contribution made by them.**

Yes, there are external members in IQAC viz. Parents (2), Alumni (2), Employer (2).

Some of the contributions made by them are as follows:

A parent has suggested informing the attendance and marks of internal exam of the students through letters/ sms/ email.

Alumnus has suggested using ICT tools for effective teaching-learning process. Employer has suggested calling industry people for expert lecture, regular industrial visit and industrial trainings.

**D. How do students and alumni contribute to the effective functioning of the IQAC?**

Students and alumni members actively participate in all meetings and discuss the issues related to teaching-learning, co-curricular and extracurricular activities etc. They also give suggestions to improve overall functioning of the institute for the benefit of students.

**E. How does the IQAC communicate and engage staff from different constituents of the institution?**

The chairman and the coordinator of the IQAC have regular communication and meetings with the teaching staff, alumni, students, parents and employers through departmental meetings, alumni meet, parents meet etc. Also reviews/information obtained from the departments are shared with other members of the IQAC during its meeting for necessary steps.

**6.5.2 Does the institution have an integrated framework for Quality assurance of the academic and administrative activities? If yes, give details on its operationalization.**

The North Maharashtra University provides guidelines for the course syllabus, pattern of examination and passing criteria. As per the course design, College arranges term wise / year wise activities and plan for classes. The faculty ensure syllabus completion in particular academic year as per plan.

The college authority with the help of different committees plan for the activities as listed below:

- Term/ Annual academic calendar
- Term wise teaching plan
- Workload plan and allocation of resources
- Class wise time table.
- Examination schedule.
- Annual seminar / workshop schedule

- Annual plan for sports and extracurricular activities.

The College authority evaluates delivery effectiveness of teaching methods. The knowledge absorption / assimilation by students is also gauged suitably.

#### **Teaching Plan and Learning Process (TLP):**

- Teaching plans are prepared for a term. These get verified / checked at different stages in accordance with syllabus and scheme of examination given by North Maharashtra University Jalgaon.
- The teaching – learning process is facilitated through qualified, trained and experienced faculty with support from office staff. Apart from class-room teaching, students are encouraged to use library and internet facilities.
- The teaching staff maintains diaries and records their daily instructions delivered, practical conducted and other such activities performed.
- Any short term responsibilities (Extra lecture, duties for seminar etc.) are properly recorded and informed to concerned authorities.
- The effectiveness of teaching – learning process is reviewed on a regular basis. The inputs for such review may be from:
  - Students feedback
  - Results of internal tests
  - Quality of assignment submitted
  - Final results of term / year.

The T.L. process is reviewed by HOD for the concerned teaching faculty and feedback communicated. The concerned faculty then plans for improvements which are monitored on a regular basis for their effectiveness.

The student's educational needs and college administrative needs are managed through various operational committees. These committees have representation from faculty, staff and students. Each committee frames plans for its activities, schedules and monitors these activities to meet stipulated requirements. The committee seeks approval from Principal and briefs her on the status of its activities regularly. The convener of the committee is authorized to release final outcome / document of work in consultation with Principal. In this way the College has an integrated framework for quality assurance of the academic and administrative activities.

**6.5.3 Does the institution provide training to its staff for effective implementation of the Quality assurance procedures? If yes, give details enumerating its impact.**

Institute will motivate the staff members of the college to participate in workshops, training programs, seminars, conferences, publish paper in journals and to work in various committees of NMU for quality assurance.

**6.5.4 Does the institution undertake Academic Audit or other external review of the academic provisions? If yes, how are the outcomes used to improve the institutional activities?**

The NMU has constituted Quality Improvement and Control Committees to review the academic provisions of the institutes. The committee has visited the institute in 2015. This has standardized the administrative and academic procedures followed in the institute which has improved the teaching-learning process, facilitated stakeholders, fulfilled needs of students. Further it has enhanced employability among the students and helped in establishing the brand name of the institution which is reflected in the admission and placement scenario.

**6.5.5 How are the internal quality assurance mechanisms aligned with the requirements of the relevant external quality assurance agencies/regulatory authorities?**

Yearly visit by NMU LIC committee, NMU Gunvatta Sudhar Committee, DTE Maharashtra committee and NBA accreditation to the institute validates the same.

**6.5.6 What institutional mechanisms are in place to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?**

The mechanisms to continuously review the teaching learning process are:

- The College authority evaluates delivery effectiveness of teaching methods. The knowledge absorption / assimilation by students is also gauged suitable.
- Teaching Plan and Learning Process (TLP):
- Teaching plans are prepared for a term. These get verified / checked at different stages in accordance with syllabus and scheme of examination given by Mumbai University / UGC.
- The teaching – learning process is facilitated through qualified, trained and

experienced faculty with support from office staff. Apart from class-room teaching, students are encouraged to use library and internet facilities.

- The teaching staff maintains diary and record daily instruction delivered, practical conducted and other such activities performed.
- Any short term responsibilities (Extra lecture, duties for seminar etc.) are properly recorded and informed to concerned authority.
- The effectiveness of teaching – learning process is reviewed on regular basis. The inputs for such review may be from
  - Students feedback
  - Results of internal tests
  - Quality of assignment submitted.
  - Final results of term year.

The T.L. process is reviewed by HOD for the concerned teaching faculty and feedback communicated. The concerned faculty then plans for improvements which are monitored on a regular basis for their effectiveness.

Student feedback is taken for all the courses. The questionnaires are distributed to all sections and students are chosen on a random basis. Feedback forms are scrutinized and a report is compiled there from. These reports are confidential. The faculty is made aware about the feedback.

**6.5.7 How does the institution communicate its quality assurance policies, mechanisms and outcomes to the various internal and external stakeholders? Any other relevant information regarding Governance Leadership and management which the college would like to include.**

The institution communicate its quality assurance policies, mechanisms and outcomes to the various internal and external stakeholder through parents meet, alumni meet, annual functions, students induction program, students mentoring sessions, Principal's address at seminars/ conferences/ interactive sessions with stakeholders etc.

## Criterion VII: INNOVATIONS AND BEST PRACTICES

### 7.1 Environment Consciousness

#### 7.1.1 Does the institution conduct a Green Audit of its campus and facilities?

Yes, green audit of the campus and facilities is conducted at the Institute. Institute maintains high standard in terms of keeping the environment of the campus green and follows practices that are environment friendly.

Committee of staff members from Mechanical Department under the guidance of the Principal takes initiatives of making the campus environment friendly.

- A good number of trees in the campus are old.
- Plantation at the Institute consists of variety of plants.
- Audit of electricity/energy consumption is done by a team from Electrical engineering department.
- Rain water harvesting is done for reuse on-site to water the gardens and for domestic use.
- Specially appointed committee periodically reviews the status of equipments, machines, computers, accessories and lab setups. Those which are obsolete, unusable and non-repairable are scraped.
- Periodic calibration and maintenance of equipments is done to get the best performance.
- Swachha Bharat and Swastha Bharat Campaign initiatives are emphasized at the Institute.

#### 7.1.2- What are the initiative taken by the college to make the campus eco-friendly?

The college campus is totally eco friendly. For this the management, the head of the institution and the whole staff has taken initiation to make campus area neat and clean. Students of the Institute are enlightened about the importance of energy conservation. Seminars on awareness of energy conservation and renewable energy are arranged for students and faculty. This apart, the institution has taken several other steps/initiatives to make the campus eco-friendly:

#### **Energy Conservation:**

Awareness is created in the Institute to save energy by displaying posters and articles regularly.

- Building, classrooms and laboratories are designed in a way to have sunlight for utmost period of day hours and to have maximum ventilation and lighting.
- All ordinary lights are replaced by LEDs and CFLs.
- Electrical devices are switched off when not in use.
- Most of the Computer CRT monitors are replaced by LCD monitors to save energy.
- Students are encouraged to work on projects leading to energy conservation.
- Along with these mentioned initiatives, Electrical department has monitored and taken initiative of conserving electrical energy by improved power factor
- A project of solar energy generation at the institute is process, which is proposed to be installed at Institute level.
- Along with these mentioned initiatives, Electrical department has monitored and taken initiative of conserving electrical energy by improved power factor for last 5 years. This has lead to an incentive earning of approximately Rs. 2 lacs per annum from Maharashtra State Electricity Distribution Company Limited (MSEDCL).

#### **Use of Renewable Energy**

- Institute is conscious about use of renewable energy and constantly creates the awareness and motivates research and implementation in this area.
  - Institute has proposed solar roof top as a renewable source of energy.
  - Faculty and students are encouraged to work on projects on renewable energy.
- Institution is going to be develop the following projects soon,
- “Solar electrification” for Campus is to be developed by mech. dept.(proposed).
  - “Solar heating” of water supply to institute hostel to be developed by mech. dept.(proposed).

#### **Water harvesting**

Rain water:

The rain water harvesting to be developed by civil department is under processing. The rainwater over the large terrace is collected in the bore well which can be used in summer days.

#### **Efforts for Carbon neutrality:**

- The Institute religiously follows some baby steps in the view of carbon



neutrality.

- The college has made arrangements for the parking of the vehicles of the students in the college ground. This helps in keeping the campus as much as possible clean.
- Institute gardens are well maintained.
- Saving on power by the infrastructure is design to have lightened room.
- Diesel generator in the campus has auto change avoid delay of change over in case of failure of electricity.
- Use of plastic cup and poly-bags are strongly discouraged in the campus.
- Optimal utilization of print out papers is emphasized.
- ICT facilities are instituted at the Institute. Paperless office communication is practiced.
- The dead leaves and the waste papers are not allowed to be put on fire. The leaves are buried in the soil itself and the papers are disposed off.

### **Plantation**

- A lot of expenditure is incurred to keep the environment green. For this the college support staff is working very whole heartedly towards the trees are planted.
- Additional green area is created in the infrastructural space with the help of potted plants.
- Institute prefers to offer saplings to the guests instead of bouquets

### **Hazardous waste management.**

- Proper disposal of hazardous waste is done carefully by respective departments.
- The chips generated during machining and coolant waste are collected properly in the workshop at marked area and disposed out

### **e-waste management.**

- Awareness of E –waste hazards is created in Institute.
- A Committee for stock verification is in existence which carries out the stock verification of each department at the end of each semester. The committee checks the status of the equipment, machines, computers, accessories, kits

and lab setups. Those which are obsolete, unusable and non-repairable are scraped and disposed.

- The E-waste generated is ensured to reuse the useful components by concerned department in projects or maintenance etc..
- Students are encouraged to use the usable components from scrap in the projects.

## 7.2 Innovations

### 7.2.1 Give details of innovations introduced during the last four years which have created a positive impact on the functioning of the college.

The college has made several innovations which have helped smooth out the functioning of the college. These innovations are in academics, administration and in other levels of the college working.

#### **Interactive Teaching Learning**

Teachers are motivated to make use of interactive methods for teaching learning. Every teacher implements interactive methods for teaching learning through expert lectures from industry, industrial visits, quiz, group discussions, role plays, seminars.etc.

#### **Intensive Teaching Scheme**

From every class slow learners are identified by test or end semester exam performance. Slow learners are counseled and guided with extra inputs. Groups of fast, average and slow learners are formed, counseled and motivated to help slow learners in academics under the guidance of a faculty mentor.

#### **Project Library**

Collection of the project reports is stored in the library. Students before deciding their project are directed to visit this project library. This helps in no repetition of project, continuation of project, alternative techniques for completed project.

#### **Project Fair**

An exhibition and competition of the projects completed by students of final year is organized during PARV function. Senior staffs from college are appointed to judge the projects. The best projects are awarded by the institute.

**Top-on Technology**

Various activities like seminars, workshops, conferences, mini courses are organized to give an insight about the latest developments in technology by experts from industry, and institutions.

**Professional Body Chapters**

Institute have student's chapter in the relevant Professional bodies like ISTE and CSI. These chapters are active and regularly organize events under this forum.

**Interview Awareness Program**

A program is conducted by training and placement cell covering probable topics and related questions asked during the interviews held for the students placed earlier in various companies. Group discussions on various topics are conducted by professionals for the students to train them and to have practice sessions for best performance during interviews.

**Art Gallery**

A forum of Art gallery is organized and Art and Craft skills of students are showcased annually during PARV function by college. "Artifest" an intercollegiate art and craft function is organized by one of the sister concern to explore the talent of the students.

**Feedback mechanism**

Students give the feedback about the teachers at the end of each session/semester. Students of each department are expected to do so for all the teachers concerned with their class. Besides, informal interaction between the students and the Class Teacher/ H.O.D/ Principal about issues, pertaining to teaching quality is also encouraged. Teachers are counseled by the head and/or principal regarding measures to improve subject understanding and/or teaching skills.

**Computerization of Administrative Block**

The college Administrative has been fully computerized (Attendance, Course Planning & coverage, Lecture notes, Staff Profiles, Internal Marks). The administrative staff has been given formal training to understand the technicalities pertaining to working on the technology.

### **Computerization of Library**

The college has made the library fully computerized.

### **Super Salary/ Zero Balance Accounts**

The college has facilitated its staff as well as the other internal stakeholders, i.e. the students with providing them the facility to maintain a zero balance bank account in the bank.

### **Academic Innovations**

- IIT, NPTEL Video Lectures
- Application Oriented Teaching
- Projects in their specialization in final year
- Expert Lectures and Workshops on Latest technologies in their respective areas

## **7.3. Best Practices.**

### **7.3.1 Elaborate on any two practices**

#### **Best Practice-1**

**Title of the Practice** Transparency in the Evaluation Process

#### **Goal**

The main objectives of evaluation procedures are:

(a) The system of evaluation should be adequate and comprehensive so as to measure different types of skills.

(b) The system should provide a feedback:

1. to the students regarding their strengths and weaknesses; and
2. to the teacher as to how far she/he has been able to benefit the students and to modify his/her approach and teaching methods.

(c) To evaluate the performance by a method, that will be free from subjectivity and be accurate as far as possible. The evaluation system, as adopted by “D. N. Patel College of Engineering” as per the North Maharashtra University norms, has two components, as,

- i. The Internal Sessional Examination (ISE)
- ii. The End Semester Examination (ESE)
- iii. Internal Continuous Assessment (ICA).

The ratio of weightage is 20% in ISE and 80% in ESE for UG and 100 % in ESE for PG. The ICA is included in ESE of individual subject under practical head. The answer scripts of ISE are shown to the students after evaluation for their information, providing sufficient transparency and accountability. University provides Xerox copy of evaluated answer book at normal charges for application of revaluation and redressal.

### **The Context**

The teaching, learning, and evaluation are integrated and indissoluble components of education. The “D. N. Patel College of Engineering” desired that the evaluation system should also serve as in aid in the process of learning. The Institute strongly believes that along with teaching, should be an integral part of aiding learning by the student. The evaluation process includes continuous internal evaluation, the conduct of examination, the evaluation of answer scripts and indicating the performance by grading. It is in this context that the evaluation practices were chosen and introduced. The examination reforms, in the Institute, are not merely a technique to improve the evaluation system but to be viewed as an aim at improving the education process itself.

### **The Practice**

ISE & ICA Component: ISE & ICA programme includes components such as Tests, Assignments, Seminars, Lab Exercises, Workshops and Practical's. For each programme viz., UG, PG courses, suitable components are included in their ISE and ICA as per norms of North Maharashtra University Jalgaon. ISE marks are shown to students along with their answer scripts by the teacher concerned enabling them to have access to the evaluated answer scripts before the marks are forwarded to the examination section.

This exercise ensures:

- (i) providing a feedback to the students on the mistakes committed;
- (ii) providing an opportunity to learn the subject more accurately and adequately;
- (iii) Transparency in the evaluation system.

*Only ISE or ICA and no ESE for certain courses:*

There are a few papers in UG, PG Programmes, which are evaluated totally by ISE or ICA; i.e., there would be no end semester examinations in these papers.

For example, Soft Skills- I, II and III. In all the above courses including practical, the weightage of the ICA is 100%.

*External Members:*

A general thrust is given on the external element in the end semester examinations, such as external examiners for practical and oral examinations from other colleges appointed by North Maharashtra University Jalgaon.

The examiner is expected to evaluate the student on the performance of practical and oral of particular subject. The theory examination is conducted as per the norms of North Maharashtra University Jalgaon.

### **Evidence of Success**

After proper evaluation and keeping feedback report from all the stake holders in the curriculum designing and development, in teaching and learning process are the evidence of success for maintaining and sustaining the quality parameter.

### **Problems Encountered and Resources Required**

At the time of introduction of the evaluation process and Reforms in order to give orientations to teachers of the Institute and for the different stakeholders it requires the personal interest of all the mentor/mentees and stake holders to extend their support and time for several evaluation.

### **Outcomes of the Practice**

There is a solid impact of the practices after the evaluation process has been introduced in the system

#### **Best Practice-2**

**Introduction extra hours teaching for doubt clears classes and support in study materials.**

#### **Goal**

The core objectives of introducing of doubt clearing classes and question banks are

1. To clear the doubt of the student on any subject if he/she is absent in the class due to any serious medical problem.
2. The doubt clearing classes also be taken in case of a group of students are unable to understand the course properly due to standard of their teaching career.
3. Question banks are a part of the innovative and best practices to make the entire student aware about the possible questions to attain in the coming examination.
4. For through revision of the course taught in the class room through different question pattern.

5. To discuss different field application models of the technology.
6. To solve different critical problems and simulation model.
7. To train students on visualizing and perceiving future technology requirement and generate new statement of equation for research activities.

### **The Context**

1. The institute over the long history of 33 years has created a position for itself in the academic ambience and makes the context more transparent by introducing the doubt clearing and question bank facilities also to create a strong academic and research environment.
2. Unless and until we provide the support to all the students to clear their doubts through extra hours expectation and service of the institute from the poor academically back ground students will be unfulfilled.
3. This type of continuous process will definitely help the students to excel in the examination and will more confident to come out with positive graduate attributes. These achievements are surely enough in itself to boost the name and the fame the institute is enjoying. Still the institute was facing certain challenges which of utmost importance. The library has been computerized and digital library open for all students and staffs.
4. The institute in the academic world introduced the technique of extra classes and prepared study materials keeping in view the examination perspective. The students belonging to the college are given extra coaching at nominal cost by addressing their problems. Their skills are sharpened and molded keeping in view the patterns of the final examinations. They are given a list of prospective exercise prepared by subject teachers. This process has helped them to attain their targets in a better way.

### **The Practice**

1. The dropout rate and the failure rate were scaling heights. The students were given extra coaching, at nominal and/ or free of cost, in all the subjects in general. The students were given extra guidance in the core subjects of their respective specialization in particular. The institute ensured that the students are provided with the theory notes framed by the faculty of the college. This action has resulted in a steep in the failure. The theory notes have facilitated the students in

such a way that their efforts in the final exams have started bearing. This type of practice automatically establishes the brand image of the institution in teaching and learning process.

2. The Institute has prepared Question Banks for various courses taught at UG level. They are used by the faculty for setting the question papers. Question Banks are updated by the departments as and when the syllabus is changed or new subjects are introduced and also to keep pace with the developments in the field.

### **Evidence of Success**

The level of achievement is maintained high in the performance of students in the examinations. Further the result of success in each semester examinations is always satisfactory.

### **Problems Encountered and Resources Required**

At the time of introduction of the Examination Reforms against the traditional end examination system, in order to give orientations to teachers of the Institute, several workshops were conducted by NMU, Jalgaon and therefore, there have been no obstacles.

### **Outcomes of the Practice**

1. Due to the system introduced, more and more students build confidence on their respective mentor and feel confident to do well in the examination.
2. Once the doubt is clear through Intensive teaching or extra classes, it has been noticed that many students come forward to share his/her knowledge with their colleagues those have still any doubt on a particular subject. It creates a enrich educational environment in the institution

### **Contacts Details Name of the Principal: Dr Purushottam Dyandeo Patil**

Name of the Institution: - "D. N. Patel College of Engineering"

City: Shahada

Pin Code: 425409.

Phone (O) :02565229649, 02565229740

Website: [www.coeshahada.ac.in](http://www.coeshahada.ac.in)

E-mail: - Mobile: 9423517700



## Evaluative Report of the Department

1. **Name of the department-** Civil Engineering
2. **Year of Establishment-** 1983
3. **Names of Programmes/Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D.,etc.)**  
UG –B. E. (Civil)
4. **Names of Interdisciplinary courses and the departments/units involved.**  
- 1.Soft skill-II (Mechanical Engineering)  
-2. Engineering Mathematics – III (Applied Science)  
-3. Energy resources technology (Mechanical Engineering)
5. **Annual/semester/choice based credit system(programme-wise)**

Semester	Theory credits	Sessional credits	Total credits
First	17	6	23
Second	16	7	23
Third	17	6	23
Fourth	17	6	23
Fifth	15	8	23
Sixth	15	8	23
Seventh	15	8	23
Eight	12	11+30#(#=audit)	23

6. **Participation of the department in the courses offered by other departments**  
-NIL
7. **Courses in collaboration with other universities, industries, foreign institutions, etc.**  
-NIL
8. **Details of courses/ programmes discontinued(if any) with reasons.**  
- NIL
9. **Number of teaching posts**

	Sanctioned	Filled
<b>Professors</b>	01	01
<b>Associate Professors</b>	03	03

<b>Asst. Professors</b>	06	05
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**10. Faculty profile with name, qualification, designation, specialization, (D.Sc. / D.Litt. /Ph.D./ M.Phil.etc.,)**

<b>Name</b>	<b>Qualification</b>	<b>Designation</b>	<b>Specialization</b>	<b>No. of Years of Experience</b>	<b>No. of Ph.D. Students Guided for the Last 4 years</b>
Dr. S. U. Chaudhary	BE(CIVIL) ME(PHE) Ph.D.(CIVIL	PROF,HOD	ENV. ENGG.	28	-
Prof. S. J. Dahiwelkar	BE(CIVIL) ME(CIVIL)	ASSO.PROF.	STRUCTURAL	30	-
Prof. S. I. Chopra	BE(CIVIL) ME(CIVIL)	ASSO.PROF.	WATER RESOURCES	31	-
Prof.C.P.Patel	BE(CIVIL) ME(CIVIL)	ASSO.PROF.	STRUCTURAL	26	-
Prof.S.C.Sharma	BE(CIVIL) ME(CIVIL)	ASST.PROF	STRUCTURAL	30	-
Prof.S.R.Patil	BE(CIVIL) ME(CIVIL)	ASST.PROF	ENV. ENGG.	26	-
Prof.I.T.Patil	BE(CIVIL) ME(CIVIL)	ASST.PROF	BLDG.SCI.& TECH.	8	-
Prof.R.A.More	BE(CIVIL) ME(CIVIL)	ASST.PROF	BLDG.SCI.& TECH.	8	-
Prof.Y.O.Patil	BE(CIVIL) ME(CIVIL))	ASST.PROF	BLDG.SCI.& TECH.	5	-
Prof. M. Y. Patil	BE(CIVIL)	ASST.PROF	ENGINEERING	2	-

11. **List of senior visiting faculty-** NIL
12. **Percentage of lectures delivered and practical classes handled (programme-wise)By temporary faculty** NIL
13. **Student-Teacher Ratio (programme-wise)** 15:1
14. **Number of academic support staff(technical)and administrative staff;**

**sanctioned and filled**

	<b>Sanctioned</b>	<b>Filled</b>
<b>Technical staff</b>	03	01
<b>Administrative staff</b>	01	01

**15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil/PG.**

<b>Name</b>	<b>Qualification</b>	<b>Designation</b>
Dr.S.U.Chaudhary	BE(CIVIL) ME(PHE)Ph.D.(CIVIL)	PROF,HOD
Prof.S.J.Dahiwelkar	BE(CIVIL) ,ME(CIVIL)	ASSO.PROF.
Prof.S.I.Chopra	BE(CIVIL),ME(CIVIL)	ASSO.PROF.
Prof.C.P.Patel	BE(CIVIL) ,ME(CIVIL)	ASSO.PROF.
Prof.S.C.Sharma	BE(CIVIL), ME(CIVIL)	ASST.PROF
Prof.S.R.Patil	BE(CIVIL), ME(CIVIL)	ASST.PROF
Prof.I.T.Patil	BE(CIVIL), ME(CIVIL)	ASST.PROF
Prof.R.A.More	BE(CIVIL), ME(CIVIL)	ASST.PROF
Prof.Y.O.Patil	BE(CIVIL), ME(CIVIL)	ASST.PROF

**16. Numberoffacultywithongoingprojectsfroma)Nationalb)Internationalfunding agencies andgrantsreceived** NIL

**17. Departmentalprojectsfundedby DST-FIST;UGC, DBT, ICSSR,etc.andtotal grantsreceived.** NIL

**18. ResearchCentre/facilityrecognizedbytheUniversity** NIL

**19. Publications:**

<b>Publication per faculty</b>	<b>Number of papers published in peer reviewed journals (National/International) by faculty</b>	<b>Books Edited</b>
Dr. S. U. Chaudhary	03	-
Prof. S. J. Dahiwelkar	03	-
Prof. Y. O. Patil	01	-
Prof. R. A. More	01	-

\* a) Publication per faculty

\* Number of papers published in peer reviewed journals(national/

International)by faculty and students –For faculty as above and for students: Nil.

\* Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database-International Social Sciences Directory, EBSCO host, etc.)

\* Monographs NIL

\* Chapter in Book NIL

\* Books Edited NIL

\* Books with ISBN/ISSN numbers with details of publishers NIL

\* Citation Index NO

Yes submitted at the time of visit.

\* SNIP NIL

\* SJR NIL

\* Impact factor Yes

Yes submitted at the time of visit.

\* h-index - NIL

20.Areasofconsultancyandincomegenerated Revenue generated on assist an experimental project work in the Institute laboratory by guidance of Dr. C.R. Deo. (Documents to be submitted as the time peer team visit.)

**21.Faculty as members in**

**a) Nationalcommittees :-** NIL

**b)InternationalCommittees:-** NIL

**c)EditorialBoards:-** NIL

**22. Studentprojects**

a) Percentage of students who have done in-house projects including interdepartmental/programme-NIL

b) Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/Industry/ other agencies- NIL

**23. Awards/Recognitionsreceivedbyfacultyandstudents.-** NIL

**24. Listofeminentacademiciansandscientists/visitorstothe department-NIL**

**25. Seminars/Conferences/Workshopsorganized&thesourceoffunding a)**

National

Sr. No.	Name of the seminar/work Shop	Source of funding	Date of seminar	co-ordinator
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1	DESIGN OF BRIDGE	SELF	10/09/2016 TO 11/09/2016	DR.S.U. CHAUDHARY
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c)International: NIL

## 26. Diversity of Students

Name of the Course	% of students from the same state	% of students from other States	% of students from abroad
UG 2015-16(BE CIVIL)	100%	-	NIL
UG 2014-15(BE CIVIL)	100%	-	NIL
UG 2013-14(BE CIVIL)	100%	-	NIL
UG 2012-13(BE CIVIL)	100%	-	NIL

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil Services, Defense Services, etc.: GATE

## 29. Student progression

Student progression	Against % enrolled
UG to PG	10
PG to M.Phil.	-
PG to Ph.D.	-
Ph.D. to Post-Doctoral	-
<b>Employed</b>	
- Campus selection 2013-14	Nil
- Other than campus recruitment	30
Entrepreneurship/Self-employment	05

## 30. Details of Infrastructural facilities

a)Library:

NO. of Volumes	No. of Titles
5901	1809

**b) Internet facilities for Staff & Students with Broad band and BSNL Facilities available both for staff & students. YES (COMPUTER LAB)**

c) Class rooms with ICT facility:-

NIL.

d) Laboratories – 10

Name of Laboratory:- Envi Engg. Lab						
SR. No.	Equipments	Qty	Equip.No. VAE/CED/EN V-	Page of no of S.R.	Date of Purchase	Cost of Equip.
1	One Flocculator	1	1/87	176/1	12/3/87	7370.00
2	Conductivity meter	1	2/87	176/2	27/3/87	2290.00
3	pH Meter	1	3/87	176/3	27/3/87	3067.00
4	Turbidity Meter	1	4/87	176/4	27/3/87	5127.00
5	Stirrer	1	5/88	176/5	4/2/88	4145.00
6	Digestion Unit and Ion Exchange Unit	1	6(i)&(ii)/88	176/6(i)&(ii)	5/2/88	10516.00
7	Muffle furnance	1	7(ii)/88	176/7(ii)	11/3/88	3918.00
8	Incubator	1	7(iii)/88	176/7(iii)	11/3/88	2137.00
9	Verticle Autoclave	1	8/88	178/8	19/3/88	4323.00
10	B.O.D.Incuator	1	9/88	178/9	22/3/88	20832.00
11	Spectro Colourimeter	1	10/88	179/10	5/4/88	7551.00
12	Analytical balance	1	13/88	179/13	27/8/88	4062.00
13	pH meter	1	20/99	181/20	24/9/99	3456.00
14	Water bath	1	21/99	181/21	2/10/99	5940.00
15	Muffle furnance	1	21/99	182/21	27/10/99	15792.00
16	Black Stone Fogging M/C	1	18/94	181/18	14/11/94	8545.00
17	Distillation Unit	1	21/99	181/21	2/10/99	5940.00
18	Electronic Balance	1	23/2001	182/23	13/1/2001	18750.00
19	Digital P H Meter	1	24(I)/2008	183/24(I)	22/12/08	3850.00
20	Thermostatically Control Oven(digital)	1	26(II)/2013	183/26(II)	30/7/13	73125.00
21	Digital Colourimeter (2Nos)	2	24(iii)/2008	183/24(iii)	22/12/2008	15750.00
22	Digital Nephleo Turbidity Meter(2Nos)	1	24(iv)/2008	183/24(iv)	22/12/2008	16875.00
23	Digital Muffle Furnance	1	24(v)/2008	183/24(v)	22/12/2008	52368.00
24	Flocculator	1	24(vi)/2008	183/24(vi)	22/12/2008	47250.00
25	Electronics Weighing Balance(Gold)	1	25/2012	183/25	27/9/12	8550.00
26	C.O.D. Apparatas.	1	26/2013	183/26	30/7/2013	67500.00
27	Projector Epson	1	27/2016	184/27	12/10/26	27000.00
Total Rs.						419029.00
Name of Laboratory: - Computer Lab						
S.N.	Equipments	Qty	Equip.No VAE/CED/COM	Page of no of S.R.	Date of Purchase	Cost of Equip.
1	Desktop Computer (Lenovo-Make)	07	1/09	60/1	16/07/2009	147000.00
2	Desktop Computer (BenQ-Make)	13	1-09	61/1	20/01/2009	239200.00
3	Desktop Computer (Lenovo-Make)	15	2,3,4-11	61/2,3,4	10-04-11	256000.00
4	Dell Lap Top- 1 no	1	5(1)12	61/5(1)	04/01/2012	28800.00
5	LCD Projector	1	5(2)12	61/5(2)	01-04-12	26200.00
6	H.P. laser jet 1020 plus		7-13	62/7	27/7/2013	6900.00
Total Rs.						704100.00

Name of Laboratory: - Geology Engg.Lab						
SR. No.	Equipments	Qty	Equip.No VAE/CED/GEO/	Page of no of S.R.	Date of Purchase	Cost of Equip.
1	Mineral Specments	31	1(a)/87	167/1(a)	27/1/87	1426.00
2	Ore. Mineral Specments	31No	1(b)/87	167/1(b)	27/1/87	598.00
3	Rock Specments	47No	1(c)/87	167/1(c)	27/1/87	2162.00
4	Geological Maps	10No	2/87	167/2	18/2/87	55.00
5	Flag stone obsidign	2	3/87	167/3	18/3/87	175.00
6	hardness set	5set	4(1)/87	167/4(1)	17/2/87	300.00
7	walker sheet gard balance	1	4(2)/87	167/4(2)	17/2/87	300.00
8	plastic tray specimen	120	4(4)/87	167/4(4)	17/2/87	1080.00
9	Tables (Glass)	5	5/88	168/5	14/3/88	5115.00
10	Tables (Glass)	3	6/88	168/6	04/04/88	3099.00
12	overthrus,normal,stip,reverse (faults)	4	10(b)/90	170/10(b)	26/2/90	2165.00
13	various dam models(gravity,arch)	1	11/90	170/11	27/3/90	895.00
14	pocket menselox	30	7/90	169/7	03-03-90	720.00
15	Horneblende	2	13/90	170/13	03-03-90	110.00
16	model (strike,dip,pitch)	1	14/90	170/14	03-03-90	285.00
17	model (dip inclined)	1	15/90	170/15	03-03-90	285.00
18	one set of uncomormity types	1	16/90	170/16	03-03-90	3865.00
19	model (inlier,outlier)	1	17/90	170/17	03-03-90	565.00
20	tunnel in horizontal beds	1	19/90	171/19	03-03-90	300.00
22	tunnel in vertical beds	1	20/90	171/20	03-03-90	300.00
23	tunnel in inclined beds	1	21/90	171/21	03-03-90	300.00
24	stand for tunnels	5	23/90	171/23	03-03-90	300.00
25	world map political	1	25/90	171/25	03-03-90	300.00
26	tectonic belts	1	26/90	127/26	27/8/1990	300.00
27	ocean floor chart	1	27/90	127/27	27/8/90	400.00
29	models(intrusive,extrusive rock)	1	28/90	172/28	27/8/90	300.00
30	stand with tunnel model	6	29/90	172/29	27/8/90	1200.00
31	model of earth dam	1	30/90	172/30	27/8/90	700.00
			TatalRs.			27910.00
Name of Laboratory:- Applied mechanics						
SR. No.	Equipments	Qty	Equip.No VAE/ECD/A M/	Page of no of S.R.	Date of Purchase	Cost of Equip.
1	Diff.Wheel& Axle	1	1-84	186/1	30/6/84	560.00
2	M.I.Fly Wheel	1	2-84	186/2	30/6/84	435.00
3	Two & Three ShearePully App.	2	7,8-84	186/7,8	30/6/84	640.00
4	Worm Crab Double Parches	1	9-84	186/9	18/7/84	490.00
5	Jib crane	1	10-84	186/10	18/7/84	490.00
6	Worm Wheel App.	1	11-84	186/11	25/8/84	700.00
7	Universal Force Table	1	13(i)-87	187/13(i)	7/12/87	1160.00
8	Deflection of Beam App.	1	13(ii)-87	187/13(ii)	7/12/87	300.00

9	Katers Reversible	1	13(iii)-87	187/13(iii)	7/12/87	400.00
10	Parallel Forces App.	1	14(i)-96	188/14(i)	30/12/96	1445.00
11	Tortional Pendulum	1	14(ii)-96	188/14(ii)	30/12/96	990.00
12	Train of Gear/Two Stage Spun gear	1	14(iii)-96	188/14(iii)	30/12/96	500.00
13	Two Stage Spun gear	1	14(iv)-96	188/14(iv)	30/12/96	720.00
14	Epicyclical gear	1	14(v)-96	188/14(v)	30/12/96	1080.00
15	Bar Pendulum of Compound , Pendulum	1	15(i)-98	188/15(i)	17/8/98	1668.00
16	Simple jib Crane	1	15(ii)-96	188/15(ii)	17/8/98	1120.00
17	Compound,Coil&BeitPriction App.	1	16-99	189/16	17/11/99	3525.00
18	Set of Weights50to1k.g	2	17-04	189/17	27/7/04	735.00
19	Flat Belt & V Belt	1	18(i)-04	1190/18(i)	30/7/04	800.00
20	Worm & worm wheel,single Purchase	1	19(i)-04	190/19(i)	30/7/04	2635.00
21	Wheel & Differential axle	1	19(ii)-04	190/19(ii)	30/7/04	1910.00
22	Parallel Forces App.	1	19(iii)-04	190/19(iii)	30/7/04	3825.00
23	Compound Pendulum Forces App.	1	19(iv)-08	190/19(iv)	25/3/08	1200.00
24	Parallel Forces App.	1	20(i)-13	190/20(i)	8/11/13	2400.00
25	Simple jib Crane	1	20(ii)-13	190/20(ii)	8/11/13	1900.00
Total Rs.						31628.00

**Name of Laboratory:-F.M.Lab.**

SR. No.	Equipments	Qty	Equip.no VAE/CED/F. M/	Page of no of S.R.	Date of Purchase	Cost of Equip.
1	Study of Flow through Nouth	1	1-85	121/1	09-09-85	7500.00
2	Fixed Bed Flume	1	13-86	122/13	30/5/86	28500.00
3	Wind Tunnel & model & Blower of 12.5 H.P.	2	14-86	123/14	27/9/86	55750.00
4	Redwood Viscomenter	1	20/03	124/20	26/12/03	11133.00
5	Reynold Apparatus	1	21-04	124/21	01-06-04	5000.00
6	Forces of Jet Apparatus		85-04		01-06-04	6400.00
7	Bernoullies Theorem Apparatus	1	24-04	126/24	30/7/04	10196.00
8	Electrical Analogy Apparatus	1	127/25(i)-04	127/25(i)	13/8/4	19800.00
9	Inverted U-Tube Manometer	1	127/25(ii)-04	127/25(ii)	13/8/04	5400.00
10	VenturiFlumeStanding Wave Flume	1	126/22-03	126/22	11-08-03	4000.00
11	Determination of CD,CV,CC	1	127/27-04	127/27	10-12-04	20752.00
						174431.0

**Name of Laboratory: - Material Testing Lab**

SR. No.	Equipments	Qty	Equip.No	Page of no of S.R.	Date of Purchase	Cost of Equip.
1	Universal Impact testing M/C	1	1-85	146/1	31/8/85	26219.00
2	Extensometer (Simple)	1	2-85	146/2	19/10/85	11800.00
3	Dial Gugs	1	3-85	146/3	19/10/85	1250.00
4	Lateral Extensometer	1	4-85	146/4	27/11/85	2313.00
5	Flexural Strength testing M/C	1	5-85	146/5	22/11/85	7105.00
6	Compression Testing Machine2000KN Capacity	1	6-85	146/6	22/11/85	46746.00
7	Rock well Cum BrinellFlawness	1	7-85	146/7	29/8/85	12742.00
8	Universal testing M/C	1	8-85	146/8	10-10-85	152098.00
9	Torsion Testing M/C	1	9-85	146/9	26/12/85	24380.00
10	Shear test-5 sets of bushes	1	19-87	149/19	29/7/87	5879.00
11	Mititiyo Japan VrrnierCallier 6"	1	20(i)-96	149/20(i)	24/2/96	1850.00



12	Micrometer 0.25mm	1	20(ii)-96	149/20(ii)	24/2/96	2000.00
13	I.S,Sieves	02	21-96	150/21	6/4/96	1014.00
14	Tempo Water Bath	1	22-96	152/22	10/04/96	4323.00
15	I.S,Sieves Lid & Pan	1	23(I,II)-96	152/23(I,II)	19/2/96	943.00
16	Set of Allen Keys	1	25-97	475/25	01-08-97	425.00
17	Column & Stratsapparatas	1	26(i)-85	149/26(i)	26/12/85	6480.00
18	Unsymmetrical BevdingApporafas	1	46(II)-99	149/46(II)	11-04-99	15000.00
19	young's Moulusulus	1	26-99	154/26	11-03-99	580.00
20	Elasticity of Fiixture App.	1	27-99	154/27	11-03-99	700.00
21	Lateral Extensometer	1	20/04	20	08-09-04	11474.00
Total RS.						335321.0

**Name of Laboratory: -Surveying**

S.N.	Equipments	Qty	VAC/CED/S UR	Page of no of S.R.	Date of Purchase	Cost of Equip.
1	Zeiss Mirror Stereoscope	1	27/86	4/27	15/10/86	14055.00
2	Zeiss Second Theodolite (010B)	1	28-86	5/28	15/10/86	41403.00
3	Total Station	1	49(1)04	10/49(1)	20/7/04	384300.00
4	Open cross Staff	6	54(I)09	12/54(I)	29/10/09	1050.00
5	Prismatic Compass	4	54(II)09	12/54(II)	29/10/09	5000.00
6	Plan Table Complecte	4	54(v)09	12/54(v)	29/10/09	10000.00
7	Abney Level	1	55-09	12/55	19/8/2009	495.00
8	Dumpy Level	4	56-09	12/56	19/8/2009	14872.00
9	Levling Staff Telescopic	6	57-09	12/57	19/8/2009	5016.00
10	Transit Vernior Theodolite (20"thedolity)	1	60-09	12/60	19/8/2009	12128.00
11	Horizon .Imported Auto Level (17 qn)	1	61-09	12/61	19/8/2009	10125.00
12	Theodolite 20 Sec. (2Nos)	2	62(i)-11	13/62(i)	14/9/11	28710.00
13	Aluminum Staff 4m long.	2	62(ii)-11	13/62(ii)	14/9/11	1850.00
14	Open Cross Staff	3	62(iv)-11	13/62(iv)	14/9/11	1125.00
15	Prismatic Compass	2	62(v)-11	13/62(v)	14/9/11	28710.00
16	Telescopic Alidade	1	63(i)-15	13/63(i)	5/2/2015	1850.00
17	Vernier TheodoliteST-20	02	63(i)-15	13/63(i)	5/2/2015	1125.00
Total Rs						571529.00

**Name of Laboratory: -Transportation Laboratory**

Sr No	Equipment Name	Qty	Equip.No	Page of no of S.R.	Date of Purchase	Cost of Equip
1	Tempo Water Bath Electric Ac/Dc	1	3-88	195/3	28/3/88	892.00
2	Hot Air oven Electric	1	4-88	195/4	28/3/88	2577.00
3	Standard Tar Viscometer 10mmm	1	/5-88	195/5	28/3/88	4902.00
4	Beranger Balance	1	6-87	195/6	21/12/87	734.00
5	Ring & Ball App.	1	7-87	196/7	21/12/87	839.00
6	Standard Penetrometer	1	8(I)-88	197/8(I)	21/5/88	2100.00
7	North Dakota cone	1	8(II)-88	197/8(II)	21/5/88	2373.00
8	Ductility Test Machine	1	9-88	197/9	30/5/88	12549.00
9	Sieves,Pan and Lid	1	10-88	198/10	10/6/88	1153.00
10	Marshal Stability Machine	1	11-98	199/11	19/9/98	40280.00
11	Flash & Fire Point Test Apparatus	1	12-99	199/12	17/11/99	17488.00
12	Viscometer	1	15-88	196/5	22/2/88	5000.00
13	Sieves	1				509.00
14	Los Angles Abrasion testing Machine	1	2-86	42/2	28/2/86	12540.00
15	Deval Abrasion testing Machine	1	10(II)-88	44/10(II)	10/3/88	14800.00
16	Dorry Abrasion testing Machine	1	10(III)-88	44/10(III)	10/3/88	17300.00
17	Universal Penetrometer With in Built	1	14(i)-15	200/14(i)	19/1/15	31264.00

	Digital timer					
18	Penetration Cone	1	14(ii)-15	200/14(ii)	19/1/15	1327.00
19	Bitumen Penetration	1	14iii)-15	200/14iii)	19/1/15	1493.00
20	Ring & Ball App.Digital	1	15-15	200/15	19/1/15	15090.00
21	Standard Tar Viscometer Elect.	1	216-15	200/16	19/1/15	13815.00
22	Flash Point Energy Regulator	1	17-15	200/17	19/1/15	17275.00
23	Centrifuge Extractor Elect.Operated	1	18-15	200/18	19/1/15	41320.00
24	Specific Gravity bottle	1	19-15	200/19	19/1/15	1500.00
25	Ductility Test Machine Electrical Digital Temp Controller	1	20-15	200/20	19/1/15	79180.00
	Total Rs.					338210.00
<b>Name of Laboratory : Geotechnical Engineering</b>						
1	Consolidation Apparatus	1	4-84	22/4	07-03-86	12458.00
2	Sieve Shaker (Motorized)	1	4(II)-86	22/4(II)	03-07-86	6200.00
3	Vane Shear Apparatus	1	5-86	22/5	07-03-86	4273.00
4	Triaxial Cut Fit (Motorized)	1	6-86	23/6	14/6/86	22110.00
5	Unconfined Compression Testing Machine	1	7-86	23/7	29/3/86	10854.00
6	Direct Test App.	1	9-86	23/9	04-02-86	15800.00
7	Hydraulic Jack	1	13-87	24/13	27/2/87	4700.00
8	Cone Penetrometer	1	14-87	24/14	27/7/87	5668.00
9	Universal Extractor Frame (AIMIL)	1	24/15	24/15	15/1/87	7100.00
10	Rammer	1	17-87	24/17	15/1/87	840.00
11	Lab C.B.R. Test App.	1	18-87	24/17	15/1/87	17600.00
12	Core Cutter	1	25-87	27/25	27/2/96	1410.00
13	Soil Auger	1	1-96	27/1	04-06-96	1700.00
14	Sieve Set	7	2-96	28/2	6/4/96	2520.00
15	Sieve Set	9	28(i)-96	29/28(i)	19/2/96	3060.00
16	Proctor Compaction App.	1	28(ii)-96	29/28(ii)	19/2/96	7020.00
17	Electronics Weighing Balance(Cap.10Kg/Cm2) AIM.077	1	46-2002	35/46	20/7/04	8500.00
18	AIMIL,Pore pressure App.1000KPA.(10Kg/Cm2)Cap.AIM.077	1	51-2004	36/51	09-07-04	17878.00
19	Compaction mould	1	53-2004	37/53	10-06-04	3129.00
20	AIMIL Permeability App.	1	55-2011	38/55	28/1/11	36483.00
21	Aluminum Container	48	56(i,ii)-2016	38/56(i,ii)	19/1/16	5520.00
22	Core Cutter	3	57-2016	38/57	19/1/16	9240.00
23	Sieve Set	9	58-2016	38/58	19/1/16	8988.00
24	Shrinkage Limit App.	1	59-2016	38/59	19/1/16	1100.00
25	Liquid Limit	1	60-2016	38/60	19/1/16	5295.00
26	Lab. Oven Electrically Oper.	1	61-2016	39/61	19/1/16	47040.00
	Total Rs.					266486.00
<b>Name of Laboratory :-Concrete Technology</b>						
SR.No.	Equipments	Qty	Equi.no. VAE/CED/CT-	Page of no of S.R.	Date of Purchase	Cost of Equip.
1	Stop Watch	2	42/1-85	42/1	29/1/85	800.00
2	Los. Angles	1	42/2-86	42/2	28/2/86	12540.00
3	Flow Table, Motorised	1	42/3-86	42/3	27/3/86	16806.00
4	Cylinder	3	42/4-86	42/4	02/04/86	1080.00
5	Compaction Factor APP	1	43/7-88	43/7	22/08/88	4680.00
6	Lab. Concrete Mixer	1	43/8-87	43/8	24/12/87	7800.00
7	Beam Mould15x15x70	1	43/9(I)-88	43/9(I)	18/01/88	2630.00

8	Riffle Sample Divider	1	43/9(II)-88	43/9(II)	18/01/88	2650.00
9	Length Gauge	1	44/9(III)-88	44/9(III)	18/01/88	700.00
10	Kelly Ball Penetration	1	4410(I)-88	4410(I)	18/03/88	820.00
11	Deval Abrasion TestingMech.	1	44/10(II)-88	44/10(II)	18/03/88	14800.00
12	Dorry Abrasion TestingMech.	1	44/10(III)-88	44/10(III)	18/03/88	17300.00
13	Crushing Value App.	1	45/11(I)-88	45/11(I)	05/09/88	3500.00
14	Thickness Gauge	1	45/11(II)-88	45/11(II)	05/09/88	875.00
15	Cube (Stee)Mould70.6x70.6x70.6m	15	46/13-2000	46/13	21/11/2000	5764.00
16	HT Vibrating Machine	1	46/14-2001	46/14	21/11/2001	5764.00
17	Cube (C.I)tMould150x150x150m	1	46/15-2001	46/15	21/11/2001	3887.00
18	Electronics Weighine Balance	1	47/18-04	47/18	20/7/04	8500.00
19	Gauging Trowel	2	47/18(i)-04	47/18(i)	27/07/04	700.00
20	I.S.Sieves+Lid Cover	1set	47/18(ii)-04	47/18(ii)	27/7/04	6340.00
21	Compression Testing Machine2000KN Capacity	1	6/146/85	146/6	22/11/85	46746.00
22	Mould Vibrator Machine		47/18-01	47/18	23/02/01	22289.00
23	Concrete test Hammer		47/18-04	47/18	27/07/04	18000.00
24	Le.Chatelier App.		47/19-04	47/19	15/09/04	2086.00
25	I.S.Sieves+Lid Cover In/Fin	1set	48/20-07	48/20	06/10/07	2182.00
26	Tilting Drum Conc.Mixer	1	48/20A-09	48/20A	15/10/09	1,41,000.00
27	Vibrator with 25mm & 40mm needle	01	48/21-10	48/21	05-01-10	15750.00
28	Permeability Test App.	1	48/22-11	48/22	28/01/11	36483.00
29	Power Bracker	1	49/22-I-13	49/22-I	04-12-13	12500.00
			Total Rs.			273972.00

**31. Number of students receiving financial assistance from college, university, government or other agencies-** Eligible students receives Scholarship from government.

**32. Details on student enrichment programmes (special lectures/workshops/seminar) with external experts Organized every year National level technical seminar & workshops.**

- Campus Recruitment Training -Nil
- Personality Development Programs-

**2012-2013**

S.N	Date	Topic	Name of speaker ,Designation and organization
1	20 Oct 12	Personality Development	Mr.KishoreDubey and Mrs . PritiDubey
2	15 Mar 13	Facing Interviews	Mr.KishoreDubey and Mrs . PritiDubey

**2013 -2014**

S.N	Date	Topic	Name of speaker ,Designation and organization
1	17 Oct 13	Personality Development	Mr.KishoreDubey and Mrs .PritiDubey
2	14 Mar 14	Facing Interviews	Mr.KishoreDubey and Mrs .PritiDubey

**2014-2015**

S.N	Date	Topic	Name of speaker ,Designation and organization
1	15 Oct 14	Personality Development	Mr.KishoreDubey and Mrs .PritiDubey
2	12 Mar 16	Facing Interviews	Mr.KishoreDubey and Mrs .PritiDubey

**2015-2016**

S.N	Date	Topic	Name of speaker ,Designation and organization
1	16 Oct 15	Personality Development	Mr.KishoreDubey and Mrs .PritiDubey, SarangYande
2	18 Mar 16	Facing Interviews	Mr.KishoreDubey and Mrs .PritiDubey, SarangYande

- Guest lecturers with Industry and academic experts.

**2012-2013**

S.N	Date	Topic	Name of speaker ,Designation and organization
1	16 Aug 12	Execution of general civil engineering structures	Shri.P.R.Patil M.D. Satpudasahakarisakharkarkhana ,Purushottamnagar
2	19 Oct 12	Architectural design and planning of residential bungalows	Shri.D.D. Narsey Leading Architect
3	19 Feb 13	General information of departmental works	Shri.J.U.Patelretired deputy Engineer P.W.D
4	8 April 13	Execution of lift irrigation civil engineering structures	Shri.P.R.Patil M.D. Satpudasahakarisakharkarkhana

			,Purushottamnagar
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**2013 -2014**

S.N	Date	Topic	Name of speaker ,Designation and organization
1	14 Aug 13	Execution of Industrial engineering structures	Shri.P.R.Patil M.D. Satpudasahakarisakharkarkhana ,Purushottamnagar
2	20Sept 13	Architectural design and planning of residential multistory buildings	Shri.D.D. Narsey Leading Architect
3	18 Feb 14	General information of departmental Road works	Shri.J.U.Patelretired deputy Engineer P.W.D
4	04April 14	Repairing and maintance of lift irrigation civil engineering structures	Shri.P.R.Patil M.D. Satpudasahakarisakharkarkhana ,Purushottamnagar

**2014-2015**

S.N	Date	Topic	Name of speaker ,Designation and organization
1	09 Aug 14	Repairing and maintance of Industrial structures	Shri.P.R.Patil M.D. Satpudasahakarisakharkarkhana ,Purushottamnagar
2	29 Sept 14	Interior design and planning of residential structures	Shri.D.D. Narsey Leading Architect Nandurbar
3	14 Feb 15	Repairing and maintance of Road works	Shri.J.U.Patelretired deputy Engineer P.W.D
4	29 Mar 15	Augmentation of lift irrigation civil engineering structures	Shri.P.R.Patil M.D. Satpudasahakarisakharkarkhana ,Purushottamnagar

**2015-2016**

S.N	Date	Topic	Name of speaker ,Designation and organization
1	12 Aug 15	Execution of general civil engineering structures	Shri.P.R.Patil M.D. Satpudasahakarisakharkarkhana ,Purushottamnagar
2	19 Sept 15	Architectural design and planning of residential bungalows	Shri.D.D. Narsey Leading Architect
3	06 Feb 16	General information of departmental works	Shri.J.U.Patelretired deputy Engineer P.W.D
4	19 Mar 16	Execution of lift irrigation civil engineering structures	Shri.P.R.Patil M.D. Satpudasahakarisakharkarkhana ,Purushottamnagar

- Seminars on Recent trends in the respective field --

NIL

### 33. Teaching methods adopted to improve student learning-

- 1) Through Extra classes for weak students are conducted.
- 2) Surprise tests-Class test are conducted to evaluate students
- 3) Improvement tests- Test are conducted.
- 4) Tutorial classes, -Tutorials are assigned to students in the form of assignments.
- 5) Feedback system& guidance of students by mentors-Students Feedback forms are filled by students without mentioning identity
- 6) Providing students with 100 short question
- 7) Using LCD, OHP.-LCD and OHP are used as teaching aids.

### 34. Participation in Institutional Social Responsibility(ISR)and Extension activities

- 1) Blood Donation Camps,-Students are participating in blood donation camps
- 2)Anti-ragging slogan, - Ragging is social crime –such slogans are written in department
- 3) road safety awareness –Safe Driving measures booklet is distributed to students for road safety
- 4) Save Power awareness program etc.- Environmental awareness prorammes are arranged

### 35. SWOC analysis of the department and Future plans Strength-

1. The department is well furnished with laboratories and Equipments
2. The department has Modrob lab.
3. The department is provided with modern computer Lab.
4. The staffs are experienced and high skilled.
5. Affiliated by NMU Jalgaon.
7. The Department has both B.E

### Weakness-

1. Quality of in –put in terms of students intellectual level is very weak.
- 2.

**Opportunities-**

1. The students are doing their projects inside the campus with the guidance of guides.
2. The projects are done by the students with the recourses and energy available in the institute.

**Challenges-**

1. To get NAAC accreditation
2. To get 100% placement
3. To make all the students well expertise in practical fields.

**Future Plans:**

1. To establish a full-fledged Entrepreneurship Development Cell this will enable to improve the skills of students to start their own organizations.
2. To establish the consultancy service to the students about their projects and their career guidance.
3. To implement innovative teaching methods to involve the students for their bright future to make every student expert Industry engineer.

## Evaluative Report of the Department

1. **Nameofthedepartment**-Computer Engineering
2. **YearofEstablishment**- 1999
3. **Namesof Programmes/Coursesoffered(UG,PG,M.Phil.,Ph.D.,Integrated Masters;IntegratedPh.D.,etc.)**  
UG –Bachelor of Engineering (Intake 60)
4. **NamesofInterdisciplinarycoursesandthedepartments/units involved.**  
Common Subject for First Year: Computer Programming  
Interdisciplinary Subject for other Branches:  
Software Engineering & Project Management  
Enterprise Resource Planning & SAP
5. **Annual/semester/choicebasedcreditsystem(programmewise)**

Semester	Theory credits	Sessional credits	Total credits
First	17	6	23
Second	16	7	23
Third	17	6	23
Fourth	17	6	23
Fifth	15	8	23
Sixth	15	8	23
seventh	15	8	23
Eight	12	11	23

6. **Participationofthedepartmentinthecoursesofferedbyotherdepartments**  
The final year student learn “Image Processing” from E&TC department faculty.
7. **Coursesincollaborationwithotheruniversities,industries,foreigninstitutions, etc.** NIL
8. **Detailsofcourses/programmes discontinued(ifany)withreasons.** NIL
9. **Number of teaching posts**

	Sanctioned	Filled
<b>Professors</b>	1	0
<b>AssociateProfessors</b>	2	1



<b>Asst.Professors</b>	10	10
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**10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt./Ph.D./M.Phil.etc.,)**

<b>Name</b>	<b>Qualification</b>	<b>Designation</b>	<b>Specialization</b>	<b>No.of Years of Experience</b>	<b>No. of Ph.D. Students Guided for the Last 4 years</b>
Mr. Vinod Shantaram Mahajan	M.Tech.	Head & Asst. Prof.	Computer Science & Engineering	10	-
Mr. Purushottam Rohidas Patil	M.E.	Asso. Prof.	Computer Science & Engineering	15	-
Mr. Shehzad Habib Shaikh	M.Tech.	Asst. Prof.	Computer Science & Engineering	8.5	-
Mr. Aakash Bhimrao Koli	M.Tech.	Asst. Prof.	Information Technology	8.5	-
Mr. Vinayak Onkar Patil	BE	Asst. Prof.	Computer	8	-
Mr. Rijwan Abdulrahim Shaikh	M.Tech.	Asst. Prof.	Computer Technology & Application	8	-
Mr. Liladhar Magan Kuwar	BE	Asst. Prof.	Computer	7	-
Mr. Ashpak. P. Khan	M.Tech.	Asst. Prof.	Info. Tech	8	-
Mr. Vinay Tila Patil	M. Tech.	Asst Prof.	Info. Tech.	8	-
Mr. Ajahar Ismailkha Pathan	M. Tech.	Asst. Prof.	Info. Tech.	8	-
Mr. Dheeraj Basant Shukla	M. Tech.	Asst. Prof.	Info. Tech.	8	-

**11. List of senior visiting faculty**

NIL

**12. Percentage of lectures delivered and practical classes handled (programmewise) By temporary faculty**

NIL

13. **Student-TeacherRatio(programmewise)** 16.36:1

14. **Number of academic support staff (technical) and administrative staff; sanctioned and filled**

Sanctioned: 3 Filled: 3

15. **QualificationsofteachingfacultywithDSc/D.Litt/Ph.D/MPhil/PG.**

Qualification	Number of Staff
Ph. D.	0
PG	9
UG	2

16. **Numberoffacultywithongoingprojectsfroma)Nationalb)Internationalfunding agencies andgrantsreceived** NIL

17. **Departmentalprojectsfundedby DST-FIST;UGC, DBT, ICSSR,etc.andtotal grantsreceived.** NIL

18. **ResearchCentre/facilityrecognizedbytheUniversity.** NIL

19. **Publications:**

- \* Publication per faculty: 5.54
- \* Number of papers published in peer reviewed journals (national/ International)by faculty and students –For faculty as above and for students: 24
- \* Number of publications listed in International Database(For eg:Web of Science, Scopus, Humanities International Complete, DareDatabase-International SocialSciences Directory,EBSCO host,etc.)
- \* Monographs NIL
- \* ChapterinBook NIL
- \* BooksEdited NIL
- \* BookswithISBN/ISSNnumbers with details of publishers NIL
- \* Citation Index YES
- \* SNIP NIL
- \* SJR NIL
- \* Impact factor Yes
- \* h-index NIL

20. **Areas of consultancy and income generated (Documents to be submitted as the time peer team visit.)** NIL

**21. Faculty as members in**

a) National committees :-	NIL
b) International Committees:-	NIL
c) Editorial Boards:-	NIL
d) Reviewer:	01

**22. Student projects**

a) Percentage of students who have done in-house projects including interdepartmental/programme-	100%
b) Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/Industry/ other agencies :	NIL

**23. Awards/Recognition received by faculty and students.**

Manali Agrawal and et al, third prize in National conference at SSVPS Dhule.

Manali Agrawal and et al, Second Prize in National conference at RCPIT Shirpur.

Pooja Bhavsar and et al, First Prize in National conference at RCPIT Shirpur.

**24. List of eminent academicians and scientists/visitors to the department**

Padamshri Dr. Vijay Bhatkar

**25. Seminars/Conferences/Workshops organized & the source of funding****a) National**

Sr no.	Name of the seminar/work Shop	Source of funding	Date of seminar /Conferences/Worksh ops	Co-ordinator
1	A two days National workshop on Ethical Hacking and Cyber Security	Self	27 <sup>th</sup> , 28 <sup>th</sup> Jan 2017	Mr. A. P. Khan Mr. S. H. Shaikh
2	Research Methodology: concepts and Tools	Self	16-17 Jan 2016	Mr. P. R. Patil
3	Workshop on Android Apps	Self	27 <sup>th</sup> , 28 <sup>th</sup> Sep 2013	Mr. S. H. Shaikh Mr. V. T. Patil
4	Workshop on Hacktrick	Self	30 <sup>th</sup> , 31 <sup>st</sup> March 2013.	Mr. A. I. Pathan Mr. V. T. Patil
5	NCRTE 2013 (Tech Fiesta)	NMU Jalgaon	1 <sup>st</sup> , 2 <sup>nd</sup> March 2013	Prof. A. P. Khan

**b) International:**

NIL

**26. Diversity of Students**

Maximum students are from Maharashtra state and few students are from Gujrat and Madhya Pradesh.

**28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.:** GATE- 01

**29. Student progression**

Student progression	Percentage/Numbers
UGtoPG	9
PGtoM.Phil.	-
PGtoPh.D.	-
Ph.D.toPost-Doctoral	-
<b>Employed</b>	
Through Campus selection	6.5%
Other than campus recruitment	60 %
Entrepreneurship/Self-employment	01

**30. Details of Infrastructural facilities**

**a) Library**

Number of Titles available: 3625

Number of Volumes available:11359

**b) Internet Facility for Staff & Students**

Internet Speed: 12 Mbps

Available with wired network and wireless access points.

**c) Classrooms with ICT facilities:** 3 Classrooms available.

**d) Laboratory Details****Name of the Lab: - Hardware Lab.**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equipments
1.	Printer 132 COL	1	01	21/01/1986	19000
2.	COLOUR TV	1	01	21/01/1986	11200
3.	PC	1	01	11/7/1988	55445
4.	PC	1	01	22/9/1988	91650
5.	PC	1	02	29/9/1988	37400
6.	UPS System	1	03	14/10/1988	17850
7.	PC	5	04	18/3/1990	138840
8.	Spike protector	1	04	18/03/1990	595
9.	PC	4	04	31/8/1990	139338
10.	FAN (KHAITAN)	5	05	10/9/1991	4680
11.	Super PC-AT	17	05	17/3/1992	1166000
12.	L&T PRINTER 132 DMP	2	06	17/3/1992	36900
13.	Color MONITER	2	06	17/3/1992	20240
14.	Chair	20	06	14/5/1992	10260
15.	AC (Ram sales)	8	07	22/5/1992	131480
16.	HP 610	1	11	20/9/1999	6300
17.	Kirloskar compressor	2	14	19/9/2000	27576
18.	Zenith p IV	3	15	29/8/2001	126000
19.	20GB HD, Epson Printer 300+ (7600)& other	1	15	01/10/2001	15900
20.	Cat 5 cable	915 m	28	27/8/2002	12874
21.	Ibm p IV	17	35	26/07/2004	450500
22.	HCL PIV	6	36	26/07/2004	136500
23.	24port switch	1	40	11/01/2008	6400
24.	DESKTOP PC(D.C)	19	42	20/06/2009	349600
25.	Printer lx 300+	1	43	18/09/2009	7000
26.	I con silver Frame white board 3X4	1	44	15/10/2010	1725
27.	3 leg Iron Stand	1	44	15/10/2010	765
28.	Lenovo Think Center Desktop without DVD	10	45	04/10/2011	167600
29.	Lenevo H22-57 Pc	15	46	15/5/2012	319500
30.	8086 trainer Kit & 8051Microcontroller Kit	11	47	21/2/2014	129302
31.	CRO 20 mhz	02	48	19/2/2014	36915
32.	ZENITH P-IV	30	02it	28/10/2002	789000
33.	Lenovo Think Center Desktop with DVD	10	04	04/10/2011	178400
					4642735

**Name of the Lab: - Computer graphics Lab.**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equipments
1.	CHAIR	10	03	9/02/1989	8500
2.	AC fodder	3	03	19/03/1989	71604
3.	Ethernet Lan card		08	12/08/1996	97000
4.	Battery	2	09	01/10/1996	5200
5.	PC TANDON	2	11	04/03/1998	98856
6.	PRINTER LQ1070	1	11	04/03/1998	17000
7.	Lan card	4	11	20/02/1998	4000
8.	P-III ZENITH & installation charges	13	15	21/08/2001	370500
9.	installation charges	28	16	04/09/2001	31000
10	TC++	5	29	28/10/2002	21000
11	P-IV ZENITH	1	32	12/09/2003	28500
12	AC Videocon	1	34	09/08/2004	14890
13	WIN-98	15	34	16/08/2004	52125
14	IBM pIV	7	35	26/07/2004	185500
15	DESKTOP PC(D.C)	23	42	20/01/2009	423200
16	Printer Xerox 3117	1	43	20/01/2009	4500
17	Printer LX 300+	1	44	13/09/2010	7300
18	I con silver Frame white board 3X4	1	44	15/10/2010	1725
19	Scanner 120	1	01	12/10/2016	3450
20	HP1020+ printer	1	07	01/08/2013	6900
					1452750

**Name of the Lab: - Database Management System Lab.**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equipments
1.	P-iii ZENITH	1	12	20/09/1999	40600
2.	CELERON ZENITH	5	12	20/09/1999	140500
3.	HP 6L GOLD	1	12	20/09/1999	18300
4.	Microsoft win NT	1	14	20/09/1999	28800
5.	Hard disk	1	14	20/09/1999	7400
6.	CD rom Drive	1	14	20/09/1999	3000
7.	Internal fax modem	1	14	20/09/1999	3000
8.	HP 640 Deskjet	1	16	04/09/2001	5100
9.	UPS LM make	4	16	04/09/2001	12800
10	Fan Usha	8	17	01/10/2009	11280
11	Win Xp	10	29	28/10/2002	42000
12	D Link 24 port	1			4975
13	AC	1	34	09/08/2004	14890
14	ORACLE 8i	1 set	37	30/08/2004	45000
15	PRINTER 300+	3	39	31/08/2007	20550
16	Lenovo Think Centre Desktop with DVD	20	40	24/09/2007	420000
17	LAPTOP	1	42	17/11/2008	39650
18	DESKTOP PC (D.c.)	4	42	20/01/2009	73600
19	PRINTER LX 300+	1	43	18/09/2009	7000
20	PRINTER LX 300+	1	44	13/09/2010	7300
21	I con silver Frame white board 3X4	1	44	15/10/2010	1725
22	3 -leg iron stand	1	44	15/10/2010	765
23	Laptop Dell	1	46	04/10/2012	28800
24	Projector	1	46	04/10/2012	26200
25	Lenovo Think Centre Computer	25	01	12/10/2016	667500
26	Printer Canon2900	1	01	12/10/2016	7300
27	Oracle WD program	1	06	05/03/2012	390000
28	Epson LX300+ printer	1	07	21/08/2013	7450
					2075485

**Name of the Lab: - Software Engineering Lab.**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equipments
1.	HCL BUSY BEE	1	10	11/02/1997	45094
2.	FLOPPY Drive	1	10	13/08/1997	1000
3.	Magic cord	1	10	13/08/1997	800
4.	Ethernet LAN card	6	12	20/09/1999	5280
5.	Printer lq 1070	1	12	20/09/1999	14900
6.	ZENITH P III	12	15	29/08/2001	342000
7.	PRINTER LX 300+	1	16	04/09/2001	6800
8.	FAN USHA	8	17	01/10/2001	11280
9.	UPS LM make &pronet 56k modem	1	32	02/10/2003	4000
10	Ups apc	1	33	09/08/2004	2800
11	PRINTER LX 300+	1	33	09/08/2004	6400

12	EPSON LX 300+	1	33	09/08/2004	6400
13	AC Videocon	2	34	09/08/2004	29780
14	Desk top iBallpIV	6	42	20/01/2009	110400
15	Xerox printer	5	43	20/01/2009	22500
16	Laptop Dell	1	44	31/08/2010	31250
17	Printer Canon 2900	1	44	13/09/2010	5800
18	Printer Epson LX 300+	1	44	13/09/2010	7300
19	I con silver Frame white board 3X4	1	44	15/10/2010	1725
20	3 leg iron stand	1	44	15/10/2010	765
21	IBM Rational S/W	1	45	29/09/2010	306720
22	Lenovo Think Centre Desktop without DVD	24	45	4/10/2011	402240
23	Printer Canon 2900	1	46	17/05/2012	6400
24	RAM	1	03	16/11/2010	1225
25	Epson LX300+ printer	1	07	21/08/2013	7450
					1380309

**Name of the Lab: - Programming Lab.**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equipments
1.	ZENITH III	22	12	20/09/1999	898800
2.	M.S. VISUAL STUDIO	1	13	20/09/1999	7800
3.	ZENITH NOTEBOOK	1	28	28/10/2002	102000
4.	Tc ++	5	29	28/10/2002	21000
5.	IBM E-series SERVER	1	29	28/10/2002	95000
6.	PRINTER LQ1150	4	29	28/10/2002	56000
7.	HP LASERJET1000	1	29	28/10/2002	15500
8.	SCANNER	1	29	28/10/2002	4900
9.	LAN CARD	100	29	28/10/2002	50000
10	HP 656	1	29	28/10/2002	3900
11	8-port,16,port & 24 port Switches, 6-CORE ARMED FIBRE CABLE,CONNECTOR, COUPLER, Media Convertor, Patch cord	1set each	29	17/12/2002	90595
12	PRINTER lx 300+	1	33	09/08/2004	6400
13	Win 98	10	34	16/08/2004	34750
14	HCL	24	36	26/07/2004	546000
15	I con silver Frame white board 3X4	1	44	15/10/2010	1725
16	3 leg iron stand	1	44	15/10/2010	765
17	Win STRTR 7 SNG7 OLPNL	60	46	06/08/2012	154479
18	40 gbHdd&fibre cable (80mtrs)	1	02	17/07/2002	10360
19	Access Points	2	03	22/02/2011	5714
20	Wireless USB LAN cord	6	03	22/02/2011	5428
21	Wireless USB Bluetooth with 5%vat	6	03	22/02/2011	2658
22	Laptop Dell	1	05	04/01/2012	28800
23	Projector	1	05	04/01/2012	26200
24	HP Laser jet 1020	1	07	15/07/2012	6800
25	Water filtre	1	07	29/09/2012	5500



**Name of the Lab: - Microprocessor Lab.**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equipments
1.	TMS 320 kit	05	08	10/09/1992	30293
2.	ZENITH P-IV	50	28	28/10/2002	1315000
3.	MS dos	5	31	08/01/2003	5750
4.	AC LG MAKE	2	31	17/07/2003	54980
5.	PRINTER 300+	2	33	09/08/2004	12800
6.	Project Epson AB57	1	43	09/02/2010	31700
7.	I con silver Frame white board 3X4	1	44	15/10/2010	1725
8.	3 leg iron stand	1	44	15/10/2010	765
9.	Lenevo	5	45	04/10/2011	83800
10	Win STRTR 7 SNG7 OLPNL	40	46	06/08/2012	100000
11	Microprocessor Kits 8085 & 8086	1	07	06/08/2012	27540
12	Canon 2900 printer	1	07	21/08/2013	6600
					1670953

**Name of the Lab: - Computer Centre**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equipments
1.	Vacuum cleaner	1	03	18/01/1989	2985
2.	CVT(5 KVA)	1	14	06/02/2001	42000
3.	Cable		17	01/10/2001	6370
4.	MODEM RAD	1	17	01/10/2001	83300
5.	ROUTER	1	17	01/10/2001	68600
6.	Rack 6U	1	30	17/12/2002	4500
7.	NETWORK O.S WIN2000	1	31	28/02/2003	39000
8.	ORACLE 9i(1+5 USER)	I set	31	28/02/2003	71000
9.	CVT(5 KVA)	2	31	10/03/2003	84000
10	Ups APC make	3	33	09/08/2004	8400
11	Speaker Intex	20	33	09/08/2004	3800
12	CD writer	5	33	09/08/2004	8000
13	Cat cable	3 bundle	33	09/08/2004	8250
14	Printer LX 300+	2	33	09/08/2004	12800
15	printer LX 300+	2	33	09/08/2004	12800
16	Printer Lx 300+	1	33	09/08/2004	6400
17	Hp PRINTER 1010	2	33	09/08/2004	18900
18	SLIM SOFTWARE	1	33	02/08/2004	89960
19	AC 1.5 tones Videocon	4	34	14/08/2004	59560
20	Antivirus	3	34	16/08/2014	1590
21	Microsoft OFFICE 2003	1	34	16/08/2014	7400
22	Microsoft WIN98	25	34	16/08/2014	86875
23	Computer p-IV IBM	60	35	21/08/2004	1590000
24	UPS 1250 VA	1	37	17/08/2004	15035

25	Switch24 port	1	37	25/10/2004	11350
26	D-link 56 KBPS	2	37	25/10/2004	3700
27	Pronet cat 5cable & router	1	37	25/10/2004	14250
28	Scanner 2410	1	44	20/02/2010	4300
29	Printer LX 300+	1	44	13/09/2010	7300
30	I con silver Frame white board 3X4	3	44	15/10/2010	5175
31	Lenovo Think Centre Desktop with DVD	7	45	04/10/2011	118020
32	MS win pro7 SNGL upgrade	100	46	06/08/2012	332934
33	Lenovo Think Centre Corei3 Computer	55	01	12/10/2016	1468500
34	projector Epson	2	01	12/10/2016	54000
35	ROUTER cisco	1	03	28/08/2006	85000
36	Lenovo Think Centre Desktop without DVD	20	04	04/10/2011	335200
37	Biometric Finger print Scanner	1	05	28/12/2011	5000
					4788254

**Name of the Lab: - Computer Network**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equipments
1.	OFFICE 2000	1	13	20/09/1999	9800
2.	ANTIVIRUS	1	13	20/09/1999	4500
3.	8 port E-net	1	11	20/09/1999	2790
4.	cat5 cable	30mtr	11	20/09/1999	690
5.	Rj 45 connecter	18	11	20/09/1999	270
6.	outlet	6	11	20/09/1999	3300
7.	SDram	1	13	20/09/1999	3000
8.	5 KVA CVT	1	15	04/09/2001	42000
9.	Cd rom	1	16	04/09/2001	2500
10	56kbps modem	1	16	04/09/2001	750
11	BROAD BAND VSAT	1 set	17	26/04/2002	150573
12	OUTLET, patch card,8 port switch	1	30	27/12/2002	13850
13	AC LG MAKE	2	31	17/07/2003	86980
14	OFFICE AUTOMATION S/W	1	36	18/08/2004	37600
15	Desktop PC HCL	20	36	26/07/2004	455000
16	16 PORT SWITCH RJ 45 CONNECTOR	1	37	01/09/2004	5385
17	Lg CD Rom	4	38	07/11/2004	3800
18	LCD MONITOR	1	38	18/04/2005	16120
19	HPSC PRINTER	1	38	25/07/2005	4800
20	EPF SOFTWARE	1	38	24/11/2005	5000
21	OFFICE AUTOMATION S/W	1	38	06/02/2006	40000
22	Combo drive	1	38	10/01/2006	2100
23	Dvd	1	39	31/01/2006	3500
24	Intex UPS	1	39	18/10/2006	2100
25	UPS(SUKAM)	1	39	05/11/2006	8700

26	UPS 1250 VA	1	37	17/08/2004	6500
27	LCD MONITOR	1	40	12/08/2008	9300
28	I con silver Frame white board 3X4	1	44	15/10/2010	1725
29	3 leg iron stand	1	44	15/10/2010	765
30	Lenovo Think Centre Desktop with DVD	4	45	04/10/2011	71440
31	Projector ceiling mount & VGA cable	1 & 13 mtr	47	12/12/2013	4175
32	INTERNET CONNECTION setup including 16 port & 24 port switches	1	01	17/07/2002	366690
33	Cable	100mtr	02	10/08/2002	1400
34	Color Printer (ID card)	1	04	28/07/2001	83000
35	Lenovo Think Centre Desktop without DVD	20	04	04/10/2011	335200
36	Wi-Fi Equipment	1 set	05	17/12/2011	95000
37	Split Ac Haier 1 Tone	1	06	17/07/2012	18000
38	Website Development Charges	1	06	09/07/2012	17500
					1928178

**Name of the Lab: - Embedded System**

Sl. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equipment
1.	ARMED 7 BASED BOARD	5	41	23/08/2008	416250
	& ARM 9 BASED	5	41	23/08/2008	
	TRITON IDE SOFTWARE	10	41	23/08/2008	
2.	Canon 2900 printer	1	07	21/08/2013	6600
					422850

**31.Number of students receiving financial assistance from college, university, government or other agencies-**

Eligible students are receives the scholarship from Government.

**32.Details on student enrichment programmes (special lectures/workshops/seminar) with external experts organized every year National level technical seminar & workshops.**

- Campus Recruitment Training
- Personality Development Programs
- Guest lecturers with Industry and academic experts.
- Seminars/ Workshop on Recent trends in the respective field

Sr no.	Name of the seminar/work Shop	Source of funding	Date of seminar /Conferences/Workshops	Co-ordinator
1	JAVA TECHNOLOGY	Self	9 <sup>th</sup> to 14 <sup>th</sup> Feb 2017	Mr. A. B. Koli

				Mr. V. O. Patil
2	Types of Viruses and practical implementation of Spyware	Self	December 2014	Mr. P. R. Patil Mr. V. S. Mahajan
3	Developing Windows and Web Application using .Net by MTA	Self	Dec 2014 and FEB 2015.	Mr. V. T. Patil Mr. S. H. Shaikh
4	Workshop on JAVA	Self	9 <sup>th</sup> , 10 <sup>th</sup> March 2014	Prof. A. P. Khan
5	Workshop on Asp.Net	Self	23 <sup>rd</sup> , 24 <sup>th</sup> March 2014	Prof. A. P. Khan
6	Workshop on Core Java	Self	9 <sup>th</sup> Feb to 24 Feb 2013	Mr. R.A. Shaikh Mr. A. I. Pathan
7	Oracle WDP	Self	Aug 2012	Prof. A. B. Koli

### 33. Teaching methods adopted to improve student learning-

1. Through Extra classes for weak students
2. Surprise tests
3. Improvement tests
4. Tutorial classes
5. Feedback system & guidance of students
6. Providing question bank to student
7. Group discussion
8. LCD projector.

### 34. Participation in Institutional Social Responsibility (ISR) and Extension activities

Blood Donation Camps, Anti-ragging slogan, road safety awareness, Save Power awareness program, Tree Plantation, Swatch Bharat Abhiyan, Organ Donation Drive etc.

### 35. SWOC analysis of the department and Future plans Strength

1. The department is well furnished with laboratories and equipment's.
2. The staff members are energetic and experienced.
3. The department frequently organizes student enrichment programs.
4. Well-disciplined culture.
5. Commitment to use of open source software.

#### Weakness

1. Quality of input in terms of student's intellectual level is very weak.
2. Less industrial exposure.

#### Opportunities

1. The students are doing their projects inside the campus with the guidance of guides.
2. The projects are done by the students with the recourses available in the institute.

#### Challenges

1. To attract high merit students.
2. To get 100% placement.
3. To make all the students well expertise in practical fields.

**Future Plans**

1. To establish the consultancy service to the students about their projects and their careerguidance.
2. To implement innovative teaching methods to involve the students for their bright future to make every student expert engineer.

## Evaluative Report of the Department

**1.Name of the Department-** Electronics & Telecommunication

**2.Year of Establishment-** June 1988

**3.Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D. etc.)**

UG – Electronics & Telecommunication

PG – Electronics & Telecommunication

**4.Names of Interdisciplinary courses and the departments/units involved:**

Interdisciplinary Subject is taught as per NMU Syllabus

**5.Annual/ semester/choice based credit system (programme wise)**

UG – Electronics & Telecommunication

semester	Theory credits	Sessional credits	Total credits
First	17	06	23
Second	16	07	23
Third	17	06	23
Fourth	17	06	23
Fifth	15	08	23
Sixth	15	08	23
seventh	15	08	23
Eight	12	11	23
Total	124	60	184

PG – Electronics & Telecommunication

semester	Theory Marks	Sessional Marks	Total Marks
First	500	250	750
Second	500	250	750
Third	--	200	200
Fourth	--	300	300
Total	1000	1000	2000

**6.Participation of the department in the courses offered by other departments**

Department	Theory taught	Sessional taken
Computer science	03 Hrs/week	04 Hrs/sem
Civil	--	--
Electrical	--	--
Instrumentation	--	--
Mechanical	--	--

**7. Courses in collaboration with other universities, industries, foreign institutions, etc.**

NIL

**8. Details of courses/ programmes discontinued (if any) with reasons:**

NIL

**9. Number of teaching posts: 07**

Post	Sanctioned	Filled
Professors	01	00
Associate Professors	02	01
Asst. Professors	06	06

**10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)**

Name	Qualification	Designation	Specialization	No Years of Experience	No of Ph.D. Students guided for the last 4 years
Patil Vijay Khushal	BE Electronics	HOD & Asso.Prof.	Digital Comm. ImageProcessing	24 Yrs	Nil
Patil Jayashree Hiralal	BE E&Tc , M Tech (VLSI)	Asst.Prof.	VLSI Design	13 Yrs.	Nil
Patil Sanjay Purushotam	BE E&Tc , ME	Asst.Prof	Telematics	13 Yrs.	Nil
Patil Nandkishor Chhagan	BE E&Tc , ME	Asst.Prof	Fibre Optics Satellite comm	13 YRS	Nil
Patil Pravin Bhimbhai	BE E&Tc , ME DC	Asst.Prof	Embedded Sys	11 Yrs	Nil
Nerker Vijay Bhagwan	BE E&Tc, M Tech DC	Asst.Prof	Digital Electronics	9 Yrs	Nil
Bhadane Ganesh Gulabrao	BE E&Tc, ME DC	Asst.Prof	Electronics Circuit Design	9 Yrs	Nil
Yamini Dipak Patil	BE E&Tc , ME E&Tc	Asst.Prof	Digital Signal Processing	3 Yrs	Nil

11. List of senior visiting faculty - NIL
12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty: NIL
13. Student -Teacher Ratio (programme wise): 15:01

14. Number of academic support staff (technical) and administrative staff; sanctioned and filled

	sanctioned	Filled
Technical staff	02	02
Administrative staff	00	00

15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.

Name	Qualification	Designation
Patil Vijay Khushal	BE Electronics ME Electronics	HOD & Asso.Prof.
Patil Jayashree Hiralal	BE E&Tc , M Tech (VLSI)	Asst.Prof.
Patil Sanjay Purushotam	BE E&Tc , ME Electronics	Asst.Prof.
Patil Nandkishor Chhagan	BE E&Tc , ME Electronics	Asst.Prof.
Patil Pravin Bhimbhai	BE E&Tc , ME DC	Asst.Prof.
Nerker Vijay Bhagwan	BE E&Tc, M Tech DC	Asst.Prof.
Bhadane Ganesh Gulabrao	BE E&Tc, ME DC	Asst.Prof.

16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received NIL.

17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received.

NIL

18. Research Centre /facility recognized by the University

NIL

19. Publications:

Publication per faculty	Number of papers published in peer reviewed journals	Books Edited



	<b>(national /international) by faculty</b>	
Patil Vijay Khushal	17	00
Patil Jayashree Hiralal	13	00
Patil Sanjay Purushotam	12	00
Patil Nandkishor Chhagan	10	00
Patil Pravin Bhimbhai	01	00
Nerker Vijay Bhagwan	04	00
Bhadane Ganesh Gulabrao	02	00

\*a) Publication per faculty:

\*Number of papers published in peer reviewed journals (national / International) by faculty and students

Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)

Monographs	NIL
Chapter in Book	NIL
Books Edited	NIL
Books with ISBN/ISSN numbers with details of publishers	NIL

**20. Areas of consultancy and income generated Revenue generated on assist an experimental project work in the institute laboratory.** NIL

**21. Faculty as members in**

<b>a) National committees:-</b>	NIL
<b>b) International Committees:-</b>	NIL
<b>c) Editorial Boards:-</b>	NIL

**22. Student projects**

a) Percentage of students who have done in-house projects including inter departmental/ programme – 100%

b) Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies: NIL

**23. Awards / Recognitions received by faculty and students.** NIL

**24. List of eminent academicians and scientists / visitors to the Department:**

NIL

**25. Seminars/ Conferences/Workshops organized & the source of funding**

a) National

Sr no.	Name of the seminar/work shop	Source of funding	Date of seminar	co-ordinator
1	Techfiesta-2015	Institute	21/02/2015	Prof.V.K.Patil

c) International:

NIL

**26. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.:**

GATE-15- 03 students

**27. Student progression:**

Student progression	Against% enrolled
UG to PG	
2012-13	18.46%
2013-14	13.15%
2014-15	10.93%
2015-16	06.66%
PG to M.Phil.	00
PG to Ph.D.	00
Ph.D. to Post-Doctoral	00
<b>Employed</b>	
Campus selection	
2012-13	00.00%
2013-14	04.00%
2014-15	04.00%
2015-16	00.00%
Other than campus recruitment	
2012-13	80.00%
2013-14	59.21%
2014-15	50.00%
2015-16	37.70%

Entrepreneurship/Self-employment	--
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### 30. Details of Infrastructural facilities

#### a) Library

Number of Titles available: 978

Number of Volumes available: 6926

#### b) Internet facilities for Staff & Students – Digital Micro computing Lab with Broad band and BSNL Facilities available both for staff & students.

c) Class rooms with ICT facility: 01

d) Laboratories:

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#### 1) Name of Lab: Digital Microcomputing Lab.

Sr. No	Name of Instruments	Dead Stock No.	Name of Company	Purchase Date	Quantity	Price (Rs.)
1	Regulated DC Power Supply	6/4	Sicon	7/10/1989	7	5950=00
2	Digital IC Trainer	41/21	Hindustan instruments	14/09/1991	4	15200=00
3	Digital IC Trainer	21/12	Shree trading	30/8/1991	2	8000=00
4	Microprocessor Kit, cable and matching connector set	27/16	DMS	14/09/1991	3	1185=00
5	STD bus connector card	27/16	DMS	14/09/1991	3	555=00
6	A TO D converter card	27/16	DMS	14/09/1991	1	850=00
7	D TO A converter card	27/16	DMS	14/09/1991	1	950=00
8	Logic controller	27/16	DMS	14/09/1991	1	660=00
9	Programmer	27/16	DMS	14/09/1991	1	1250=00
10	SMPS	27/16	DMS	14/09/1991	3	2550=00
11	Educational trainer kit	28/16	DMS	14/09/1991	3	10350=00
12	Inconix microprocessor trainer kit, battery backup	26/15	Inconix	15/09/1991	7	19950=00
13	Multiple power supply	26/15	Inconix	15/09/1991	7	5950=00
14	Thumb wheel and 7 segment display	26/15	Inconix	15/09/1991	1	850=00
15	Reed relay control interface	26/15	Inconix	15/09/1991	1	950=00
16	Stepper motor controller interface	26/15	Inconix	15/09/1991	1	1850=00
17	Unicoded keyboard	26/15	Inconix	15/09/1991	1	850=00
18	Elevator simulator	26/15	Inconix	15/09/1991	1	950=00
19	Digital IC Tester	56/30	Shree Trading	30/09/1995	1	15000=00
20	Educational Trainer Kit A.DYNA 86 B.8253#325 C.8279#415 D.LBDR#287	60/33	DMS	02/09/1996	1 1 1 1	8075=00 1751=00 2737=00 2380=00
21	SMPS Cable and Connector Set	61B	DMS	02/09/1996	1 1	1168=00 374=00
22	CRO	60/35	Philips	03/09/1996	1	14500=00

23	Function Generator	33/19	L T	14/9/1991	1	3800=00
24	Multimeter	65/35	MICO	20/10/1996	1	1170=00
25	Voltage Stabilizer		Agrawal Electronics	10/10/2000	1	1800=00
26	Digital kits A. Decoder 7490,7447 B. Adder, Subtractor C. ALU 74181 D. BCD adder E. Decoder counter 7490 F. Mux, Demux G. Code converter H. Pulse Train generator I. Parity Generator and Checker	1/1	Purnima	30/08/1990	1 1 1 1 1 1 1 1 1	800=00 1000=00 1000=00 1000=00 800=00 1200=00 1000=00 1000=00 800=00
27	A. Active HDL with simplify pro Xilinx Webpack 4.1 B. Universal Trainer kit(FPGA,CPL model) C. Hardware Locks 40511 to 40515 D. Synplify PRO hardware Dongle E. SYNPLIFY PRO CD with Manual F. Active HDL 5.2 CD G. Webpack 4.1 CD		Trident Techno lab Pvt. Ltd.	22/10/2002	5 2 5 1 1 1 1	151250=00 42210=00
28	Personal Computer p-iv @1.5 Ghz,Chipset intel 845 G1,RAM-128 Mb,DDRAM,Harddisk 40 Gb, Floppy Disk,Monitor 15” NIC Card,Cd Rom	Central purchase transferred from computer dept.		28/10/2002	15	394500=00
29	16 port switch with CAT 5 Cable		Mahiras computers	30/08/2004	1	3850=00
30	Epson LX-300+ Printer		Swami computers	09/08/2004	1	6400=00
31	Spectrum Analyzer (Picoscope)		BM sales	15/09/2004	1	54000=00
32	A. Microcontroller Kit 89V51RD2 with power Supply B. 8 Bit DAC interface C. 8 Bit ADC interface D. Keyboard interface with 4*4 matrix E. Stepper Motor and DC motor interface F. 16*2 LCD display module G. 7 segment display module H. RTC DS10307 interfacing module	90,48	Megacore system solutions	30/08/2007	8 2 2 8 2 8 8 2	30240=00 3330=00 3200=00 12000=00 3600=00 2240=00 1440=00 4200=00
33	Lenovo 5311 bq with 17” monitor	Central purchase			5	105000=00
34	A. PC based 32 Channel Logic Analyzer with Digital pattern gen. with USB interface B. VLSI trainer Kit Universal FPGA and CPLD trainer kit C. CPLD daughter board module	55	Prashant distributors pune	25/08/2008	01 03	171639=00

	D.FPGA Spartan XC35400 daughter board along with interface of Stepper motor, DC motor, Temp sensor				03 03	
35	A.DSP trainer kit B.LED interfacing kit C.LCD interfacing kit D. Daughter board interfacing kit	54	Prashant Distributors pune	25/08/2008	02 01 01 02	84819=00
36	Digital IC Tester		BM Sales	26/09/2008	01	24000=00
37	Desktop Monitor I ball Cabinet 2241, Intel B1 G1	57	Swami Enterprises	20/01/2009	10	184000=00
38	A .Lenovo Think CENTER1934RZ8 desktop DO1ES800129B/3209/km/dos/3-3-3 M Series M60 E B. Lenovo think CENTER1934RZ8 desktop DO1ES800129B/3209/km/D OS/3-3-3 with CD Rom C. Lenovo 18.5" TFT 2580 ATI Commercial monitor	Bill no:11-12/3699-2	Minitek Systems Pvt. Ltd.	04/10/2011	15  10  25	428250=00
39	Laptop Dell Vostro 1540	681/1	Swami Enterprises	04/01/2012	01	27428=00
40	Epson Projector EB59	681/1	Swami Enterprises	04/01/2012	01	24952=00
					Total	17,21,073=00

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**2) Name of Lab: PG LAB.**

Sr. No	Name of Instruments	Dead Stock No.	Name of Company	Purchase Date	Quantity	Price (Rs.)
1	Lenovo Thinkcenter1934R28Desktop DO/E5800/29b	109/059	Minitek system Nashik.	04/10/2011	10	1,71,300=00
2	Laptop Dell Vostro 1540	111/060	Swami Enterprices, shahada	04/01/2012	01	55,000=00
	Epson Projector EB59				01	
3	MATLAB Software	121/065	ADCC Infocad pvt lmd.Nagpur		01	3,53,798=00
4	SONY HDR-CX190E	122/066	Best Buy Electronics Shahada	07/01/2013	01	19,500=00
5	USB Video Capture Device	R4/066	Harshada Agencies Shahada	08/01/2013	01	2,700=00
6	8085Microprocessor Kit	126/067	Core Technology Kolhapur.	20/02/2014	10	95,718=00
	Interfacing of 8253/54 kit				02	
7	LCD projector	134/69	Swami Enterprices, shahada	12/10/2016	01	27,000=00
				Total		7,25,016=00

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**3) Name of Lab: Microwave and Optical Fiber Communication**

SR NO.	Name of Instruments	DSR No	Model No	Quantity	Name of Company	Cost of Instruments	Date of Purchase
01	Cathode Rays Oscilloscope(20MHZ)	33/19	OS300C	01	L &T	11500=00	14/09/1991
02	C. R. O(15MHZ)	37/20	PM3206	01	PHILLIPS	10975=00	14/09/1991
03	C. R. O(15MHZ)	37/20	PM3206	01	PHILLIPS	10975=00	14/09/1991
04	C. R. O(60MHZ)	36/20	PM3055	01	PHILLIPS	39850=00	14/09/1991
05	Function generator (01MHZ)	65/35	HM5030	01	SCIENTIFIC	5512=00	09/09/1996
06	Function generator (01MHZ)	73/40	SM5060	01	SCIENTIFIC	7750=00	21/00/2001
07	Power Supply (0-30v,1A)	34/19	----	01	ANTRON	1650=00	14/09/1991
08	Power Supply (0-30v,1A)	34/19	----	01	ANTRON	1650=00	14/09/1991
9 A	1)Klystron Power Supply with Sq.Wave Mode	48/25	KP1010	01	VIDYUT YANTRA UDYOG	4575=00	30/05/1992
	2) Solid State VSWR meter VS411		VS411	01		5980=00	
	3) Klystron Mount X2051		2051	01		760=00	
	4) Klystron 2K25 or K27 tube		X-2051	01		1780=-00	
	5) Variable Attenuator (0-22db) X5020		5020	01		1835=00	
	6) Freq <sup>n</sup> meter $\mu$ meter Type X4055		4055	01		1885=00	
	7) ) Freq <sup>n</sup> Attenuator (6db) X5006		X-5006	01		760=00	
	8)Slotted Section with probe carriage X-6051		X-6051	01		3155=00	
	9) Tunable probeX- 6055		X-6055	01		1270=00	
	10)Directional Coupler (Cross) (20db) X-6062		X-6062	01		1080=00	
	11) E-H Magic Tee		X-3045	01		940=00	30/05/1992
	12) Movable shot		X-4081	01		795=00	
	13) Pyramidal Wave guide Horn Antenna gain with 16 db		X-5041	02		1080=00 1080=00	
	14)Isolated Circulator with Termination		X-6021	01		2375=00	
	15)Wave guide Stand		5035,1212, 6035,1213	04		225*4=900	

	16) Matched Termination		X-4000	02		890=00 890=00	
	17) Detector 1N23 Diode		X-4051	01		290=00	
	18) Wave guide Detector Mountable without crystal			01		1260=00	
<b>9 B</b>	19) Tunable crystal Mount Detector	52/28	X-4051	01		1400=00	03/01/1994
	20) Directional Coupler	52/28	X-6010	01		2260=00	
<b>10</b>	1) LASER Gun Power Supply	53/29		01	PROSECA-ENGG.	17500=00	07/03/1994
	2) LUX meter with open detector			01		24500=00	
<b>11</b>	1) Direct Reading Freq <sup>n</sup> meter	63/34	X-4155	01	VIDYUT YANTRA UDYOG	5990=00	22/08/1996
	2) Gunn Power Supply		X-110	01		4850=00	
	3) Gunn Oscillator		X-2152	01		8380=00	
	4) Pin Modulator		X-451	01		3235=00	
<b>12</b>	1) Modal Fiber Link B low Low cost fiber optic trainer kit.	70/38	LINK B	02	FALCON ENTERPRISES	1,25,000=00	19/01/1998
	2) RS 232 Interface			01			
	3) 1000 micron plastic fiber cable			01	FALCON ENTERPRISES		
	4) Model mos -850 fiber optic LED Source			01			
	5) Model mop fiber optic power meter with DMM			01			
	6) patch cord for glass fiber			01			
	7) Model DL 100 fiber optic digital link for glass fiber			01			
	8) power supply DL 100			01			
	9) fiber stripper			01			
<b>13</b>	Servo control voltage Stabilizer	71/39		01	Agrawal Elec.	1800=00	10/10/2000
<b>14</b>	1) Klystron Power Supply	74/40		01	VIDYUT YANTRA UDYOG	8950=00	22/02/2001
	2 a) Klystron Mount X2051			01		1970=00	
	2 b ) Klystron 2K25			01		2980=00	
	3) Variable Attenuator (0-22db)			02		3480=00 3480=00	
	4) Direct Reading Freq <sup>n</sup> meter			02		7790=00 7790=00	
	5) Three Port Circulator			01		3290=00	
	6) Wave guide Detector Mount			02		2760=00 2760=00	
	7) Wave guide Stand			06		390*6=2340	
	8) Wave guide Termination			04		1750*4=7000	
	9) Gunn Oscillator			01		9660=00	
	10) Pin Modulator			01		4160=00	
	11) Gunn Power Supply			01		5965=00	
	12) ) Solid State VSWR meter			02	9980=00 9980=00		
<b>15</b>	1) Klystron Power Supply	77/42		02		9910=00	19/10/2000



					Bedare Elect.	9910=00	2
	2 ) Klystron Mount			02		1990*2=3980	
	3) Klystron tube			02		3100*2=6200	
	4)Fixed Atteunator(6db)			02		2730*2=5460	
	5) Freq <sup>n</sup> meter (Micrometer type)			02		3520*2=7040	
	6) )Isolated /Circulator with Terminator			02		4600*2=9200	
	7) Wave guide Stand			10		400*10=4000	
	8) Wave guide Detector Mount			02	Bedare Elect.	2800*2=5600	
	9)Matched Terminator			02		1900*2=3800	19/10/200
	10)Waveguide antenna parabolic with dipolefeed			01		4900=00	2
	11) Cooling fan			02		350*2=700	
16	Antenna Stand with graduated circular scale	78/43		01	Bedare Elect.	2300=00	10/12/200 2
17	Digital Multimeter	76/42	603	02	Prashant Distributor	1330*2=2660	13/09/200 2
18	LCD Projector	85/47	VPESI	01	Rajiv Marketing Pune	80,000=00	25/08/200 4
19	Digital Multimeter	98/54	603	02	MECO	1100*2=2200	23/09/200 8
20	1)Microwave Test Bench (KPS+VSWR meter)	105/57	KP-151 VS411	01	VIDYUT YANTRA UDYOG	66,800=00	12/10/200 9
	2)Klystron tube		2K25	03		5300*3=15900	
	3)Magic Tee		X-3045	01		1935=00	
	4) Cross Directional Coupler		X-6062	02		2280*2=4560	
	5)Pyramidal Horn Antenna		X-5041	02		2040*2=4080	
	6)Parabolic Dish Antenna		X-5071	01		5080=00	
21	1)Microwave Test Bench Set up klystron based Nvis NV 9000	112/61		01	Prashant Distributor	57640=00	12/11/201 1
	2)Solid State Klystron Power Supply (KPS)			01		13,320=00	
	3)Detector Mount			01		3032=00	
	4)Direct Reading Freq <sup>n</sup> meter			01	Prashant Distributor	8220=00	
	5)Parabolic Disc with feed 8" diameter			01		6488=00	
	6)Gunn power Supply			01		9776=00	
	7)Mechanical Turn Table			01		8608=00	
					Total	8,47,259=00	
22	Fiber Optic Communication Trainer	130/68		01	Akademika Lab Solution Mumbai. 400709	33750=00	23/11/201 5
					Total	8,81,009=00	

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**4) Name of Lab: Power Electronics Lab**

Sr. No	Name of Instruments	DSR No.	Name of Company	Purchase Date	Quantity	Price (Rs.)
01	CRO 20 MHz	4/3	Systronics	21/10/1989	01	10,800=00
02	CRO 20 MHz	4/3	Systronics	21/10/1989	01	10,800=00
03	CRO 15 MHz	37/20	Philips	14/09/1991	01	10,975=00
04	CRO 20 MHz	33/19	L&T	14/09/1991	01	11500=00
05	CRO 20 MHz	79/44	Systronics	13/09/2002	01	17600=00
06	Function Generator.(1MHz)	33/19	L&T	14/09/1991	01	3800=00
07	Function Generator.(1MHz)	33/19	L&T	14/09/1991	01	3800=00
08	Function Generator.(1MHz)	33/19	L&T	14/09/1991	01	3800=00
09	Function Generator.(1MHz)	73/40	Scientific	21/02/2001	01	7750=00
10	Function Generator.(1MHz)	22/12	Systronics	18/12/1990	01	3750=00
11	Function Generator.(1MHz)	22/12	Systronics	18/12/1990	01	3750=00
12	DC Power Supply (0-30v/1A)	6/5	Sicon	7/10/1989	01	1400=00
13	DC Power Supply (0-30v/1A)	6/5	Sicon	7/10/1989	01	1400=00
14	DC Power Supply (0-30v/1A)	6/5	Sicon	7/10/1989	01	1400=00
15	DC Power Supply (0-30v/1A)	6/5	Sicon	7/10/1989	01	1400=00
16	DC Power Supply (0-30v/1A)	6/5	Sicon	7/10/1989	01	1400=00
17	DC Power Supply (0-30v/5A)	32/18	Agronic	14/09/1991	01	1600=00
18	DC Power Supply (0-30v/5A)	32/18	Agronic	14/09/1991	01	1600=00
19	DC Power Supply (0-30v/2A)	32/18	Agronic	14/09/1991	01	1100=00
20	DC Power Supply (0-300v/500MA)	38/20	Testronics	14/09/1991	01	4500=00
21	DC Power Supply (0-300v/500MA)	38/20	Testronics	14/09/1991	01	4500=00
22	Twin Transistor Power Supply 0-30V/2A	14/9	Systronics	21/10/1989	01	3680=00
23	Twin Transistor Power Supply 0-30V/2A	14/9	Systronics	21/10/1989	01	3680=00
24	Power Supply(0-15v/5A)	57/30	Agrawal electronics	30/09/1995	01	2500=00
25	Power Supply (0-15v/5A)	57/30	Agrawal electronics	30/09/1995	01	2500=00
26	Auto Transformer	47/24	variac	12/0/1991	01	1800=00
27	Servo Voltage Stabilizer	71/39	Agrawal electronics	10/10/2000	01	1800=00
28	Servo Voltage Stabilizer	30/17	Antosan electronics	14/09/1991	01	5300=00
29	Pulse Generator	7/5	Systronics	21/10/1989	01	9080=00
30	Pulse Generator	7/5	Systronics	21/10/1989	01	9080=00

31	Four digit Taco- meter	19/11		30/08/1990	01	2900=00
32	Digital Multimeter.	3/3	Mico	7/10/1989	01	995=00
33	Digital Multimeter.	3/3	Mico	7/10/1989	01	995=00
34	Digital Multimeter.	3/3	Mico	7/10/1989	01	995=00
35	Digital Multimeter	29/17	Meco	14/09/91	01	1300=00
36	Digital Multimeter	76/42	Meco	03/09/2002	01	1330=00
37	Digital Multimeter	76/42	Meco	03/09/2002	01	1330=00
38	Digital Multimeter(bench type)	75/42	Systronics	03/09/2002	01	6500=00
39	Analog multimeter	20/12	R-S Digitronic l	30/08/1990	01	2075=00
40	Power factor meter	57/30	ME Instrument		01	2100=00
41	Function Generator(3MHz)	93/51	Scientific	06/11/2007	01	7083=00
42	Function Generator(3MHz)	93/51	Scientific	06/11/2007	01	7083=00
43	Auto Transformer(6A)	97/53	Agrawal electronics	26/09/2008	01	2240=00
44	Resistance box	97/53	Agrawal electronics	26/09/2008	01	1295=00
45	Resistance box	97/53	Agrawal electronics	26/09/2008	01	1295=00
46	Digital Multimeter	98/154	MECO	23/09/2008	01	1100=00
47	Digital Multimeter	98/154	MECO	23/09/2008	01	1100=00
48	Digital Multimeter	98/154	MECO	23/09/2008	01	1100=00
49	Digital Multimeter	98/154	MECO	23/09/2008	01	1100=00
50	Electronics design board	106/58	Beta engg.pune	21/10/2010	06	5287=50
51	Signal generator(3MHz)	107/58	APLAB Limited.	28/10/2010	01	8663=00
52	Signal generator(3MHz)	107/58	APLAB Limited.	28/10/2010	01	8663=00
53	CRO (25 MHz)	108/58	APLAB Limited.	24/11/2010	01	13860=00
54	CRO (25 MHz)	108/58	APLAB Limited.	24/11/2010	01	13860=00
55	Switching mode power supply.	63/115	SINCOM Pvt.LTD.	14/11/2011	01	6187=50
56	DC Power Supply 0-32V/1A	64/118	Testronix lim.	01/11/2012	01	3780=00
57	DC Power Supply 0-32V/1A	64/118	Testronix lim.	01/11/2012	01	3780=00
58	Variac 1φ (240V/6A)	64/119	Bharat electrical.	1/11/2012	01	2625=00
59	Variac 1φ (240V/6A)	64/119	Bharat electrical.	1/11/2012	01	2625=00
60	Signal generator(3MHz)	65/120	APLAB Limited.	1/11/2012	01	9556=25
61	Signal generator(3MHz)	65/120	APLAB Limited.	1/11/2012	01	9556=25
62	Digital Multimeter.	66/125	Omega Electronics.	25/01/2014	01	2850=00
63	Digital Multimeter.	66/125	Omega Electronics.	25/01/2014	01	2850=00
64	Digital Multimeter.	66/125	Omega Electronics.	25/01/2014	01	2850=00
65	CRO(20MHz)	67/127	Lab Electronics	19/02/2014	01	18457=00
66	CRO(20MHz)	67/127	Lab Electronics	19/02/2014	01	18457=00
67	DC Power Supply	67/128	Testronix.	19/02/2014	01	7875=00
68	DC Power Supply	67/128	Testronix.	19/02/2014	01	7875=00
					Total	3,96,748=00
69	V-I Characteristics of IGBT & MOSFET.	103/56	Kastronica	19/02/2009	01	9500=00
70	Single phase fully controlled	103/6	Kastronica	19/02/2009	01	8520=00

	Bridge converter.					
71	On Line UPS Demonstration kit.	103/6	Kastronica	19/02/2009	01	14560=00
72	Single Phase Bridge Inverter	103/6	Kastronica	19/02/2009	01	9500=00
					Total	4,38,828 =00
73	R-RC Triggering Circuit for SCR.	132/69	Kashtronica	08/01/2016	01	7360=00
74	1-Phase half controlled bridge converter.	132/69	Kashtronica	08/01/2016	01	9100=00
75	D.C. Step Up Chopper.	132/69	Kashtronica	08/01/2016	01	8500=00
76	D.C. Step Down Chopper.	132/69	Kashtronica	08/01/2016	01	8700=00
77	1 Phase AC Regulator using IC 785.	132/69	Kashtronica	08/01/2016	01	11500=00
78	Single Phase Series Inverter with Power Supply.	133/69	Omega Electronics, jaipur.	08/01/2016	01	6000=00
79	Forced Commutated Circuit with Power Supply.	132/69	Omega Electronics, jaipur.	08/01/2016	01	5500=00
					Total	5,48,777=00

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**5) Name of Lab: Communication Engineering**

Sr. No	Name of Instruments	DSR No.	Name of Company	Purchase Date	Quantity	Price (Rs.)
01	CRO 20 MHz	4/3	Systronics	21/10/1989	01	10,800=00
02	CRO 20 MHz	44/79	Systronics	13/09/2002	01	17,600=00
03	CRO 20 MHz	8/6	Scientific	14/09/1991	01	11,500=00
04	CRO 20 MHz	37/20	Philips	14/09/1991	01	10,975=00
05	AM/FM Generator	38/20	International	14/09/1991	01	7,970=00
06	AM/FM Generator	38/20	International	14/09/1991	01	7,970=00
07	Function Generator	22/12	Systronics	18/12/1990	01	3,750=00
08	Function Generator	33/19	L&T	14/09/1991	01	3,800=00
09	Function Generator	11/07	VASAVI Electronics	07/10/1989	01	6,800=00
10	Function Generator	22/12	Systronics	18/12/1990	01	3,750=00
11	Standard RF Signal Generator	03/02	Systronics	07/10/1989	01	11,520=00
12	Digital Standard RF Signal Generator	55/29	Systronics	30/09/1995	01	18,170=00
13	Dual Power Supply $\pm 15V/2A$	06/04	Sicon	07/10/1989	01	3,450=00
14	DC Power Supply 0-30V/1A	06/05	Sicon	07/10/1989	01	1,400=00
15	DC Power Supply 0-30V/1A	06/05	Sicon	07/10/1989	01	1,400=00
16	DC Power Supply 0-30V/1A	06/05	Sicon	07/10/1989	01	1,400=00
17	Twin Transistor Power Supply 0-30V/2A	16/9	Systronics	07/10/1989	01	3,680=00
18	DC Power Supply 0-30V	32/8	Agronic		01	1,100=00
19	DC Power Supply 0-30V	32/8	Agronic		01	1,100=00
20	Multimeter(Analog)	20/12	RS digitronics Mix	30/08/1990	01	2,075=00
21	Multimeter(Analog)	20/12	RS digitronics Mix	30/08/1990	01	2,075=00
22	Digital Multimeter	29/17	Hung Chang		01	1,170=00
23	Digital Multimeter	29/17	International	14/09/1991	01	1,300=00
24	Digital Multimeter	65/35	MECO Instruments	20/10/1996	01	1,170=00
25	Digital Multimeter	76/42	MECO Instruments	13/09/2002	01	1,330=00
26	Digital Multimeter	76/42	MECO Instruments	13/09/2002	01	1,330=00
27	Digital Multimeter	75/42	Systronics	03/09/2002	01	6,500=00
28	AC Millivoltmeter	13/8	Systronics	14/02/1990	01	2,510=00
29	AC Microvoltmeter	2/2	Systronics	21/10/1989	01	3,375=00
30	Servo Voltage Stabilizer 1KvA	30/17	Alpha Elect	14/09/1991	01	5,300=00
31	Pulse Generator	07/05	Systronics	21/10/1989	01	9,080=00
32	Textronics Output Power meter 0-100w	57/30	Agrawal Electronics	30/09/1995	01	2,800=00
33	AM/FM Generator	87/47	Systronics / Radart	21/09/2004	01	68,426=00
34	Overhead Projector	88/47	Ragiv Mkg	14/09/2004	01	7,800=00
35	Function Generator	93/51	Scientific	06/11/2007	01	7,083=00

36	Function Generator	93/51	Scientific	06/11/2007	01	7,083=00
37	CRO 20 MHz	95/52	Systronics	08/11/2007	01	19,100=00
38	CRO 20 MHz	95/52	Systronics	08/11/2007	01	19,100=00
39	Practical Kits PCM,QAM,DSSS,DM,ADM	92/50	Kashtronica	05/10/2007	01each	62,080=00
40	60 MHz DSO	96/52	Systronics	06/03/2008	01	47,736=00
41	AM/FM Generator	97/53	Aplab	26/09/2008	01	16,900=00
42	Power meter	97/53	Aplab	26/09/2008	01	11,000=00
43	GPS Trainer	101/56	Scientech	03/12/2008	01	50,807=00
44	GSM App Module	101/56	Scientech	03/12/2008	01	4,666=00
	GSM Trainer	102/56	Scientech	03/12/2008	01	62,612=00
45	Satellite Comm. Trainer	102/56	Scientech	03/12/2008	01 set	95,977=00
46	Digital Multimeter	98/54	MECO	23/09/2008	01	1,100=00
47	Digital Multimeter	98/54	MECO	23/09/2008	01	1,100=00
48	Electronic Design Exp Board	106/58	ADROIT	21/10/2010	02	10,574=00
49	Multiwaveform Signal Generator	107/58	APLAB	28/10/2010	02	17,326=00
50	25MHz 2Channel 4Trace CRO	108/58	APLAB	24/11/2010	03	41,580=00
51	Digital Multimeter	98/54	MECO	23/09/2008	01	1,100=00
52	Digital Multimeter	98/54	MECO	23/09/2008	01	1,100=00
53	Mobile Telephone Trainer Kit	112/61		12/11/2011	01	44,550=00
54	Balanced Modulator Kit	110/59	LAB Electronics	18/10/2011	01	4,099=00
	FM Transmitter Kit	110/59	LAB Electronics	18/10/2011	01	4,530=00
55	BJT Mixer Kit	115/63	Sincom	14/11/2011	01	3,589=00
	FM Demodulation Foster Kit	115/63	Sincom	14/11/2011	01	3,488=00
56	DC Power Supply 0-30V/1A	118/64	Agrawal	01/11/2012	02	7,875=00
57	Multiwaveform Signal Generator	120/65	APLAB	26/11/2012	02	19,112=00
58	Digital Multimeter	125/66- 1	OMEGA	25/10/2014	01	2,850=00
59	PWM KIT	125/66- 2	OMEGA	25/10/2014	01	4,560=00
60	PPM KIT	125/66- 3	OMEGA	25/10/2014	01	4,902=00
61	AM KIT	125/66- 4	OMEGA	25/10/2014	01	3,534=00
62	PAM KIT	51/28	Divine Sai Sys	13/09/1993	01	4,350=00
63	PAD KIT	51/28	Divine Sai Sys	13/09/1993	01	3,950=00
64	PCM KIT	51/28	Divine Sai Sys	13/09/1993	01	8,800=00
65	TDM KIT	51/28	Divine Sai Sys	13/09/1993	01	7,900=00
66	DM KIT	51/28	Divine Sai Sys	13/09/1993	01	7,900=00
67	Error Detecting code KIT	51/28	Divine Sai Sys	13/09/1993	01	4,250=00
68	ADM KIT	54/29	Divine Sai Sys	08/09/1993	01	8,900=00
69	TDD KIT	54/29	Divine Sai Sys	08/09/1993	01	7,850=00
70	RADIO 3 BAND DEMO BAORD	46/24	OMEGA	15/01/1992	02	2,000=00
71	PAM & PDM Kit	127/67	Lab Electronics	19/02/2014	01	4,882=78
					Total	9,50,220=00
72	Analog Sampling & Reconstruction with PS	133/69	OMEGA	28/01/2016	01	6,297=50
<b>Sr. No</b>	<b>Name of Instruments</b>	<b>DSR No.</b>	<b>Name of Company</b>	<b>Purchase Date</b>	<b>Quantity</b>	<b>Price (Rs.)</b>

01	Am Transmitter KIT	1/1	Purnima	30/08/1990	01	900=00
02	Balanced Modulator KIT	2/2	Purnima	30/08/1990	01	1,000=00
03	IF Amplifier & Detector Stage KIT	1/1	Purnima	30/08/1990	01	900=00
04	Inset Ajay Radio	3/3	Ajay	19/03/1991	01	210=00
05	Philips Radio	6/4	Philips	29/01/1994	01	460=00
06	FSK KIT		Kashtronica	04/10/2001	01	5,500=00
07	ASK KIT	12/6	Kashtronica	04/10/2001	01	6,000=00
08	QPSK KIT	12/6	Kashtronica	04/10/2001	01	12,640=00
09	DATA FORMATS KIT	12/6	Kashtronica	04/10/2001	01	4,500=00
10	DTMF Dial Tone Generator	8/5	LAB	08/12/1994	01	2,260=00
11	Telephone Line Monitor	8/5	LAB	08/12/1994	01	1,910=00
12	RF Amplifier for AM KIT	11/5	MATRIX	19/04/2001	01	2,000=00
13	AGC KIT	11/5	MATRIX	19/04/2001	01	2,000=00
14	RF Amplifier for FM KIT	11/5	MATRIX	19/04/2001	01	2,000=00
15	Squelench Circuit KIT	11/5	MATRIX	19/04/2001	01	2,000=00
16	FM Tx & Receiver KIT	11/5	MATRIX	19/04/2001	01	4,800=00
17	Telephone Demo KIT	13/6	VHS	10/10/2001	01	6,300=00
18	Mobile Hand Set Demo KIT	13/6	VHS	10/10/2001	01	9,800=00
19	Portable Tone Generator	5/8	LAB	08/12/1994	01	1,910=00
20	BJT Mixer Sigma KIT	19/8	Techno Scientific	12/08/2004	01	2,750=00
21	RF Amplifier for AM KIT	19/8	Techno Scientific	12/08/2004	01	1,500=00
22	Squelench Circuit KIT	19/8	Techno Scientific	12/08/2004	01	1,500=00
23	AGC Trainer KIT	19/8	Techno Scientific	12/08/2004	01	2,500=00
Total						9,56,517=00

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**6) Name of Lab: Consumer Electronics Lab & Control Engg Lab.**

Sr. No	Name of Instruments	DSR No.	Name of Company	Purchase Date	Quantity	Price (Rs.)
01	CRO 20 MHz	4/3	Systronics	21/10/1989	01	10,800=00
02	CRO 10 Hz-15 Mhz	37/20	Philips	14/9/1991	01	10,975=00
03	CRO 20 MHz	8/6	Scientific	6/11/1989	01	11,500=00
04	CRO 20 MHz	64/35	Electronic Agency	09/09/1996	01	14,500=00
05	Digital storage oscilloscope	33/19	L&T	14/09/1991	01	95,000=00
06	Digital storage osc.(replace by BM electronics)		Philips	2003-2004	01	30,000=00
07	Function Generator 1hz-1Mhz	22/12	Systronics	18/12/1990	01	3750=00
08	Function Generator	33/19	L&T	14/09/1991	03	11,400=00
09	Function Generator	66/35	Scientific	09/09/1996	01	5,512=00
10	Function Generator	73/40	Scientific	21/02/2001	01	7,750=00
11	AF Signal Generator	75/42	Systronics	03/09/2002	01	6,400=00
12	DC Power Supply 0-30V/1A	34/19	Sicon	07/10/1989	02	2800=00
13	DC Power Supply 0-30V/1A	34/19	Antison	14/09/1991	01	1650=00
14	Dc Power Supply 15v/2A	06/04	Sicon	07/10/1989	01	3450=00
15	Twin Transistor Power Supply 0-30V/2A	16/9	Systronics	21/10/1989	01	3680=00
16	AC Millivoltmeter	13/8	Systronics	14/03/1990	01	2510=00
17	AC Microvoltmeter	15/9	Systronics	16/04/1989	01	3375=00
18	Digital Multimeter	29/17	International	14/09/1991	01	1300=00
		65/35	MECO	20/10/1996	01	1170=00
			MECO	--	01	1170=00
		76/42	MECO	13/09/2002	01	1330=00
			MECO	13/09/2002	01	1330=00
19	Bench type Multimeter	75/42	Systronics	03/09/2002	01	6500=00
20	Multimeter(Analog)	20/12	RS digitronics	30/08/1990	01	2075=00
21	Wobbuloscope	31/18	Unitech	14/09/1991	01	34,800=00
22	Pattern generator B/W	18/11	Pacific	30/08/1090	02	3000=00
23	Pattern generator colour	58/31	Shree trad.	30/09/1995	01	17500=00
24	Sweep generator	40/21	International	14/09/1991	01	33,350=00
25	LCR Q-meter	47/24	Pacific	12/09/1991	02	14600=00
26	Wave Absorbtion meter	46/24	Omega	15/01/1992	01	2500=00
27	Distortion factro meter	31/18	Unitech	14/09/1991	01	4994=00
28	Digital Field Strength meter	68/37	Aplab	22/08/1996	01	13,800=00
29	Digital timer	69/38	Omega	22/08/1996	01	6700=00
30	Voltage stabilizer 0-300v/1KVA	71/39	Agarwal Elec/shri trad.	10/10/2000	01	1800=00
31	Colour TV set	43/22	BPL	12/03/1992	01	26120=00
32	B/W TV Set	43/22	videocon	12/03/1992	01	4860=00
33	TV Booster	43/22	Diamond	12/03/1992	02	920=00
34	VCR	43/22	BPL	12/03/1992	01	26140=00



35	PA System i)Ampifier S.S.A 150 ii)Speakers iii)Mic ASM IV)Mic stand v)Telescope stand VI)30-BOX Speaker poter vii)Microphone	43/22 -- -- -- -- --	Ahuja --- --- -- --	12/03/1992 --- --- --- ---	01 02 01 02 02 02 01	6050=00 4360=00 1720=00 640=00 360=00 4320=00 1925=00
36	Decade Resistance Box	01/02	Omega	07/10/1989	02	1600=00
37	Decade Inductance box	35/19	Pacific	14/09/1991	02	2000=00
38	Decade condenser box	44/23	Omega	14/09/1991	02	1900=00
39	Decade Resistance Box	35/19	Pacific	14/09/1991	02	1500=00
40	Vaccum tube voltmeter	39/21	Radar	14/09/1991	01	5475=00
41	Stepper motor Demo unit with power supply and stepper motor	67/36	Powercon	23/08/1996	01	15250=00
42	Synchro transmeter and receiver pair Dc Stepper motor 3Kg	50/27	Hem Electronics	07/08/1992	01 01	5650=00 950=00
43	AC servo motor	62/34	Laxmi control	17/09/1996	01	20,000=00
44	EPABX System	59/32	ESS.COM	28/08/1996	01	64366=00
45	TV B/W 15 Cm Demo kit	45/23	Omega	14/09/1991	01	9000=00
46	Tape Recorder Demo Kit	47/24	Link	12/09/1991	02	5600=00
47	Kelvin bridge	72/39	Lab Electronics	20/12/2000	01	1850=00
48	Maxwell bridge	72/39	Lab Electronics	20/12/2000	01	1975=00
49	HAYS bridge	72/39	Lab Electronics	20/12/2000	01	1975=00
50	Wheastonebridge	72/39	Lab Electronics	20/12/2000	01	1975=00
51	Schearing bridge	72/39	Lab Electronics	20/12/2000	01	1975=00
52	Strain Guage kit	67/36	Powercon	23/08/1996	01	6538=00
53	TEMP. Transducer	67/36	Powercon	23/08/1996	01	6325=00
54	Resonance kit	21/12	Omega	28/09/1990	01	425=00
55	LVDT	67/36	Powercon	23/08/1996	01	6535=00
56	Colou TV trainer kit	83/46	Sincom	12/08/2004	01	29990=00
57	Cassete player Tape recorder	83/46	Sincom	12/08/2004	01	3890=00
58	VCR trainer kit	83/46	Sincom	12/08/2004	01	29500=00
59	Fax machine Demo kit	83/46	Sincom	12/08/2004	01	31500=00
60	Function Generator	93/51	scientific	06/11/2007	01	7083=00
61	Frequency counter	94/51	scientific	06/11/2007	01	10,645=00
62	CRO	95/52	Systronics	07/09/2007	02	38,200=00
63	Inductance box	97/53	Agrawal Elect.	26/09/2008	03	8850=00
64	Resistance box	97/53	Agrawal Elect.	26/09/2008	02	2300=00
65	Digital Multimeter	98/54	Meco	23/09/2008	02	2200=00
66	CRO 25 Mhz	108/58	Aplab	24/11/2010	03	41580=00
67	Function Generator	107/58	Aplab	28/10/2010	02	17326=00
68	Electronic Design Experimentor	106/58	Beta	21/10/2010	02	10557=00

	board					
69	Thevenins Thm/Nortans thm Kit	114/62	Perfect Elect.	01/01/2012	02	7450=00
70	Thermistor Temp Control kit	114/62	Perfect Elect.	01/01/2012	01	1925=00
71	Transient response of 2 <sup>nd</sup> order system kit	113/62	Prasant Distri.	12//11/2012	01	1980=00
72	Function generator	120/65	Aplab	20/02/2013	02	19112=00
73	DC Power supply 0-30v	118/64	Agarwal Electron.	01/11/12	02	6075=00
74	CRO 20 MHz	127/67	Lab Electron.	19/02/2014	02	36914=00
75	Dual power supply 15v	128/67	Textronix	19/02/2014	03	23625=00
76	Digital multimeter	125/66	Omega	25/01/2014	02	5700=00
					Total	9,48,770=00

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### 7) Name of Lab: Basic Electronics Lab

Sr. No.	Name of the instruments	DSR No	Date of purchase	Name of the Company	Qty	Cost (Rs)
1	C.R.O.(20MHz)	4/3	21/10/1989	Systronics	01	10800=00
2	C.R.O.(20MHz)	4/3	21/10/1989	Systronics	01	10800=00
3	C.R.O.(20MHz)	4/3	21/10/1989	Systronics	01	10800=00
4	C.R.O. (15MHz)	37/20	14/09/1991	Philips	01	10975=00
5	C.R.O.(20MHz)	8/6	06/11/1989	Scientific	01	11500=00
6	C.R.O.(20MHz)	79/44	13/09/02	Systronics	01	17600=00
7	Low distorton AF generator	12/08	21/10/1989	Systronics	01	3740=00
8	Low distorton AF generator	12/08		Systronics	01	3740=00
9	Function Generator	33/19	14/09/1991	L&T	01	3800=00
10	Function Generator	33/19	14/09/1991	L&T	01	3800=00
11	Function Generator	11/07	07/10/1989	Vasavi Electro.	01	6800=00
12	Function Generator	73/40	21/02/2001	Scientific	01	7750=00
13	Function Generator	73/40	21/02/2001	Scientific	01	7750=00
14	AF Generator	75/2/42	03/09/2002	Systronics	01	6400=00
15	Power supply (0-30v,1A)	06/05	07/10/1989	Sicon	01	1400=00
16	Power supply (0-30v,1A)	06/05	07/10/1989	Sicon	01	1400=00
17	Power supply (0-30v,1A)	06/05	07/10/1989	Sicon	01	1400=00
18	Power supply (0-30v,1A)	06/05	07/10/1989	Sicon	01	1400=00
19	Power supply (0-30v,1A)	06/05	07/10/1989	Sicon	01	1400=00
20	Power supply (0-30v,5A)	32/18	14/09/1991	Agronic	01	1600=00
21	Power supply (0-30v,5A)	32/18	14/09/1991	Agronic	01	1600=00
22	Power supply (0-30v,2A)	32/18	14/09/1991	Agronic	01	1600=00
23	Twin transistor Power supply (0-30v,2A)	17/10	21/10/1989	Systronics	01	3680=00
24	Twin transistor Power supply (0-30v,2A)	17/10	21/10/1989	Systronics	01	3680=00
25	Twin transistor Power supply (0-30v,2A)	17/10	21/10/1989	Systronics	01	3680=00
26	Dual Tracking Power supply (0+,-15v,2A)	17/10	07/10/1989	Sicon	01	3450=00
27	Dual Tracking Power supply (0+,-15v,2A)	6/4	07/10/1989	Sicon	01	3450=00
28	Dual Tracking Power supply (0+,-15v,2A)	6/4	07/10/1989	Sicon	01	3450=00
29	Dual Tracking Power supply (0+,-15v,2A)	6/4	07/10/1989	Sicon	01	3450=00
30	Dual Tracking Power supply (0+,-15v,2A )	6/4	07/10/1989	Sicon	01	3450=00
31	Power supply (0-300v,500mA)	38/20	14/09/1991	Testronics	01	4500=00
32	Ac Millivoltmeter	13/08	14/03/1990	Systronics	01	2510=00
33	Ac Millivoltmeter	13/08	14/03/1990	Systronics	01	2510=00
34	Ac Millivoltmeter	13/08	14/03/1990	Systronics	01	2510=00

35	Ac Microvoltmeter	2/2	20/11/1989	Systronics	01	3375=00
36	Ac Microvoltmeter	2/2	20/11/1989	Systronics	01	3375=00
37	Ac Microvoltmeter	2/2	20/11/1989	Systronics	01	3375=00
38	Variac(5A)	47/24	12/09/1991	ME The Link	01	1800=00
39	Decade Resistance Box	35/19	14/09/1991	Pacific	01	750=00
40	Decade Resistance Box	1/2	07/10/191989	Omega	01	800=00
41	Decade Resistance Box		07/10/1989	Omega	01	800=00
42	Decade Resistance Box			Omega	01	800=00
43	Decade Condenser Box	44/23	14/09/1991	Omega	01	950=00
44	Decade Condenser Box		14/09/1991	Pacific	01	950=00
45	Inductance Box	35/19	14/09/1991	Pacific	01	1000=00
46	Inductance Box	35/19	14/09/1991	Pacific	01	1000=00
47	Moving coil type voltmeter					
	0-1V	9/6	07/10/1989	Shree trading company	03	4980=00
	0-10V	23/13	30/08/1990	Shree trading company	08	
	0-25V	23/13	30/08/1990	Shree trading company	08	
	0-100V	23/13	30/08/1990	Shree trading company	08	
	0-300V	23/13	30/08/1990	Shree trading company	08	
	Backlite Stand		30/08/1990	Shree trading company	25	
48	Moving coil Ammeter,0-1mA	23/13	30/08/1990	Shree trading company	08	5900=00
	0-10mA				03	
	0-25mA				08	
	0-50mA				08	
	0-100mA				03	
	0-500mA				08	
	Backlite Stand				25	
49	Microammeter	23/13	30/08/1990	Shree trading company		1700=00
	0-50μA				08	
	0-100μA				08	
	Backlite Stand				30	
50	Analog Multimeter	20/12	30/08/1990	Monarch Mktg.	01	2075=00
51	Digital Multimeter	3/3	07/10/1989	Mico instr.	01	995=00
52	Digital Multimeter				01	995=00
53	Digital Multimeter				01	995=00
54	Digital Multimeter	29/17	14/9/1991	Imported	01	1300=00
55	Digital Multimeter	65/33	20/10/1996	Meco instr.	01	1170=00
56	Digital Multimeter		20/10/1996		01	1170=00
57	Digital Multimeter	76/42	13/09/2002	Meco	01	1330=00
58	Digital Multimeter	76/42	13/09/2002	Meco	01	1330=00
59	Digital Multimeter(Bench type)	75/1/42	3/09/2002	Systronics	01	6500=00
60	Voltage Stabilzer(1KVA)	71/39	10/10/2000	Shree trading	01	1800=00

				company		
61	Network Modular Component Storage System. Longitudial Partition Plate	25/14	16/09/1990	Network Pvt.Ltd.Kanpur (3230per) (150 per 100)plate	02 100	6460=00 0150=00
62	Storage Cupboard	42/22	24/02/1990	Mansuri Still Shahada	01	2900=00
63	Cupboard	49/27	31/07/1992	Mansuri Still Shahada	01	3900=00
64	Electronic Component Display charts(STK101,102,103,104,105,106)	5/4	07/11/1989	Seltronics Aurangabad	05	4302=00
65	C.R.O.Dynamic Demonstrator(DB11)	i)21/12	30/08/1990	Shree trading company	01	4500=00
66	Kit-Feedback Amplifier (Omega)	ii)21/12	30/08/90	Shree trading company	01	0750=00
67	CRO 20MHz Dual Trace with Component Tester	84/46	14/08/2004	Scientech Prashant Distributers, Pune	03	15865=50
						15865=50
						15865=50
68	Function generator(Scientific 3MHz)	93/51	06/11/2007	Scientific	02	7083=00
69	CRO 20MHz with Component Tester	95/52	07/09/2007	Systronics	03	19100=00
						19100=00
						19100=00
70	Digital Multimeter(MASTECH)				02	
71	Decade Resistance Box		26/09/2008	Agrawal Electronics	02	1150=00
72	Decade Inductance Box		26/09/2008	Agrawal Electronics	02	2950=00
73	Variac (Autotransformer 6A)		26/09/2008	Agrawal Electronics	01	2150=00
74	Digital Multimeter	98/54	23/09/2008		02	1100=00
75	Electronic Design Experiment board	106/58	22/10/2010		02	5287=00
76	Function generator(Aplab 3MHz)	107/58	28/10/2010	Aplab	02	8663=00
77	To plot the freq. response of vtg. Series f/b amplifier	113/62	12/11/2011	Prashant Distributers	01	2040=00
78	LC Hartley Oscillator	113/62	12/11/2011	Prashant Distributers	01	1800=00
79	Emitter coupled Transistor Differential Amplifier	113/62	12/11/2011	Prashant Distributers	01	3620=00
80	To Draw characteristics of	116/62	12/11/2011	Prashant	01	2100=00

	FET			Distributers		
81	Low & High vtg. Measurement & Regulation chs. Using IC 723	116/62	13/2/2012	B.M.sales	01	2100=00
82	Study of Collipits Oscillator	116/62	13/2/2012	B.M.sales	01	2100=00
83	Measure the response of Schmitt Trigger.	116/62	13/2/2012	B.M.sales	01	2100=00
84	Function generator(Aplab 3MHz)	120/65	26/11/2012	Aplab	04	9556=25
85	Power supply (0-32v,1A)	118/64	1/11/2012	Testronix	04	3937=50
86	Variac (Single phase closed Type 6A)	119/64	1/11/2012		02	2625=00
87	Digital Multimeter Dmm-201	125/66	25/11/2014	Omega Electronics	03	2850=00
88	CRO 20MHz	127/67	19/2/2014	Lab Electronics	02	18451=00
						18451=00
89	Power Supply Dual o/p	128/67	19/2/2014	Agrawal Electronics	03	7875=00
90	Digital Multimeter	98/54	23/09/08		03	1100=00
					Total	5,50,065=00

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**8) Name of Lab: ECD LAB.**

Sr. No	Name of Instruments	DSR No	Name of Company	Purchase Date	Quantity	Price (Rs.)
1	Regulated DC Power Supply single output	118/064	Agrawal Electronics Mumbai.	01/11/2012	02	7,000=00
	Resistance box	118/064	Agrawal Electronics	01/11/2012	04	4,800=00
	Capacitance box	118/064	Agrawal Electronics	01/11/2012	04	11,200=00
	Inductance box	118/064	Agrawal Electronics	01/11/2012	02	6,600=00
2	Aplab 3MHz Multiwaveform Signal generator	120/065	Aplab Limited	26/11/2012	02	19,112=50
3	Digital Multimeter DMM-201	125/066	Omega Electronics	25/01/2014	01	2,850=00
4	Regulated DC Power Supply dual output Model Testronix	128/067	Agrawal Electronics Mumbai.	19/02/2014	02	15,750=00
5	Display board of different fixed & variable resistor	131/68	Sincom Sindhua electronics & comm. Pvt limited ,nagpur	07/12/2015	08	3,090=00
	Display board of different fixed & variable Capacitors					3,090=00
	Display board of different fixed & variable Inductors					3,090=00
	Display board of different types of Diodes					3,090=00
	Display board of Transistor					3,090=00
	Display board of different SCR DIAC TRIAC UJT					3,090=00
	Display board of different Switches					3,090=00
	Display board of different Discrete ICs					4,290=00
Total						92,491=00

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**9) Name of Lab: e yantra Embedded System & Robotics Lab**

Sr. No	Name of Instruments	DSR No	Name of Company	Purchase Date	Quantity	Price (Rs.)
1	Fire Bird V2560	135/070	Nex Robotics Pvt Ltd Unit No 13 Bldg No 2(A3) Sector-1 Millennium Business Park Mahape New Mumbai 400710	07/01/2017	04	1,81,273=00
	Spark V Robot				05	
	Fire Bird VP89V51RD2 Adapter Card				03	
	Fire Bird VLPC2148 Adapter Card				05	
	Zigbee Module 100m range				10	
	Zigbee module Adapter				05	
	Metal Gear Servo Motors				10	
	Servo Motor based gripper kit for Fire Bird V Robot				02	
	Sharp GP2Y0A21YK0F Infrared range Sensor				10	
				Total Cost		1,81,273=00

**28. Details on student enrichment programmes (special lectures / workshops /seminar) with external experts organized every year National level technical seminar & workshops.**

- Campus Recruitment Training
- Guest lecturers with Industry and academic experts.
- Seminars on Recent trends in the respective field.

**29. Teaching methods adopted to improve student learning-** (1) Through Extra classes for weak students (2) Surprise tests, (3) Improvement tests (4) Tutorial classes, (5) feedback system & guidance of students (6) Providing students with 100 short questions (7) Group discussion (9) use of LCD Projectors for better understanding of subject.

**30. Participation in Institutional Social Responsibility (ISR) and Extension activities** Blood Donation Camps, Anti-ragging slogan, Road Safety awareness, Save Power awareness program etc.

**31. SWOT analysis of the department and Future plans Strength-**

1. The department is well furnished with laboratories and Equipments
2. The department has e Yantra Embedded System & Robotics Lab.
3. The department is provided with modern Computer Lab.
4. The staffs are experienced and high skilled.
5. Affiliated by NMU Jalgaon.
7. The Department has both B. E & M.E.



**Weakness-**

1. Quality of in –put in terms of students intellectual level is very weak.
2. Irregular publication of university results.

**Opportunities.-**

1. The students are doing their projects inside the campus with the guidance of guides.
2. The projects are done by the students with the recourses and energy available in the institute.

**Challenges-**

1. To get NAAC accreditation
2. To get 100% placement
3. To make all the students well expertise in practical fields.

**Future Plans:**

1. To establish a full-fledged Entrepreneurship Development Cell this will enable to improve the skills of students to start their own organizations.
2. To establish the consultancy service to the students about their career.
3. To implement innovative teaching methods to involve the students for their bright future to make every student expert Industry engineer.

## Evaluative Report of the Department

1. **Name of the department-** ELECTRICAL ENGINEERING
2. **Year of Establishment-** 1999
3. **Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)**
  - UG
4. **Names of Interdisciplinary courses and the departments/units involved.**
  - Programmable logic controller and distributed control system- Instrumentation and Control Engineering Department
5. **Annual/ semester/choice based credit system (programme wise)**

semester	Theory credits	Sessional credits	Total credits
First	17	6	23
Second	16	7	23
Third	17	6	23
Fourth	17	6	23
Fifth	15	8	23
Sixth	15	8	23
seventh	15	8	23
Eight	12	11	23

6. **Participation of the department in the courses offered by other departments**

Department	Theory taught	Sessional taken
Electronics & Telecommunication	1) Electrical Circuit and Machines	3HRS/WEEK
Instrumentation	1) Electrical Machines and Network	3HRS/WEEK
	2) Energy Audit and Conservation	3HRS/WEEK
Mechanical	1) Basic Electrical Drives and Control	3HRS/WEEK
	2) Energy Audit and Conservation	3HRS/WEEK

7. **Courses in collaboration with other universities, industries, foreign institutions, etc.**

- NIL

8. **Details of courses/programmes discontinued (if any) with reasons.**

- NIL

9. **Number of teaching posts**

Post	Sanctioned	Filled
Professors	01	NIL
Associate Professors	02	NIL
Asst. Professors	10	07

10. **Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt./Ph.D. / M. Phil. etc.)**

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
Smt.K.A.Patel	M.Tech.(EPS)	Head & Asstt.Prof.	Electrical Power System	12.8	Nil
Prashant R.Patil	M.Tech.(EPS)	Asstt.Prof.	Electrical Power System	10	Nil
Pankaj R. Patil	M.Tech.(EPS)	Asstt.Prof.	Electrical Power System	7.2	Nil
K.J.Gandhi	M.Tech.(EPS)	Asstt.Prof.	Electrical Power System	6.8	Nil
V.S.Kale	M.Tech.(EPS)	Asstt.Prof.	Electrical Power System	6.8	Nil
J.R.Saindane	B.E.Elect	Asstt.Prof.	--	5.8	Nil
S.C.Tembhekar	B.E.Elect	Asstt.Prof.	--	4.8	Nil

**11. List of senior visiting faculty-**

NIL

**12. Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty**

NIL

**13. Student -Teacher Ratio (programme wise) 15:1****14. Number of academic support staff (technical) and administrative staff; sanctioned and filled**

	sanctioned	Filled
Technical staff	03	03
Administrative staff	00	00

**15. Qualifications of teaching faculty with D.Sc / D.Litt / Ph.D / MPhil / PG.**

Name	Qualification	Designation
Smt.K.A.Patel	M.Tech.(EPS)	Head & Asstt.Prof.
Prashant R.Patil	M.Tech.(EPS)	Asstt.Prof.
Pankaj R. Patil	M.Tech.(EPS)	Asstt.Prof.
K.J.Gandhi	M.Tech.(EPS)	Asstt.Prof.
V.S.Kale	M.Tech.(EPS)	Asstt.Prof.
J.R.Saindane	B.E.Elect	Asstt.Prof.
S.C.Tembhekar	B.E.Elect	Asstt.Prof.

**16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received**

NIL

**17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received.**

NIL

**18. Research Centre /facility recognized by the University**

NIL

**19. Publications:**

Publication per faculty	Number of papers published in peer reviewed journals (National / International) by faculty	Books Edited
Smt.K.A.Patel	01- International	NIL
Prashant R.Patil	01- International	NIL
Pankaj R. Patil	01- International	NIL
K.J.Gandhi	01- International	NIL
V.S.Kale	01- International	NIL
J.R.Saindane	02 - International	NIL

\* a) Publication per faculty

\* Number of papers published in peer reviewed journals (national /International) by faculty and students –For faculty as above and for students:  
NIL

\* Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)

* Monographs	NIL
* Chapter in Book	NIL
* Books Edited	NIL
* Books with ISBN/ISSN numbers with details of publishers	NIL
* Citation Index	NIL
* SNIP	NIL
* SJR	NIL
* Impact factor	Yes

\* h-index

NIL

**20. Areas of consultancy and income generated / Revenue generated**

NIL

**21. Faculty as members in**

a) National committees:-	NIL
b) International Committees:-	NIL
c) Editorial Boards: -	NIL

**22. Student projects**

a) Percentage of students who have done in-house projects including inter departmental/programme-

NIL

b) Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies

NIL

**23. Awards / Recognitions received by faculty and students.**

NIL

**24. List of eminent academicians and scientists / visitors to the department**

NIL

**25. Seminars/ Conferences/Workshops organized & the source of funding****A) National**

Sr no.	Name of the seminar/work shop	Source of funding	Date of seminar	co-ordinator
1	TECHFiesta 2K14	COLLEGE	15/03/2014	Smt.K.A.Patel

**26. Diversity of Students**

Maximum students are from Maharashtra State

**28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.:**

**GATE- 02 STUDENTS**

(2012-13) - NIL

(2013-14) - NIL

(2014-15) - 01

(2015-16) - 01

**29. Student progression**

<b>Student progression</b>	<b>Against % enrolled</b>
UG to PG	(2012-13) - 9% (2013-14) - 10% (2014-15) - 8% (2015-16) - 14%
PG to M.Phil.	<b>NIL</b>
PG to Ph.D.	<b>NIL</b>
Ph.D. to Post-Doctoral	<b>NIL</b>
<b>Employed</b> • Campus selection • Other than campus recruitment	<b>NIL</b> <b>55%</b>
Entrepreneurship/Self-employment	<b>NIL</b>

**30. Details of Infrastructural****facilities****a) Library:**

<b>Name of Volumes</b>	<b>No. of Titles</b>
983	4015

**b) Internet facilities for Staff & Students-**

- Lab with Broad band and BSNL Facilities available both for staff & students.

**c) Class rooms with ICT facility:-**

- NIL

## d) Laboratories

**ELECTRICAL MACHINE LAB**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equip
01	MG SET 5HP,DC SHUNT MOTOR WITH SERIES GENRATOR	1	1/1	22/8/85	17900/-
02	MG SET 5HP,DC SHUNT GENRATOR WITH DC SHUNT MOTOR	1	1/1	22/8/85/	17900/-
03	AIR COOL TRANSFORMER 250/125 V,1KVA	1	1/1	22/8/85	1250/-
04	AIR COOL TRANSFORMER 440/230 V,5KVA 3PH	1	1/1	22/8/85	4150/-
05	DC POWER RECTIFIER UNIT 440/230V 3PH	1	1/1	22/8/85	18000/-
06	LOAD RESISTANCE BANK 3PH 440V 50HZ 20A	3	1/2	22/8/85	27000/-
07	REPULSION IND.MOTOR 1HP 230V	1	1/2	22/8/85	3950/-
08	CAP. START MOTOR 1HP 230V	1	1/2	22/8/85	1550/-
09	SPLIT PHASE MOTOR1HP 230V	1	1/2	22/8/85	1800/-
10	SLIPRING MOTOR 3HP 3PH 440V 50HZ	1	1/2	12/9/85	8000/-
11	Transformer 15-0-15	05	1/2	16/9/85	140/-
12	Transformer 7.5-0-705	05	1/2	16/9/85	140/-
13	Transformer 10-0-10	10	1/2	16/9/85	380/-
14	SQU.CAGE MOTOR 3HP,3PH,440V	1	1/3	25/9/85	5475/-
15	MG SET 3KW,220V,DC COMP.GEN. SHUNT MOTOR	1	1/3	25/9/85/	3075/-
15	DC SHUNT MOTOR 3PH,220V	1	1/3	25/9/85	9285/-
17	MG SET 3HP,440V SYN.MOTOR WITH 3KW SHUNT GEN.	1	1/3	25/9/85	18695/-
18	Transformer 250-0-250	5	1/3	18/01/85	357
19	VARITRONS.VARIABLE AUTO TRANSFORMER 230V,50HZ,1PH O/P	1	1/3	5/11/86	1148/-



	VOLT 0-270V				
20	VARIABLE AUTO TRANSFORMER 3PH,415V,50HZ O/P VOLT 0-470V	1	1/3	5/11/86	3520/-
21	VARIABLE AUTO TRANSFORMER 240V,50HZ,1PH,O/P VOLT 0-270V 8A	2	1/4	27/9/86	1750/-
22	DILUX MODEL OVERHEAD PROJECTOR	1	1/4	4/8/86	3350/-
23	ONE POWER BATTERY	1	1/4	29/6/88	1100
24	POWERMAN HONDA GEN.230V WITH CONTROL PANAL	1	1/12	13/01/89	20500/-
25	VARITRONS.VARIABLE AUTO TRANSFORMER 230V,50HZ,1PH O/P VOLT 0-270V 15A	3	1/13	25/10/89	6516/-
26	VARIABLE AUTO TRANSFORMER 240V,50HZ,1PH,O/P VOLT 0-270V 8A	3	1/13	25/10/89	3813/-
27	VARIABLE AUTO TRANSFORMER 3PH,415V,50HZ O/P VOLT 0-470V 15A	2	1/13	25/10/89	12725/-
28	CRIMPING TOOL 1.5 MM <sup>2</sup>	1	1/14	25/11/86	1240/-
29	CRIMPING TOOL 2.5 MM <sup>2</sup>	1	1/14	25/11/86	1240/-
30	MULTIMETER DIGITAL MODEL 9A	2	1/15	15/03/95	3475/-
31	RHEOSTATS 1.7A/300Ω 1.2A/750Ω 5A/50Ω	4 2 2		23/07/96	4780/- 2230/- 2890/-
32	SHARP 1HP DOMESTIC WATER PUMP	1	1/15	15/07/2000	3400/-
33	3PH DOUBLE WOUND TRANSFORMER 440/230V,5KVA	2	1/16	18/10/2000	19600/-
34	1PH TRANS.,1KVA	1	1/16	18/10/2000	3200/-
35	HANDGLOWS 11KV	1	1/17	27/11/2000	150/-
36	3PT STARTER	1	1/18	27/11/2000	1840/-
37	4PT STARTER	2	1/18	27/11/2000	3900/-
38	RHEOSTAT 1) 50Ω,5A 2) 24Ω,10A 3) 145Ω,2.8A	5 2 3	1/18	10/10/2001	8000/- 5140/- 4320/-

	4) 300Ω,1.7A	5			6800/-
39	DC MOVING COIL AMMETER 5/10A	4	1/18	26/04/01	5972/-
40	DC MOVING COIL AMMETER 1/2A	2	1/18	26/04/01	2986/-
41	AC MI AMMETER 1) 0-5/10A 2) 0-1/2A 3) 0-15A	4 1 1	1/19	26/04/01/	5208/- 1302/- 1250/-
42	DC SHUNT MOTOR 3HP	1	1/19	16/08/01	12800/-
43	DC SHUNT MOTOR 5HP	1	1/19	16/08/01	17800/-
44	1PH SPLIT PH CAP MOTOR	1	1/19	16/08/01	5200/-
45	1PH REPULSION MOTOR 1HP	1	1/19	16/08/01	5400/-
46	AC SERIES MOTOR 1HP	1	1/19	16/08/01	7200/-
47	1PH CAP.START MOTOR	1	1/19	16/08/01	6000/-
48	3PH,415V SQU.CAGE MOTOR	1	1/20	16/08/01	8000/-
49	STAR-DELTA STARTER FOR 5 HP MOTOR	1	1/20	16/08/01	2400/-
50	ROTOR RESIS.STARTER 3PH SLIP RING MOTOR	1	1/20	16/08/01	2200/-
51	DOL STARTER	1	1/20	16/08/01	900/-
52	FUGIMAKE ANALOG TACHOMETER	1	1/24	20/05/2003	5500/-
53	AUTOSTATE 3PH AC 50HZ,I/P 415V,O/P0-470V,15A	3	1/25	20/07/2004	33569/-
54	3PH IND.LOAD 10A	1	1/25	6/09/2004	16362/-
55	ANALOG TACHOMETER 10000RPM	3	1/25	6/09/2004	15300/-
56	DIGITAL MULTIMETER 1) MS 8200GM 2) 92A3	2 2	1/25	6/09/2004	4250/- 1530/-
57	DEMO PANEL FOR AC/DC M/CS 1HP	1	1/25	6/09/2004	29750/-
58	3PH SAL.POLE 5 KVA ALTERNATER WITH DC SHUNT MOTOR	1	1/26	6/09/2004	35700/-

59	3PH SYN.MOTOR	1	1/26	6/09/2004	14875
60	DC V OR DC-I DUAL RANGE	4	1/27	23/07/2004	4036/-
61	ELECTRODYNAMO METER WATTMETER 2-CURRENT 2-VOLT	2	1/27	14/08/2004	3683/-
62	AC AMMETER 5/10 A,1/2A	4	1/27	19/08/2004	4015/-
63	AUTO PF CONTROL PANEL	1	1/28	4/10/2001	65821/-
64	DIGITAL TACHOMETER	1	1/29	26/07/2006	2137/-
65	DIGITAL MULTIMETER ROTOR RESISTANCE STARTER 3-PH, 3-PH AUTO TRANS 415V,15A, 3-PH PHASE SHIFTING TRANS 250VA, STAR-DELTA STARTER 3-PH	5 1 2 1 1	1/31	26/03/2007	95216/-
66	1) DC AMMETER 0-5/10A 2) DC AMMETER 0-1/2A 3) AC AMMETER 0-5/10A 4) AC AMMETER 0-1/2 A 5) AC AMMETER 0-30A 6) AC VOLTMETER 0- 100/300/600V 7) DC VOLTMETER 0-150/300V	10 10 5 2 2 10 10	1/31    1/32	26/03/2007	67176/-
67	1) 3PH RESIS.LOAD 4A PER PH 440,3KW 2) 1PH RESIS LOAD 250V 1KW 3) RHEOSTAT A) 0.8A/800Ω B) 1A/900Ω C) 1.5A/580Ω D) 1.7A/600Ω E) 1.8A/300Ω F) 5A/50Ω	1 5 1 1 1 5 10 5	1/33	26/03/2007	78625/-
68	ELECTRIC GEN.SET 50KVA	1	1/35	5/02/2009	3,80,958/-
69	1) ANALOG TACHOMETER CONTACT TYPE 2) DIGITAL MULTIMETER 3(1/2)DIGIT 3) 3PH RESIS. LOAD BANK 6KW 4) 1PH AUTOTRANSFORMER 8AMP 5) 1PH. TRANSFORMER	05 05 01 04 04 03	1/37	6/09/2011	1,58,202/-

	230/5V,1KVA 6) CRO DUAL TRACE 20 MHZ				
70	TACHOMETER DIGI AND ANALOG	01 EACH	1/39	20/04/2015	5250/-
71	DC SERIES MOTOR COUPLED WITH DC SHUNT GEN. BACKELITE CONTROL PANEL	01 01	2/02	15/12/2015	41500 12500
72	SQUIRREL CAGE I.M. BACKELITE CONTROL PANEL	01 01	2/02	15/12/2015	22500 12500
73	3 PHASE SYNCHRONOUS MOTOR BACKELITE CONTROL PANEL	01	2/03	15/12/2015	37500 14500
74	RESISTIVE LOAD BANK 3 HP 440 V 12 AMP	01	2/03	15/12/2015	19500
75	ABCD PARAMETER	01	2/04	15/12/2015	91000
76	DC POWER RECTIFIRE UNIT 3 PH	01	2/04	18/12/2015	136552
77	PORTABLE AC AMMETER 0-5 A/10A	10	2/05	18/12/2015	12750
78	PORTABLE DC AMMETER 0- 1A/2A	10	2/05	18/12/2015	12750
79	TACHOMETER DIGITAL CONTACT TYPE	07	2/05	18/12/2015	11550
<b>TOTAL</b>					<b>1864736/-</b>

**HIGH VOLTAGE ENGG.LAB**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equip
01	30KV,250MA,HV TESTER FOR CABLE TESTING	1	1/36	18/09/2009	219236/-
02	CORONA CAGE	1	1/36	18/09/2009	
03	SPEARGAP ASSEMBLY MANNUAL 100MM	1	1/36	18/09/2009	
04	60 KV OIL TESTING KIT	1	2/06	18/12/2015	63500
<b>TOTAL</b>					<b>282736/-</b>

**SOFTWARE APPLICATION LAB.**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equip
01	LENOVO5311-8BQ PC WITH 17'MONITOR	15	1/34	24/09/2007	315000/-
02	DESKTOP COMPUTER IBALL CABINET 2241DUAL CORE	10	1/35	20/01/2009	184000/-
03	PROJECTOR EPSON EB-57	1	1/36	9/02/2010	31700/-
04	1) LENOVO THINK CENTER 1934RZ8 DESK TOP 2) LENOVO 18.5" TFT 2580AT1	10 10	1/37	4/01/2012	177000/-
05	LAPTOP DELL 1540 COER i3	01	1/38	4/01/2012	28800/-
06	PROJECTOR EPSON EBS-9	01	1/38	4/01/2012	26200/-
07	PROJECTOR EPSON EBS-31	01	2/07	12/10/2016	27000/-
08	LENOVO THINK CENTRE EDGE 73	10	2/07	12/10/2016	2,67,000/-
<b>TOTAL</b>					<b>1056700/-</b>

**INDUSTRIAL DRIVES AND CONTROL**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equip
01	CONTROL OF DC MOTOR USING 1PH,HALF CONTROL RECT.100V,100W 1500RPM MOTOR	1	1/34	19/02/2009	83531/-
02	CONTROL OF DC MOTOR USING 1PH,FULL CONTROL RECT.100V,100W 1500RPM MOTOR	1	1/34	19/02/2009	
03	1QUADRANT COPPER CONTROL 110V,100W,1500RPM LOAD	1	1/34	19/02/2009	
04	2QUADRANT COPPER CONTROL 110V,100W,1500RPM LOAD	1	1/34	19/02/2009	
05	SPEED CONTROL OF 1PH IND. MOTOR USING AC VOLT REGU.	1	1/35	19/02/2009	
06	CHOPPER FED DC MOTOR 1- QUAD.	1	2/04	15/12/2015	34500
07	CHOPPER FED DC MOTOR 12 QUAD	1	2/04	15/12/2015	26500
08	UNIVERSAL MOTOR CONTROL	1	2/04	15/12/2015	28000
09	STEPPER MOTOR DRIVE KIT	1	2/06	18/12/2015	9500
10	DC SHUNT MOTOR CONTROL WITH HALF AND FULL WAVE RECT.	2	2/06	18/12/2015	67200
TOTAL					249231/-

**BASIC ELECTRICAL ENGG. LAB**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equip
01	RACER STOP WATCH	04			8403
02	RHEOSTAT 115 OHM/18 AMP	03			0480
03	RHEOSTAT 800 OHM/8AMP	03			0660
04	RHEOSTAT 325 OHM/1.4AMP	03			0660
05	RHEOSTAT 055 OHM/10AMP	03			0855
06	RHEOSTAT 034 OHM/3.3AMP	02			0380
07	RHEOSTAT 050 OHM/3.8AMP	02			0560
08	RHEOSTAT 100 OHM/2AMP	02			0480
09	MECO SINGLE PHASE ELEMENT DYNAMOMETER TYPE WATTMETER 150/300 OHM - 1/2 AMP	03			2295

10	DYNAMOMETER TYPE SINGLE PHASE WATTMETER 150/300OHM - 2.5/5 AMP	03			2295
11	DYNAMOMETER TYPE SINGLE PHASE WATTMETER 150/300OHM - 0.5/1 AMP	03			2340
12	PORTABLE D.C AMMETER 0.5 -1 AMP	03			1107
13	INSULATION RESISTANCE TESTER	01			0723
14	DIGITAL MULTI METER	02			6390.09
15	DIGITAL TONG TESTER	02			
16	AJCO MICE EARTH RESISTANCE TESTER	01			2438
17	TONG TESTER YF300 TAIWAN MAKE	01			1160
18	MOVING AMMETER 1 – 2 AMP	10			6885
19	AMMETER M.C TYPE 5 – 10 AMP	10			
20	AMMETER M.C .TYPE 15 AMP	05			
21	VOLTMETER M.I TYPE 300/600 VOLT	06			
22	VOLTMETER M.I TYPE 150/300 VOLT	06			
23	VOLTMETER M.C TYPE 150/300 VOLT	06			
24	AMMETER M.I TYPE 5 AMP	10			5649.8
25	AMMETER M.I TYPE 10 AMP	10			
26	SINGLE PHASE POWER FACTOR 5 AMP/250 VOLT	03			
27	SINGLE PHASE TRANSFORMER 230/12, 180 VA	01			0445.3
28	POLYPACK CAPACITOR 0.22 $\mu$ F,250 VOLT	06			0021
29	POLYPACK CAPACITOR 0.47 $\mu$ F,250 VOLT	06			0021
30	THEVNIN'S THEOREM KIT	01	2/02	15/12/2015	3800
31	R-L-C SERIES	01	2/02	15/12/2015	5200
32	R-L-C PARALLEL	01	2/02	15/12/2015	5200
33	REGULATED POWER SUPPLY 0-30 V 2 AMP.	01	2/05	18/12/2015	4500
					<b>66755/-</b>

### ELECTRICAL ENGG. MATERIAL LAB

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equip
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01	OIL TEST SET 0 – 60 KV	01	1/16	19/09/2000	18448
02	A.C HIGH VOLTAGE TESTER 2.5 – 5 KV	01	1/16	27/09/2000	12486
03	GAUSS METER	01	1/17	27/11/2000	6300
04	PIN TYPE INSULATOR 11 KV	02	1/17	27/11/2000	0400
05	PIN TYPE INSULATOR 33 KV	02	1/17	27/11/2000	1300
06	DISC TYPE INSULATOR 11 KV	02	1/17	27/11/2000	2400
07	STRAIN TYPE INSULATOR 33 KV	01	1/17	27/11/2000	6000
08	SHACKLE TYPE INSULATOR	02	1/17	27/11/2000	0200
<b>TOTAL</b>					<b>47,534/-</b>

### SWITCH GEAR & PROTECTION LAB

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equip
01	SWITCH GEAR & RELAY TESTING KIT	01	1/24	16/02/2004	49320
02	MICROPROCESSOR BASED OVER CURRENT RELAY	01	1/24	16/02/2004	19850
03	SIMULATION MODEL FOR DIFFERENTIAL PROTECTION OF TRANSFORMER	01	1/24	16/02/2004	71250
04	MHO PRE IMPEDANCE RELAY KIT WITH SHORT TRANSMISSION LINE MODEL	01	1/24	16/02/2004	29645
05	SIMULATION MODEL FOR DIFFERENTIAL / DISTANCE PROTECTION OF TRANSMISSION LINE	01	1/24	16/02/2004	64500
06	SIMULATION MODEL FOR PROTECTION OF ALTERNATOR	01	1/25	16/02/2004	88750
<b>TOTAL</b>					<b>2,32,787/-</b>



**NETWORK ANALYSIS**

<b>Sr. No.</b>	<b>Name of Equipment</b>	<b>Qty.</b>	<b>Page no of S.R.</b>	<b>Date of Supply</b>	<b>Cost of equip</b>
01	TESTRONICS 92B 0-30V,2A	2	1/26	6/09/2004	4760/-
02	TESTRONICS 92C 0-30V,5A	4	1/26	6/09/2004	13600/-
03	TESTRONICS 435C DUAL TRACKING O/P 15V,2A	2	1/26	6/09/2004	6800/-
04	8A,1PH I/P 250V,O/P 0-270V TRANS.	3	1/26	6/09/2004	5610/-
05	TESTRONICS 59 FUNCTION GEN.	3	1/26	6/09/2004	7650/-
06	AGRONIC RDB 6RESIS.DECAD BOX 1Ω TO 1.11 MΩ	2	1/26	6/09/2004	2720/-
07	AGRONIC LDB 6INDU..DECAD BOX 10μH -11MH	2	1/26	6/09/2004	4760/-
08	AGRONIC CDB 6 CAP.DECAD BOX 10PF-11.11μF	2	1/26	6/09/2004	4400/-
09	AGRONIC RDB 4RESIS.DECAD BOX 10Ω TO 111.11 KΩ	2	1/26	6/09/2004	1870/-
10	AGRONIC LDB 4INDU..DECAD BOX 10μH -111.11mH	2	1/26	6/09/2004	3400/-
11	AGRONIC CDB 4CAP.DECAD BOX 100PF-1.11μF	2	1/26	6/09/2004	2720/-
12	BREAD BOARD	10	1/26	26/08/2004	1450/-
13	FUNCTION GENERATOR	03	2/06	18/12/2015	24750
14	SUPERPOSITION THEOREM KIT	01	1/39	28/02/2013	5771/-
15	SERIES AND PARALLEL RESONENCE CIRCUIT	01	1/39	28/02/2013	5771/-
16	ABCD PARAMETER	01	1/39	28/02/2013	5164/-
17	Y-PARAMETER KIT	01	1/39	28/02/2013	5164/-
18	Z-PARAMETER KIT	01	1/39	28/02/2013	5164/-
<b>TOTAL</b>					<b>1,11,524/-</b>

**CONTROL SYSTEM**

<b>Sr. No.</b>	<b>Name of Equipment</b>	<b>Qty.</b>	<b>Page no of S.R.</b>	<b>Date of Supply</b>	<b>Cost of equip</b>
01	POTENTIOMETER AS A ERROR DETECTOR KIT	01	1/23	19/10/2002	71743/-
02	STUDY OF DC SERVOMETER	01	1/23	19/10/2002	
03	DC MOTOR POSITION CONTROL SYSTEM	01	1/23	19/10/2002	
04	SPEED TORQUE CHARACTERSTIC OF AC SERVOMOTOR	01	1/23	19/10/2002	
05	TIME RESPONSE 2 <sup>ND</sup> ORDER SYSTEM	01	1/23	19/10/2002	
06	STUDY OF REAL TIME PID CONTROLLER	01	1/24	19/10/2002	
07	STEPPER MOTOR	01			950/-
08	SYNCHROTRANSMITTER & RECEIVER	01			5650/-
09	CRO DUAL TRACE 20MHZ	03	1/37	6/09/2011	51,000/-
10	DC POSITION CONTROL SYSTEM	01	2/05	18/12/2015	34350
11	SPEED TORQUE CHARACTERISTICS OF DC SERVOMOTOR	01	2/06	18/12/2015	27450
<b>TOTAL</b>					<b>1,91,143/-</b>

**ELECTRICAL MEASUREMENT**

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equip
01	MEGGER 1000V	01	1/16	8/07/2000	1050/-
02	352013 CRO	05	1/17	7/12/2000	87183/-
03	1PH ENERGY METER	01	1/17	27/11/2000	500/-
04	SCHEARING BRIDGE	01	1/17	27/11/2000	3500/-
05	DECADE CAPACITANCE BOX	01	1/17	27/11/2000	2000/-
06	DECADE RESISTANCE BOX	01	1/17	27/11/2000	1600/-
07	EARTH RESISTANCE TESTER	01	1/18	19/03/2001	2610/-
08	DRILL MACHINE	01	1/18	19/03/2001	3200/-
09	3PH WATTMETER 5A/10A ,250/500V 1)3PH WATTMETER 2.5/5A ,250/500V 2)1PH WATTMETER 5/10A 250/500V 3)PORTABLE DC AMMETER 5/10A 4)PORTABLE DC AMMETER 1/2A 5)PORTABLE AC AMMETER 5/10A 6) PORTABLE AC AMMETER 1/2A 7) PORTABLE DC VOLTMETER 150/300V 8) PORTABLE AC VOLTMETER150/300/600V 9) PORTABLE AC AMMETER 0-15A	02 02 06 06 08 06 09 10 10 04	1/20 1/20 1/20 1/20 1/21 1/21 1/21 1/21 1/21 1/21	10/09/2001	69293/-
10	1)P.T.440V,20VA 2)P.T.440V,5VA 3)EPSTAIN SQUARE SET 4)3-PH SHIFTING TRANSFORMER 1000VA	01 01 01 01	1/21 1/21 1/21 1/22	24/09/2001 24/09/2001 24/09/200 24/09/20011	67098/-
11	1)C.T. TEST SET 2)LOADING TRANSFORMER	01 01	1/22	24/09/2001	85312/-
12	1)SERIES PARALEL LCR CKT 2)MAXWELL BDG 3)ANDRESON BDG	01 01 01	1/22 1/22 1/22	8/10/2001 8/10/2001 8/10/2001	17893/-

	4)PORTABLE LIGHT SPOT GALVANOMETER 5)WEIN BDG	01 01	1/23	8/10/2001	
13	WHEATSTONE BDG WITH GALVANO METER	01			2195/-
14	DC POTETIOMETER WITH GALVANO METER	01			1450/-
15	1)PORTABLE POTENTIOMETER 2)PORTABLE WHEATSTONE BDG 3)RHEOSTAT 2.8/1450HM 4) RHEOSTAT 1.7/300OHM 5) RHEOSTAT 5/1500HM 6) RHEOSTAT 5/1000HM 7) RHEOSTAT 8.5/380HM 8) RHEOSTAT 12/180HM 9) RHEOSTAT 18/0.80HM	01 01 04 04 02 02 02 01 01			24020/-
16	ECE MACK 1-PH ENERGY METER	01			345/-
17	ECE MACK 3-PH ENERGY METER	01			891/-
18	POTENTIAL TRANSFORMAR TEST SET MODELFOR SUTABLE 63.5V/110V	01	1/28	26/08/2004	23500/-
19	POLARITY TESTER MODEL FOR P.T. SET	01	1/28	26/08/2004	1570/-
20	BURDEN BOX FOR P.T. TEST SET	01	1/28	26/08/2004	6400/-
21	INSTRUMENTATION TUTOR MODEL PRESSURE MODEL	01	1/28	26/08/2004	7030/-
22	STOBOSCOPE MODEL	01	1/28	26/08/2004	8950/-
23	STRAIN GAUGE	01	1/28	26/08/2004	7030/-
24	RTD MODEL	01	1/28	26/08/2004	5350/-
25	LVDT KIT 10A	01	1/28	26/08/2004	7600/-
26	PORTABLE WATTMETER5/10A,300/600V	15	1/38	30/01/2013	96161
27	GALVANOMETER	02	1/38	30/01/2013	
28	RHEOSTAT50 OHM,5A RHEOSTATE 300 OHM,1.7 A	10 10	1/38	30/01/2013	
29	CT 5A/5A	02	1/38	30/01/2013	
26	KELVIN'S DOUBLE BRIDGE	01	2/03	15/12/2015	10500

27	ANDERSON'S BRIDGE	01	2/03	15/12/2015	12500
28	SCERING BRIDGE	01	2/03	15/12/2015	10500
29	STUDY OF PRESSURE TRANSDUCER	01	2/03	15/12/2015	38000
30	CALLIBRATION OF 1 PH ENERGY METER	01	2/05	18/12/2015	31500
31	CALLIBRATION OF 3 PH ENERGY METER	01	2/05	18/12/2015	38600
32	CALLIBRATION OF AMMETER AND VOLTMETER	01	2/05	18/12/2015	26500
33	MEGGER	01	2/05	18/12/2015	3500
<b>TOTAL</b>					<b>705331/-</b>

### MPMC LAB

Sr. No.	Name of Equipment	Qty.	Page no of S.R.	Date of Supply	Cost of equip
01	MICROPROCESSOR TRAINER KIT 8085	05	2/06	18/12/2015	41500
02	MICROCONTROLLER TRAINER KIT 8051	01	2/06	18/12/2015	9400
03	STEPPER MOTOR INTERFACING CARD	01	2/06	18/12/2015	3490
<b>TOTAL</b>					<b>54390/-</b>

**31. Number of students receiving financial assistance from college, university, government or other agencies-** NIL

**32. Details on student enrichment programmes (special lectures / workshops/seminar) with external experts organized every year National level technical seminar & workshops.**

- Campus Recruitment Training
- Personality Development Programs
- Guest lecturers with Industry and academic experts.
- Seminars on Recent trends in the respective field

**33. Teaching methods adopted to improve student learning-**

- Through Extra classes for weak students
- Surprise tests,
- Improvement tests

- Tutorial classes
- Feedback system & guidance of students by mentors
- Providing students with 100 short questions
- Group discussion
- Using LCD, OHP.

#### **34. Participation in Institutional Social Responsibility (ISR) and Extension activities**

- Blood Donation Camps
- Tree plantation
- Anti-ragging slogan
- Road safety awareness
- Red reborn camp
- Save Power awareness program etc.

#### **35. SWOT analysis of the department and Future plans Strength-**

1. The department is well furnished with laboratories and Equipments
2. The department is provided with modern computer Lab.
3. The staffs are experienced and high skilled.
4. Affiliated by NMU Jalgaon.

#### **Weakness-**

1. Quality of in –put in terms of students intellectual level is very weak.
2. Irregular publication of university results.
3. Improper matching of Theory and practical as prescribed by university.

#### **Opportunities-**

1. The students are doing their projects inside the campus with the guidance of guides.
2. The projects are done by the students with the recourses and energy available in the institute.

#### **Challenges-**

1. To get NAAC accreditation
2. To get 100% placement
3. To make all the students well expertise in practical fields.

**Future Plans:**

1. To establish a full-fledged Entrepreneurship Development Cell this will enable to improve the skills of students to start their own organizations.
2. To establish the consultancy service to the students about their projects and their career guidance.
3. To implement innovative teaching methods to involve the students for their bright future to make every student expert Industry engineer.

## Evaluative Report of the Department

1. **Name of the department-** Instrumentation Engineering
2. **Year of Establishment-** 1983
3. **Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)**  
UG – Instrumentation Engineering
4. **Names of Interdisciplinary courses and the departments/units involved.**  
**Interdisciplinary Subject is taught as per NMU Syllabus**  
Programmable Logic controller & Distributed control system
5. **Annual/ semester/choice based credit system (programme wise)**

semester	Theory credits	Sessional credits	Total credits
First	17	06	23
Second	16	07	23
Third	17	06	23
Fourth	17	06	23
Fifth	15	08	23
Sixth	15	08	23
seventh	15	08	23
Eight	12	11	23
Total	124	60	184

6. **Participation of the department in the courses offered by other departments**

Department	Theory taught	Sessional taken
Civil	--	--
Electrical	03 Hrs/week	03 Hrs/sem
Electronics & Telecommunication	--	--
Computer science	--	--

7. **Courses in collaboration with other universities, industries, foreign institutions, etc.** NIL
8. **Details of courses/programmes discontinued (if any) with reasons.**  
NIL
9. **Number of teaching posts: 09**



Post	Sanctioned	Filled
Professors	01	02
Associate Professors	02	02
Asst. Professors	06	04

**10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)**

Name	Qualification	Designation	Specialization	No Years of Experience	No of M.E. Students guided for the last 4 years	No of Ph.D. Students Guided for the last 4 years
Prof. M. N. Patil	M.E.(IEM) Ph.D. (Persuing)	Technical Director	Management	20 Yrs	NIL	NIL
Dr. N. J. Patil	Ph.D. (Instrumentation)	HOD & Professor	Fuzzy Logic	16 Yrs	02	NIL
Prof. B. R. Patil	M.E (Electrical)	Associate Professor	Digital Instrumentation	19 Yrs	NIL	NIL
Prof. R. S. Patil	M.Tech(Electronic Instrumentation)	Associate Professor	Electronic Instrumentation	18 Yrs	NIL	NIL
Prof. K. Y. Chaudhari	M.Tech. (Electronic Instrumentation)	Assistant Professor	Electronic Instrumentation	13 Yrs	NIL	NIL
Prof. H. B. Patel	M.E (Electrical)	Assistant Professor	control systems	8 Yrs	NIL	NIL
Prof. M. J. Patil	M.E. (Electrical) Appearing	Assistant Professor	control systems	10Yrs	NIL	NIL
Prof. A. R. Patil	M.E. (E & Tc)	Assistant Professor	Communication	4 Yrs	NIL	NIL

11. **List of senior visiting faculty -** NIL
12. **Percentage of lectures delivered and practical classes handled (programme wise) by temporary faculty:** NIL
13. **Student -Teacher Ratio (programme wise):** 15:1
14. **Number of academic support staff (technical) and administrative staff; sanctioned and filled**

	Sanctioned	Filled
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Technical staff	03	03
Administrative staff	00	00

**15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.**

Name	Qualification	Designation
Prof. M. N. Patil	M.E.(IEM) Ph.D. (Persuing)	Technical Director
Dr. N. J. Patil	Ph.D. (Instrumentation)	HOD & Professor
Prof. B. R. Patil	M.E (Electrical)	Associate Professor
Prof. R. S. Patil	M.Tech(Electronic Instrumentation)	Associate Professor
Prof. K. Y. Chaudhari	M.Tech. (Electronic Instrumentation)	Assistant Professor
Prof. H. B. Patel	M.E (Electrical)	Assistant Professor
Prof. M. J. Patil	M.E. (Electrical) Appearing	Assistant Professor
Prof. A. R. Patil	M.E. (E & Tc)	Assistant Professor

**16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received** NIL

**17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received.** NIL

**18. Research Centre /facility recognized by the University** NIL

**19. Publications:**

Publication per faculty	Number of papers published in peer reviewed journals (national /international) by faculty	Books Edited
Prof. M. N. Patil	02	00
Dr. N. J. Patil	35	01
Prof. B. R. Patil	04	00
Prof. R. S. Patil	03	00
Prof. K. Y. Chaudhari	07	00
Prof. H. B. Patel	02	00
Prof. M. J. Patil	01	00
Prof. A. R. Patil	02	00

\*a) Publication per faculty: 07

\*Number of papers published in peer reviewed journals (national / International) by faculty and students – For faculty as above and for students: **NIL**

\* Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)  
**10**

\* Monographs

\* Chapter in Book

\* Books Edited **01**

\* Books with ISBN/ISSN numbers with details of publishers  
Yes

\* Citation Index **Yes**

\* SNIP **NIL**

\* SJR **NIL**  
Impact factor **0.1 - 1**

\* h-index - **NIL**

**20. Areas of consultancy and income generated. Revenue generated on assist an experimental project work in the institute laboratory by guidance of .** **NIL**

**21. Faculty as members in**

**a) National committees:-** **NIL**

**b) International Committees:-** **NIL**

**Reviewer: Elsevier ISA Transaction, IEEE Transaction on Fuzzy Systems**

**c) Editorial Boards:-** **NIL**

**22. Student projects**

a) Percentage of students who have done in-house projects including inter departmental/ programme - **75%**

b) Percentage of students placed for projects in organizations outside the institution i.e.in Research laboratories/Industry/ other agencies **NIL**

23. Awards / Recognitions received by faculty and students.

NIL

24. List of eminent academicians and scientists / visitors to the department:

NIL

25. Seminars/ Conferences/Workshops organized & the source of funding

a) National

Sr. No.	Name of the seminar/work Shop	Source of funding	Date of seminar	Co-ordinator
1	Automation in Industry	College	14/02/2015	Tushar Shendge Prolific Systems Vadodara
2	Role of Engineer in Industry	College	05/08/2016	Er. Rohit R. Patil

c) International: Nil

26. Diversity of Students

Name of the Course	% of students from the same state	% of students from other States	% of students from abroad
UG 2015-16	100	00	00
UG 2014-15	100	00	00
UG 2013-14	100	00	00
UG 2012-13	95	05	00

28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defense services, etc.:

NIL

29. Student progression:

Student progression	Against % enrolled
UG to PG	51

PG to M.Phil.	00
PG to Ph.D.	00
Ph.D. to Post-Doctoral	00
<b>Employed</b> - Campus selection - Other than campus recruitment	56
Entrepreneurship/Self-employment	--

### 30. Details of Infrastructural facilities

a) Library:

No. of Volumes	No. of Titles
7766	519

**b) Internet facilities for Staff & Students – Digital Micro computing Lab with Broad band and BSNL Facilities available both for staff & students.**

c) Class rooms with ICT facility:- 02

d) Laboratories – 08

1) Name of Lab: Transducer Lab.

Sr. No.	Equipment with Specification	Stock Reg.No.	Date of Purchase	Name of company	Qty.	Unit price	Purchase price Rs.
1.	APLAB. TEMP. CONTROLLER 9601 K-10.	12	07/01/86	APLAB ELECT. THANE	1	1200.00	1200.00
2.	EUREKA GLASS TUBE ROTA METER MODEL CIVE/PG/II RANGE 4.1-41LPM FLUIDMETER	14	17/02/86	EUREKA IND.EQP.	2	1540.00	3080.00
3.	FUNCTION GENERATOR (VHS-2000)	15	14/02/86	VHS ELECT. PUNE	1	3120.00	3120.00
4.	APLAB 15 MHz DUAL TRACE OSCIL OSCOPE 3131.	22	24/02/86	APLAB ELECT.	1	15703.00	15703.00
5.	L.V.D.T. DISPLACEMENT TRANSDUCER +/- 10 MM MICRON 200.	24	21/03/86	INSTRU. & CONTROL BANGALORE	1	800.00	800.00

6.	L.V.D.T.DISPLACEMENT TRANSDUCER +/- 500 MICRON 205	25	21/03/86	INSTRU. & CONTROL BANGALORE	1	550.00	550.00
7.	DISPLACEMENT CALIBRATION JIG RANG 0-25 mm 610.	26	21/03/86	INSTRU. & CONTROL BANGALORE	1	1000.00	1000.00
8.	DIGITAL PRESSURE INDICATOR	26a	21/03/86	INSTRU. & CONTROL BANGALORE	1	5000.00	5000.00
9.	PRESSURE TRANSDUCER			INSTRU. & CONTROL BANGALORE	1	1875.00	1875.00
	i> 0-1 Kg./cm <sup>2</sup>	27a			1	2500.00	2500.00
	ii> 0-10 Kg/cm <sup>2</sup>	27b	21/03/86				
10.	VIBRATION METER	29a	21/03/86	INSTRU. & CONTROL BANGALORE	1	4150.00	4150.00
11.	ELECTRODYNAMIC VELOCITY PICKUP MODEL 820	29b	21/03/86	INSTRU. & CONTROL BANGALORE	1	850.00	850.00
12.	VERIABLE REACTANCE PICK UP	30	21/03/86	INSTRU. & CONTROL BANGALORE	1	450.00	450.00
13.	ELECTRODYNAMIC VIBRATION GENERATOR 463	31a	21/03/86	INSTRU. & CONTROL BANGALORE	1	3000.00	3000.00
14.	EXCIATION AMPLIFIER 473.	31b	21/03/86	INSTRU. & CONTROL BANGALORE	1	8000.00	8000.00
15.	DIGITAL STRAINMETER	32a	21/03/86	INSTRU. & CONTROL BANGALORE	1	5000.00	5000.00
16.	STRAIN GAUGE BANDED ON CENTILEVER BEAM.	32b	21/03/86	INSTRU. & CONTROL BANGALORE	1	3500.00	3500.00
17.	DIGITAL DISPLACEMENT METER	33	21/03/86	INSTRU.&CONTROL BANGALORE	1	5000.00	5000.00
18.	PRESICION SERIES AIR FILTER REGULATOR 0-60 PSI PRESSUER GAUGE	40	03/05/86	INDU. TRAIN. PUNE	9	469.00	4229.00
19.	MAXI SERIES AIR FILTER REGULATOR	41	03/05/86	INDU. TRAIN. PUNE	2	737.50	1475.00
20.	SOLENOID VALVE 2 WAY NORMALLY CLOSED.	42	03/05/86	INDU. TRAIN. PUNE	1	285.00	285.00
21.	SOLENOID VALVE 2 WAY NORMALLY OPENED	43	03/05/86	INDU. TRAIN. PUNE	1	285.00	285.00

22.	DEAD WEIGHT PRESSURE GAUGE TESTER.	47	29/03/86	RAVIKA IND. DELHI	1	6042.00	6042.00
23.	DEAD WEIGHT VACCUME GAUGE TESTER	48	29/03/86	RAVIKA IND. DELHI	1	5671.00	5671.00
24.	SERIES AIR FILTER REGULATOR WITH 0 - 60 PSI PRESSURE GAUGE	52	17/06/86	IND.TRAIN.POONA	1	456.00	456.00
25.	BRASS BODY NEEDLE VALVE	53	17/06/86	IND.TRAIN.POONA	15	76.00	1147.00
26.	SOLENOID VALVE 3 WAY NORMALLY OPEN MID GATE.	54	17/06/86	IND.TRAIN.POONA	1	327.00	327.00
27.	L & T MAKE CONTRACTOR 3 N/C.	57	13/05/86	GEETA MACH.BARODA	1	294.00	294.00
28.	745 PID CONTROLLER I/P & O/P 4-20 mA SR. NO. 123.	83	16/12/86	LECTROTEK SYSTEM POONA	1	9050.00	9050.00
29.	RTD TRANSMETER I/P PT 100 0-600 degree c. SR. 1131.	84a	16/12/86	LECTROTEK SYSTEM POONA	1	3215.00	3215.00
30.	THERMOCOUPLE TRANSMETER I/P CR-AL THERMOCOUPLE 0-1200 0c. SR. NO. 1132.	84b	16/12/86	LECTROTEK SYSTEM POONA	1	3215.00	3215.00
31.	P TO E CONVERTER MODEL 792 P	85	16/12/86	LECTROTEK SYSTEM POONA	1	6890.00	6890.00
32.	E TO P CONVERTOR MODEL-760	86	16/12/86	LECTROTEK SYSTEM POONA	1	4133.00	4133.00
33.	TEST KIT FOR RTD.	90	31/01/87	G.P. ELECTRONICS BARODA	1	1200.00	1200.00
34.	TEST KIT FOR THERMOCOUPLE J - TYPE.	91	31/01/87	G.P. ELECTRONICS BARODA	1	1200.00	1200.00
35.	TEST KIT FOR PH	92	31/01/87	G.P. ELECTRONICS BARODA	1	1300.00	1300.00
36.	TEST KIT FOR THERMOCOUPLE K - TYPE.	93	31/01/87	G.P. ELECTRONICS BARODA	1	1200.00	1200.00
37.	RTD SIMULATOR 18541	94	31/01/87	G.P. ELECTRONICS BARODA	1	5500.00	5500.00
38.	THERMOCOUPLE SIMULATOR 18543	95	31/01/87	G.P. ELECTRONICS	1	9000.00	9000.00
39.	PH SIMULATOR 1854214	96	31/01/87	G.P. ELECTRONICS	1	5500.00	5500.00

				BARODA			
40.	DIGITAL CALIBRATOR 18530	97	31/01/87	G.P. ELECTRONICS BARODA	1	7500.00	7500.00
41.	DIGITAL TRANSMETER 8532	98	31/01/87	G.P. ELECTRONICS BARODA	1	7500.00	7500.00
42.	DIGITAL TEMPERATURE INDICATOR/ MONITOR, MODEL NO. 3101	99	31/01/87	G.P. ELECTRONICS BARODA	1	4000.00	4000.00
43.	MAGNETIC AMPLIFIER	101	16/02/87	TEKSON ELECTRO POONA	1	1664.00	1664.00
44.	ALARM ANOUNCIATOR SINGLE POINT	102	16/02/87	TEKSON ELECTRO POONA	1	1248.00	1248.00
45.	HOOTER CONNECTED WITH ANOUNCIATOR.	103	16/02/87	TEKSON ELECTRO POONA	1	170.00	170.00
46.	PUSH BUTTON CONNECTED WITH ANOUNCIATOR.	104	16/02/87	TEKSON ELECTRO POONA	2	25.00	50.00
47.	FLOW VALVE CONTROL VALVE	111	31/03/87	BLUE STAR BOMBAY	1	8126.00	8126.00
48.	ALARM ANOUNCIATOR 10 POINTS	113	16/02/87	TEKSON ELECTRO POONA	1	4100.00	4100.00
49.	DIGITAL POTENTIOMETER	119	28/03/87	G.P. ELECTRONICS BARODA	1	3000.00	3000.00
50.	HYDRAULIC TRAINER.	123	17/12/87	VICKERS SYSTEM BOMBAY	1	106080.0 0	106080.00
51.	DIGITAL PH METER PHILIPS MAKEMODE PP 9046	125a	28/01/87	CHANDAK INSTRUMENT	1	5307.00	5307.00
52.	INDUSTRIAL COMBINATION ELECTRODE	125b	28/01/87	CHANDAK INSTRUMENT	1	2526.00	2526.00
53.	EI02 STROBOMETER	131	19/12/87	TOSHNIWAL INSTRU. BOMBAY	1	4600.00	4600.00
54.	ROSEMOUNT METER 151 DP TRANSMETER.	143	06/03/89	ROSEMOUNT LTD BOMBAY	1	36542.00	36542.00
55.	1/2 H.P. LUBI MONOBLOCK PUMP SET	144	25/03/89	BOMBAY HARDWARE SHAHADA	1	1075.00	1075.00
56.	SQUARE ROOT EXTRACTOR	146.a	05/04/89	NISHKO ELECTR. POONA	1	4800.00	4800.00
57.	DIGITAL PROCESS INDICATOR	146.b	05/04/89	NISHKO ELECTRO. POONA	1	1400.00	1400.00



58.	ORIFICE PLATE ASSEMBLY	147	16/03/89	STAR-MECH. ENGG. POONA	1	1250.00	1250.00
59.	DIGITAL TEMP. CONTROLLER 0-600	155	27/11/89	ELECTRONICS INSTRU. BOMBAY	1	2900.00	2900.00
60.	CUT VIEW OF CONTROL VALVE	156.1	25/12/89	HEM ELECTRONICS MIRAJ	1	2650.00	2650.00
61.	THERMOCOUPLE CALIBRATION SETUP	156.2	25/12/89	HEM ELECTRONICS MIRAJ	1	4280.00	4280.00
62.	PRSSUERE GAUGE 0-4 Kg/cm2	157.1	18/11/89	SHREE TRADING AMARAVATI	5	120.00	600.00
63.	VACCUME GAUGE 0-760 mm/Hg	157.2	18/11/89	SHREE TRADING AMARAVATI	3	130.00	390.00
64.	THERMOCOUPLES Cr-AL	158.1	07/12/89	INSTRUMENT & CONTROL	2	416.00	832.00
65.	THERMOCOUPLES Fe-Co	158.1	07/12/89	INSTRUMENT & CONTROL	3	416.00	1248.00
66.	DIGITAL STRAIN METER SINGLE CHANNEL	158.2	07/12/89	INSTRUMENT & CONTROL	1	4680.00	4680.00
67.	STRAIN GAUGE BANDED ON CENTILEVER BEAM	158.3	07/12/89	INSTRUMENT & CONTROL	1	3640.00	3640.00
68.	VENTURY TUBE WITH MANOMETER	159.1	20/01/90	APEX ENGG. SANGALI	1	1484.00	1484.00
69.	PIEZO ELECTRIC SENSOR	159.2	20/01/90	APEX ENGG. SANGALI	1	5300.00	5300.00
70.	HOT AIR OVEN	160	14/11/89	SHREE TRADING AMARAVATI	1	4134.00	4134.00
71.	AIR CIRCULATING FAN FOR ABOVE	160	14/11/89	SHREE TRADING AMARAVATI	1	901.00	901.00
72.	VACCUME GAUGE 0-400 mm oF Hg	161.1	18/11/89	BENI ENTERS. BOMBAY	4	177.75	711.00
73.	LT/LK MAKE CONTACTOR 16 AMP.	161.2	18/11/89	BENI ENTERS. BOMBAY	1	315.00	315.00
74.	AIR COMPRESSOR UP TO 100 PSI WITH MOTOR.	161.3	18/11/89	BENI ENTERS. BOMBAY	1	3911.00	3911.00
75.	SUITAIBLE STARTER FOR AIR COMPRESSOR.	161.4	18/11/89	BENI ENTERS. BOMBAY	1	503.00	503.00

76.	SUITABLE PRESSURE SWITCH FOR AIR COMPRESSOR	161.5	18/11/89	BENI ENTERS. BOMBAY	1	559.00	559.00
77.	SERVO CONTROLLED VOLTAGE STABILIZER	164	28/12/89	SUVIK ELECTRONICS GHANDNAGAR	2	7480.00	14960.00
78.	PT - 100.	218.1	06/10/90	LECTROTEK SYSTEM POONA	3	550.00	1650.00
79.	FE. CONST. THERMOCOUPLE J-TYPE	218.2	06/10/90	LECTROTEK SYSTEM POONA	3	400.00	1200.00
80.	ELECTRO PNUMATIC CONVERTER	218.3	06/10/90	LECTROTEK SYSTEM POONA	1	5400.00	5400.00
81.	PNEMATIC ELECTRONIC CONVERTER MODEL 792	218.4	06/10/90	LECTROTEK SYSTEM POONA	1	7500.00	7500.00
82.	DIGITAL mA METER CUM SOURCE	218.5	06/10/90	LECTROTEK SYSTEM POONA	2	4500.00	9000.00
83.	INSTRUMENTATION TUTOR PART III WITH ACCESSERIES	221.1	06/11/90	INDUSTRIAL ENGG. INSTRU. BANGLOR	1	16021.00	16021.00
84.	THERMISTER 10K	221.2	06/11/90	INDUSTRIAL ENGG. INSTRU. BANGLOR	10	811.80	8118.00
85.	THERMISTER 5K	221.3	06/11/90	INDUSTRIAL ENGG. INSTRU. BANGLOR	10	606.20	6062.00
86.	THERMOMETER Hg FILLED 0-100 C	221.4	06/11/90	INDUSTRIAL ENGG. INSTRU. BANGLOR	2	378.50	757.00
87.	PID CONTROLLER	224.1	27/10/90	ARTECH LAB BOMBAY	1	10113.00	10113.00
88.	TWO WIRE TRANSMITTER	224.2	27/10/90	ARTECH LAB BOMBAY	2	325.50	6510.00
89.	0 TO +/- 30V REGULATOR D.C.P.S	231	30/12/91	SICON POONA	2	1696.00	3392.00
90.	IMPORTED DIGITAL MULTIMETER	234	24/09/91	SHREE TRADING	2	1560.00	3120.00
91.	SERVO CONTROLLED STABILIZER	244.7	23/02/95	AGRAWAL ELECTRONICS BOMBAY	1	4400.00	4400.00
92.	DIGITAL STROBSCOPE	275	27/12/99	JEEYVER ENTER A. BAD	1	11400.00	11400.00
93.	TWO WIRE TEMP TRANSMITTER (T/C)	276.1	28/12/99	SAP ENGG. PUNE	1	4650.00	4650.00
94.	TWO WIRE TEMP	276.2	28/12/99	SAP ENGG. PUNE	1	4650.00	4650.00

	TRANSMITTER (RTD)						
95.	L.V.D.T. MEASUREMENT KIT	277.1	13/12/99	ADVANCED ELECTRO. MUMBAI	1	10621.00	10621.00
96.	ULTRASONIC DISTANCE METER	277.2	13/12/99	ADVANCED ELECTRO. MUMBAI	1	10621.00	10621.00
97.	I TO P CONVERTOR	278	11/12/99	NISHKO INSTRU, POONA	1	11858.00	11858.00
98.	PRESSURE TO CURRENT CONVERTOR.	279.1	11/12/99	NISHKO INSTRU, POONA	1	14125.00	14125.00
99.	THERMOCOUPLE J TYPE	220.1	24/10/90	BENI ELECTRONICS GHANDINAGAR	2	508.50	1017.00
100.	THERMOCOUPLE K TYPE	220.2	24/10/90	BENI ELECTRONICS GHANDINAGAR	2	508.50	1017.00
101.	RTD PT-100	220.3	24/10/90	BENI ELECTRONICS GHANDINAGAR	2	1243.00	2486.00
102.	784 - 4 WIRE TEMP. CONTROLLER	262	25/01/97	LECTROTEK SYSTEM POONA	1	5891.00	5891.00
103.	PRESSURE SWITCH	263.1	25/01/97	LECTROTEK SYSTEM POONA	2	3745.00	7490.00
104.	TEMP. SWITCH	263.2	25/01/97	LECTROTEK SYSTEM POONA	2	3745.00	7490.00
105.	CAPACITIVE LEVEL TRANSMITTER	263.3	25/01/97	LECTROTEK SYSTEM POONA	1	13375.00	13375.00
106.	BUTTERFLY VALVE WITH ROTARY ACTUATOR WITH ACCESSORIES	270	12/09/97	KHEDKAR RADIO SHAHADA	1	8832.00	8832.00
107.	AIR COMPRESSOR	303	18/12/2009	FOUJI TRADING COMPANY	1	34729.00	34729.00
108.	STRAIN GAUGE TRAINER	312(1)	19/02/2013	BEDARE ELECTRONICS	1	11430.00	11430.00
109.	TEMP MEASUREMENT	312(2)	19/02/2013	BEDARE ELECTRONICS	1	8190.00	8190.00
110.	DISPLACEMENT METER(LVDT)	312(3)	19/02/2013	BEDARE ELECTRONICS	1	8280.00	8280.00
111.	DISPLACEMENT METER(INDUCTIVE)	312(4)	19/02/2013	BEDARE ELECTRONICS	1	7380.00	7380.00
112.	ANGULAR DISPLACEMENT USING CAPACITIVE	312(5)	19/02/2013	BEDARE ELECTRONICS	1		

	TRANSDUCER					4140.00	4140.00
113.	LEVEL MEASUREMENT USING RESISTIVE TRANSDUCER	312(6)	19/02/2013	BEDARE ELECTRONICS	1	17100.00	17100.00
114.	MEASUREMENT OF SPEED USING OPTICLE INDUCTIVE TRANSDUCER	312(7)	19/02/2013	BEDARE ELECTRONICS	1	13050.00	13050.00
115.	PIEZO ELECTRIC TRANSDUCER DEMO UNIT	312(8)	19/02/2013	BEDARE ELECTRONICS	1	4140.00	4140.00
116.	FLOW MEASUREMENT TRAINER	312(9)	19/02/2013	BEDARE ELECTRONICS	1	49500.00	49500.00
117.	HUMIDITY MEASUREMENT TRAINER	312(10)	19/02/2013	BEDARE ELECTRONICS	1	17100.00	17100.00
118.	PH MEASUREMENT TRAINER	312(11)	19/02/2013	BEDARE ELECTRONICS	1	5760.00	5760.00
119.	CONDUCTIVITY MEASUREMENT TRAINER	312(12)	19/02/2013	BEDARE ELECTRONICS	1	5760.00	5760.00
120.	OPTICAL ROTARY ENCODER TRAINER	312(13)	19/02/2013	BEDARE ELECTRONICS	1	17100.00	17100.00
121.	DEAD WEIGHT TESTER USING PRESSURE GAUGE	312(14)	19/02/2013	BEDARE ELECTRONICS	1	38160.00	38160.00
	VAT AT 12.5%	312(1-14)	25/09/2013	BEDARE ELECTRONICS	14	25886.25	25886.25
122	Thermocouple, Pressure Gauge	316	19/03/2016	DOT Control Systems Pune	11	14760.00	14760.00
	Total Rs.						837731.25

## 2) Name of Lab: PROCESS\_LAB.

Sr. No.	Equipment with Specification	Dead stock Reg.No.	Date of Purchase	Name of company	Qty.	Total Price Rs.
1.	15MHz DUAL TRACE CRO	23	24/02/86	APLAB ELECTRONICS	1	9834.00
2.	ADEPT CONTROL ENGG TRAINER	58	31/08/86	ADEPT RECORTING PUNE	1	9500.00
3.	ADEPT DISTURBANCE	59	31/08/86	ADEPT RECORTING PUNE	1	8500.00

	GENERATOR					
4.	AC VOLTAGE STABILISER	64	01/10/86	TEKSON ELECTRO SYSTEM	1	4800.00
5.	ELECTRONICS VALVE POSITIONER	120	20/01/87	BLUE STAR LTD BOMBAY	1	3990.00
6.	ELECTRONICS PID CONTROLLER	220.4	24/10/99	BENI ELECTRONICS GHANDINAGAR	1	9630.00
7.	PROGRAMMABLE LOGIC CONTROLLER	220.5	24/10/99	BENI ELECTRONICS GHANDINAGAR	1	39655.00
8.	DUAL TRACKING POWER SUPPLY 0 -- 15V/1A	230.2	29/12/91	CONEL INSTRU.PUNE	1	1976.00
9.	POWER SUPPLY [0-30v] 1A	231	30/12/91	SICON POONA	1	1696.00
10.	CRO 20MHz(L&T)	232	18/12/91	BUSINESS ALLIANCE NASHIK (L&T)	1	11500.00
11.	PC BASED TEMP CONTROL SYSTEM	254.1	08/09/96	APEX SANGALI	1	57200.00
12.	PC BASED LEVEL CONTROL SYSTEM	254.2	08/09/96	APEX SANGALI	1	72800.00
13.	PRESSURE TRANSDUCER WITH DIGITAL PRESSURE METER	255a	18/10/96	SAP TECH. PUNE	1	12120.00
14.	LEVEL SWICH	255b	18/10/96	SAP TECH. PUNE	2	10080.00
15.	GLASS TUBE ROTAMETER	271	05/08/98	DATAONE EQUIP.SANGALI	5	38880.00
16.	RATIO CONTROL SYSTEM	272.1	03/08/98	DATAONE EQUIP.SANGALI	1	168990.00
17.	SPLIT RANGE CONTROL SYSTEM	272.2	03/08/98	DATAONE EQUIP.SANGALI	1	142100.00
18.	CASCADE CONTROL SYSTEM	272.3	03/08/98	DATAONE EQUIP.SANGALI	1	168990.00
19.	PRESSURE CONTROL SYSTEM	272.4	03/08/98	DATAONE EQUIP.SANGALI	1	117740.00
20.	PID CONTROLLER	279.2	11/12/99	NISKO INSTRU. PVT LTD PUNE	1	14175.00
21.	ANSHUMAN PLC	281	09/08/01	ANSHUMAN PUNE	1	138847.00
22.	ABB Make DCS System	288	26/06/2004	Megi control Pvt. Ltd.	1	550000.00
23.	TRANSDUCER A)PT-100	289	26/06/2004	Megi control Pvt. Ltd.	4	8800.00

	B)RTD						
24.	INTERFACING BOARDS	292	20/10/2006	Circuit electronics	4	5600.00	
25.	UPS	293	18/10/2006	National tele.	2	4200.00	
26.	MOTHER BOARD HCL CPU+ RAM+ MOUSE 10	294	11/11/2007	Swami enter.	1	6250.00	
27.	DVP- PLC,CABLE, SOFTWARE	300	10/01/2009	Field man control system	1	30608.00	
28.	EPSON LCD PROJECTOR	306	09/02/2010	Swami enter.	1	31700.00	
29.	USB CABLE FOR PRINTER	307	12/09/2010	Indore company	1	1025.00	
30.	N COMPUTING KIT	308	25/09/2010	Indore company	1	8300.00	
31.	EPSON LCD PROJECTOR	310(b)	04/01/2012	Swami enter.	1	26200.00	
32.	LAPTOP DELL	310(a)	04/01/2012	Swami enter.	1	28800.00	
33.	DAQ Card	311	14/01/13	Aashay measurement	1	34399.00	
34.	TWO WIRE TRANSMITTER	314(a)	25/09/13	BEDARE ELECTRONICS	1	12888.88	
35.	FOUR WIRE TRANSMITTER	314(b)	25/09/13	BEDARE ELECTRONICS	1	12888.88	
36.	E/P CONVERTOR	314(C)	25/09/13	BEDARE ELECTRONICS	1	24888.86	
37.	P/E CONVERTOR	314(d)	25/09/13	BEDARE ELECTRONICS	1	12888.88	
38.	FOUR POINT ALARM ANNOUNCIATOR	314(e)	25/09/13	BEDARE ELECTRONICS	1	16888.87	
39.	DIGITAL PRESSURE GAUGE	314(f)	25/09/13	BEDARE ELECTRONICS	1	11288.88	
40.	SQUARE ROOT EXTRACTOR	314(g)	25/09/13	BEDARE ELECTRONICS	1	12888.88	
41.	PID CONTROLLER TRAINER KIT	314(h)	25/09/13	BEDARE ELECTRONICS	1	21688.87	
42.	VAT AT 12.5%	314(a-h)	25/09/13	BEDARE ELECTRONICS	8	14179.37	
43.	LCD Projector	320	12/10/2016	Swami Enterprises Shahada	1	27000.00	
44.	Siemens PLC	321	15/09/2016	Bedare Electronics Nagpur	1	115639.00	
	TOTAL LAB COST RS.						2062014.37

**3) Name of Lab: Digital, Microprocessor and Analytical Lab**

Sr. No.	Equipment with Specification	DS Reg.No.	Date of Purchase	Name of company	Qty.	Unit price	Purchase price Rs.
1.	SINGLE PHASE METER	1	22/11/85	GMM	1	165.00	165.00
2.	MPF 1-Z 80 BASED MICROPROCESSOR TRAINING KIT	19 (a)	3/12/86	INTEK ENGINEER POONA	1	3995.00	3995.00
3.	POWER SUPPLY FOR ABOVE KIT	19(b)	3/12/86	INTEK ENGINEERING	1	1500.00	1500.00
4.	MICROPROCESSOR TRAINER EC 85	34	25/3/86	PROFESSIONAL ELECTRONICS	2	5070.00	5070.00
5.	INTERFACING BOARDS	37	25/3/86	PROFESSIONAL ELECTRONICS	9	12069.00	12069.00
6.	POWER SUPPLY	38	25/3/86	PROFESSIONAL ELECTRONICS	1	1060.00	1060.00
7.	PEP 8085 INTER.	51	28/05/86	PROFESSIONAL ELECTRONICS	1	580.00	580.00
8.	APLAB DECADE RESISTANCE BOX 4260	56	10/07/86	APLAB ELECT. THANE	1	1805.00	1805.00
9.	DC CURRENT RECORDER	60	31/08/86	ADPT RECORDING PUNE	1	8500.00	8500.00
10.	REGULATED DC POWER SUPPLY 0-5V/2AMP	87	06/01/87	SICON PUNE	7	600.00	4200.00
11.	KIT FOR POWER SUPPLY	88	06/01/87	SICON PUNE	1	500.00	500.00
12.	REGULATED POWER SUPPLY 5V/2AMP	100	03/02/87	SICON PUNE	2	630.00	1260.00
13.	APLAB AC MILLIVOLTMETER	105	13/03/87	APLAB ELECT. THANE	1	3885.00	3885.00
14.	APLAB DC MICRO VOLTMETER	106	13/03/87	APLAB ELECT. THANE	1	3330.00	3330.00
15.	MICROPROCESSOR TRAINER EC 85	108	19/3/87	PROFESSIONAL ELECTRONICS	7	3625.00	25375.00
16.	O/P POWER SUPPLY	109	19/3/87	PROFESSIONAL ELECTRONICS	7	860.00	6020.00
17.	REGULATED POWER SUPPLY 5V/500mA	114	28/03/87	HINDUSTAN INSTRU. PUNE	2	535.00	1070.00
18.	8-BIT DATA INPUT	115	28/03/87	HINDUSTAN INSTRU. PUNE	2	535.00	1070.00

19.	DIGITAL IC BREAD BOARD	116	28/03/87	HINDUSTAN INSTRU. PUNE	4	535.00	2140.00
20.	AUTO MANUAL CLOCK PULSE	117	28/03/87	HINDUSTAN INSTRU. PUNE	2	535.00	1070.00
21.	MICROPROCESSOR SYSTEM	124 a	28/1/88	CHANDAK INSTRUMENTS NAGPUR	1	4950.00	4950.00
22.	POWER SUPPLY FOR KIT	124 b and c	28/1/88	CHANDAC-INTRUMENTS NAGPUR	1	1345.00	1345.00
23.	8-BIT DATA OUTPUT INDICATOR	126	08/02/88	HINDUSTAN INSTRU. PUNE	2	535.00	1070.00
24.	DIGITAL IC TRAINER	130	29/04/88	MONARCH MARKETING NAGPUR	1	4155.00	4155.00
25.	INCONIX WORKSTATION 8085	138 a	12/8/88	INCON ELECTRONIC SYSTEM	1	16150.00	16150.00
26.	INTERFACING BOARDS	138 b	12/8/88	INCON ELECTRONIC SYSTEM	1	8900.00	8900.00
27.	STEPPER MOTORS	142	5/3/89	SRIJAN CONT.PUNE	1	763.00	763.00
28.	STD 2011 FDC Card	151	12/8/88	CHANDAK ELECTRONICS	1	3555.00	3555.00
29.	EDUCATIONAL TRAINER KIT	152	12/8/88	CHANDAK ELECTRONICS	12	1665.00	19980.00
30.	MODEL * 85	152	12/8/88	CHADAK ELECTRONICS	1	9450.00	9450.00
31.	MODEL A-MF 8679	152	12/8/88	CHANDAK ELECTRONIS	1	8325.00	8325.00
32.	POWER SUPPLY FOR TRAINER KIT	153	12/8/88	CHANDAK ELECTRONICS	12	585.00	7020.00
33.	DIGITAL IC TRAINER	163	28/03/90	SUHAS ELECTRICAL PUNE	3	3600.00	10800.00
34.	DECADE RESISTANCE BOX	229	05/10/91	OMEGA ELECT. JAIPUR	2	880.00	1760.00
35.	DUAL TRACKING POWER SUPPLY 0 -15V/1A	230.2	29/12/91	CONEL INSTRU.PUNE	1	1976.00	1976.00
36.	POWER SUPPLY (0-30v)	231	30/12/91	SICON INSTRU. PUNE	2	1130.00	2260.00
37.	DUAL TRACE CRO	232	18/12/91	BUSINESS ALLIANCE NASHIK (L&T)	1	11500.00	11500.00
38.	PORTABLE WHEAT BRIDGE	233.1	10/12/91	TOSHNIWAL IND. AJMER	1	5777.00	5777.00
39.	PORTABLE POTENTIOMETER	233.2	10/12/91	TOSHNIWAL IND. AJMER	1	5352.00	5352.00



40.	DC POWER SUPPLY 5V/1AMP	237	12/03/92	PACIFIC ELECT.	5	819.00	4099.00
41.	ENERGY METER (5-10A)	241	29/09/92	KANAIYA ELECTRICAL	1	350.00	350.00
42.	SPECTOPHOTOMETER	243	26/12/94	AMBALAL ENTER. A'BAD(SYSTRO.)	1	16445.00	16445.00
43.	PORTABLE METER (0-1 mA)	244.1	23/02/95	AGRAWAL ELECT. BOMBAY	4	820.00	3280.00
44.	WATT METER 150/300 VOLTS	244.2	23/02/95	AGRAWAL ELECT. BOMBAY	1	1375.00	1375.00
45.	POWER FACTOR METER	244.3	23/02/95	AGRAWAL ELECT. BOMBAY	1	2200.00	2200.00
46.	PORTABLE MICROMETER	245	23/02/95	SHREE TRADING COMP. AMARAVATI	1	3968.00	3968.00
47.	MICROOHMMETER	246.1	01/02/95	SHREE TRADING COMP. AMARAVATI	1	2700.00	2700.00
48.	OUTPUTMETER	246.2	01/02/95	SHREE TRADING COMP. AMARAVATI	1	2106.00	2106.00
49.	ANDERSON BRIDGE	248.1	26/12/94	SHREE TRADING COMP. AMARAVATI	1	5824.00	5824.00
50.	MEASURES INDUCTANCE (BRIDGE)	248.2	26/12/94	SHREE TRADING COMP. AMARAVATI	1	5824.00	5824.00
51.	BALANCED CELL COLOERIMETER	250	06/01/95	AMBALAL ENTER. A'BAD (SYSTRO.)	1	9094.00	9094.00
52.	FLAME PHOTOMETER	251	16/01/95	AMBALAL ENTER. A'BAD (SYSTRO.)	1	22857.00	22857.00
53.	PHOTO FLUROMETER	252	21/02/95	AMBALAL ENTER. A'BAD (SYSTRO.)	1	17674.00	17674.00
54.	DENSITOMETER	253	21/02/95	AMBALAL ENTER. A'BAD (SYSTRO.)	1	4968.00	4968.00
55.	ABBE REFRACTIONMETER	256	02/11/96	SANDEEP TRADER NAGPUR	1	7115.00	7115.00
56.	EDUCATIONAL TRAINER MODEL 51 --1602 T096	265	12/9/97	DYNALOG SYSTEM MUMBAI	5	4590.00	22950.00
57.	POWER SUPPLY CABLE & CONNECTOR	265	12/9/97	DYNOLOG SYSTEM MUMBAI	5	1169.00	5843.00
58.	OVER HEAD PROJECTER	276	18/10/99	SCIENTIFIC INSTRU. MUMBAI	1	9747.00	9747.00
59.	MICROPROCESSOR KIT 8085 CLASSIC	280	18/10/01	ANSHUMAN PUNE	7	4250.00	29750.00

	INTERFACING						
60.	INTERFACING BOARDS (a to j)	280	18/10/01	ANSHUMAN	7	1200.00	18425.00
61.	MP -kit	298	17/11/2008	BM SALES	10	4150.00	46688.00
62.	EXPERIMENTAL BOARD	304	26/10/2009	BETA ENGG.	10	4700.00	52875.00
63.	Microcontroller Kits 8051	315	19/08/2014	Edutech Learning Pvt Ltd. Vadodara	10	14000.00	140000.00
64.	Digital Colorimeter	318	21/08/2016	Systronics Ltd. Ahemedabad	1	18817.00	18817.00
65.	Digital Spectrophotometer	319	15/09/2016	Systronics Ltd. Ahemedabad	1	55176.00	55176.00
Total Cost Rs.							719902

#### 4) Name of Lab: Digital Signal Processing Lab.

Sr. No.	NAME OF EQUIPMENTS	Dead Stock No.	Date of Pur.	NAME OF COMPANEY	Qty.	AMOUNT	TOTAL AMOUNT
1	Zenith PC Pentium IV issued from computer dept			Zenith	15	26300.00	394500.00
2	Epson printer	290	24/08/2006	SWAMI ENTERP.	1	6700.00	6700.00
3	D link SW-net cable, software	291	13/07/2006	TOI CONTROL PVT LTD	1	41910.00	41910.00
5	LAN SWITCH	295	12/07/2008	GOPIN ENTER.	1	8300.00	8300.00
6	I Ball Desktop pc	302	20/01/2009	SWAMI ENTERP.	25	18400.00	460000.00
7	V Sim Software	305	28/01/2010	COSINE LABS	1	35000.00	35000.00
8	Lenova think center	309	4/10/2011	MINITEK SYSTEM	25	423500.00	423500.00
9	HP 1020 PLUS LESAR PRINTER	313	1/08/2013	OM COMPUTER	1	6900.00	6900.00
10	TMS 320C6745 DSP Kits	315	19/08/2014	Edutech Learning Solutions Vadodara	02	75500.00	151000.00
		Total Cost					1527810.00

		Rs.					
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### 5) Name of Lab: Electronics Lab

Sr. No.	Equipment with Specification	Dead stock Reg.No.	Date of Purchase	Name of company	Qty.	Unit Price	Total Price Rs.
1.	MULTIMETER uf 303	2	15/11/85	VHS ELECTRONICS POONA	2	1000.00	2000.00
2.	IN CKT. TRANSISTOR TESTER	3	15/11/85	VHS ELECTRONICS POONA	2	240.00	480.00
3.	DIGITAL MULTIMETER DM 6016	4	15/11/85	VHS ELECTRONICS POONA	1	1960.00	1960.00
4.	SIMSON PANEL METER (0-25V)	5a	23/12/85	R. TRAD.BOMBAY	2	125.00	250.00
5.	260-M MULTIMETER [260-6M]	5b	23/12/85	R. TRAD.BOMBAY	5	1400.00	7000.00
6.	SIMPSON METER (25-0-25V)	8	11/01/86	R. TRAD.BOMBAY	2	155.00	310.00
7.	SIMPSON METER (5-0-5V)	9	11/01/86	R. TRAD.BOMBAY	2	155.00	310.00
8.	LOW DIST. SIN-SQU. GENERATOR MODEL-2015	13	07/01/86	APLAB ELECTRONICS LTD.	1	4173.00	4173.00
9.	POWER SUPPLY [0-30v DC REGULATOR	16	14/02/86	CONEL INSTRUMENT POONA	2	1716.00	3432.00
10.	DUAL TRACE POWER SUPPLY [+/- 3 TO +/- 5 v]	17	24/02/86	CONEL INSTRUMENT POONA	1	1768.00	1768.00
11.	0-30v 5A D.C. REGULATED POWER SUPPLY	18	24/02/86	CONEL INSTRUMENT POONA	1	2808.00	2808.00
12.	DUAL TRACKING POWER SUPPLY 3 - 15V/1A(151T)	21	25/02/86	CONEL INSTRU. PUNE	1	1768.00	1768.00
13.	DIGITAL TECHOMETER	28	21/03/86	INSTRUMENT & CONTROL	1	2750.00	2750.00

14.	APLAB POWER SUPPLY MODEL-7431 (5v/2A)	44	12/04/86	APLAB ELECT. THANE	2	910.50	1821.00
15.	APLAB POWER SUPPLY MODEL-7111 (0-30v/1A)	45	12/04/86	APLAB ELECT. THANE	2	1722.00	3444.00
16.	APLAB MULTIPLE OUTPUT POWER SUPPLY MODEL - 7711	46	12/04/86	APLAB ELECT. THANE	1	4965.00	4965.00
17.	0 to 300 v V.D. REGULATOR POWER SUPPLY	49	28/04/86	CONEL POONA	1	4208.00	4208.00
18.	APLAB POWER SUPPLY [+/- 15v/5A] MODEL 7442	50	28/05/86	APLAB THANE	2	1158.00	2316.00
19.	APLAB DECADE RESISTANCE BOX (4250)	55	10/07/86	APLAB THANE	1	1475.00	1475.00
20.	OP-AMP EXPERIMENTAL KIT	61	30/08/86	HINDUSTAN INSTRU.	2	371.00	742.00
21.	TIMER 555 KIT WITH RELAY	62	30/08/86	HINDUSTAN INSTRU.	2	271.50	943.00
22.	DIGIT SELECT SINE/SQUARE GENERATOR MODEL-2002.	65	27/08/86	APLAB THANE	1	2783.00	2783.00
23.	POWER SUPPLY [0 To 35v/5A] MODEL-7115	66	27/08/86	APLAB THANE	1	3690.00	3690.00
24.	POWER SUPPLY [12v/1A]	89	06/01/87	SICON POONA	1	1100.00	1100.00
25.	20MHz FUNCTION GEN. (2019)	110	31/03/87	APLAB LTD.	1	18650.00	18650.00
26.	DISCRETE COMPONENT TRAINER.	121	20/07/87	HIN. INSTRUMENT	1	7906.25	7906.25
27.	FREQUENCY COUNTER 600MHz	107	13/03/87	APLAB ELECTRONICS THANE	1	13933.17	13933.17
28.	ELECTRO-TECH THYSET 2M, 3M, 4M, 5/6M, 9M, 12M, WITH 1HP M., 13M WITH 0.5HP M.	127	08/01/88	ELECTRO-TECH.POONA	7	3597.00	25185.60
29.	BELTRONIC DECADE RESISTANCE BOX	128	01/12/87	BOMBAY ELECTRONICS	1	2080.00	2080.00
30.	DIGITAL MULTIMETER	129	26/03/88	FRANK BOMBAY	6	1122.00	6737.00

	MODEL 9A						
31.	PACIFIC MAKE DECADE CAPACITANCE BOX	132.1	01/06/88	MONARCH MARKATING INTER.	2	1000.00	2000.00
32.	PACIFIC MAKE DECADE INDUCTANCE BOX	132.2	01/06/88	MONARCH MARKATING INTER.	2	1000.00	2000.00
33.	DIGITAL MULTIMETER MODEL - 9A	133	08/09/88	FRANK SUDHA.BOMBAY	6	6737.00	6737.00
34.	ELECTRONICS CHARTS	134	22/08/88	APEX ENGG.SANG.	20	176.55	3531.00
35.	DUAL TRACE OSCILLOSCOPE 15MHZ MODEL 3131 (APLAB)	139	04/05/88	CHANDAK INSTRU.NAGPUR	2	11362.00	22724.00
36.	DUAL TRACE OSCILLOSCOPE 15MHZ[PHILIPS]	140	13/04/88	ELECTRO. AGY. POONA	2	10800.00	21600.00
37.	ARGONIC MILIVOLT SOURCE	154	15/11/89	ELECTRONI INSTRU.BOMBAY	2	1900.00	3800.00
38.	DIGITAL MULTIMETER MODEL M/C 6E	219	22/10/90	MECO INSTRU.BOMBAY	5	1000.00	5000.00
39.	POWER SUPPLY 0 TO +/-15v/1A	222	21/09/90	ELNOVA DELHI	5	3149.00	15745.00
40.	TRANSISTOR POWER SUPPLY	225	17/01/91	SYSTRONICS	3	2202.00	6607.00
41.	CRO 15MHZ DUAL TRACE	226	14/02/91	SYSTRONICS	2	9202.50	18405.00
42.	FUNCTION GENERATOR	228	24/08/91	OMEGA ELECTRONICS	5	2420.00	12100.00
43.	1.DECADE RESISTANCE BOX 2.DECADE CAPACITANCE BOX	229	05/10/91	OMEGA ELECTRONICS	3+1	1361.50	5445.00
44.	DC REGULATED POWER SUPPLY [0-300v]	230.1	29/12/91	CONEL POONA	1	2392.00	2392.00
45.	DUAL TRACKING POWER SUPPLY [0-+/- 15V]	230.2	29/12/91	CONEL POONA	8	1976.00	15808.00
46.	0 TO +/- 30V REGULATOR	231	30/12/91	SICON POONA	15	1696.00	25440.00
47.	L&T GOULD MAKES 20 MHz DUAL TRACE OSCI.	232	18/12/91	BUSINESS ALLIANCE NASHIK	8	11500.00	92000.00

48.	IMPORTED DIGITAL MULTIMETER	234	24/09/91	SHREE TRADING	18	1560.00	28080.00
49.	LOW DISTORTION AUTO GENERATOR	235	20/02/92	VHS ELECTRONICS POONA	2	3253.50	6507.00
50.	SCIENTIFIC PULSE GENERATOR	236	30/01/92	SCIENTIFIC INDORE	2	9183.50	18367.00
51.	DECADE INDUCTANCE BOX	238	12/03/92	PACIFIC ELECTRONICS	5	2049.20	10246.00
52.	FUNCTION GENERATOR	239.1	12/03/92	PACIFIC ELECTRONICS	2	2671.50	5343.00
53.	FERQ. COUNTER	239.2	12/03/92	PACIFIC ELECTRO.	1	3596.00	3596.00
54.	CUPBURD FOR COMPONENT STORAGE	240	29/07/92	MANSURY STELL SHAHADA	2	3900.00	7800.00
55.	SMPS KIT [IC 723]	242.1	14/04/93	PURNIMA ENT. PUNE	1	1272.00	1272.00
56.	SERIES REGULATOR	242.2	14/04/93	PURNIMA ENTER. POONA	1	689.00	689.00
57.	AUTO TRANSFORMER	244.4	23/02/95	AGRAWAL ELE. BOMBAY	2	1045.00	2090.00
58.	DIGITAL TECHOMETER (CONTACT TYPE)	244.5	23/02/95	AGRAWAL ELE. BOMBAY	1	1045.00	2090.00
59.	DIGITAL TECHOMETER (NON CONTACT)	244.6	23/02/95	AGRAWAL ELE. BOMBAY	1	1595.00	3190.00
60.	FUNCTION GENERATOR [TEXTRONICS]	244.8	23/02/95	AGRAWAL ELECT.BOMBAY	1	3135.00	3135.00
61.	DIGITAL MULTIMETER DEMO BOARD	249	28/01/95	SHREE TRADING	1	5200.00	5200.00
62.	DISTORTION FACTOR METER	247	17/01/95	SHREE TRADING	1	7207.00	7207.00
63.	31/2 DIGIT DIGITAL BENCH MODEL MAINS OPERATED 0-200 mv	257	23/10/96	SHREE TRADING	3	4056.00	12168.00
64.	FUNCTION GENERATOR	258	28/10/96	SYSTRONICS	1	20966.00	20966.00
65.	DIGITAL MULTIMETER	259.1	29/10/96	MECO INSTRU.	3	2086.00	6258.00
66.	DIGITAL MULTIMETER 3+1/2 DIGIT MODEL 603	259.2	29/10/96	MECO INSTRUMENT	6	1427.00	8562.00
67.	FUNCTION GENERATOR	260	11/10/96	SCIENTIFIC INDORE	5	7144.40	35722.00

	MODEL HN 5030.2						
68.	OSCILLOSCOPE	261	20/01/97	SCIENTIFIC INDORE	1	15065.00	15065.00
69.	DIGITAL STORAGE ADAPTER	264	13/03/97	SYSTRONICS A.BAD	1	21036.00	21036.00
70.	OSCILLISCOPE DEMOSTRATE	266	20/09/97	SCIENTIFIC INDORE	1	24288.00	24288.00
71.	POWER SCOPE	267	10/10/97	SYSTRONICS A. BAD	1	23293.00	23293.00
72.	ANALOG I.C. TESTER	268	08/11/97	THE LINK MUMBAI	1	17586.00	17586.00
73.	SERIES INVESTOR KIT 19M	269.1	08/01/98	ELECTRO TECH.	1	11556.00	11556.00
74.	PARALLEL INVERTER KIT	269.2	08/01/98	ELECTRO TECH.	1	11556.00	11556.00
75.	CHOPPER KIT WITH 1 H.P. MOTOR	269.3	08/01/98	ELECTRO TECH.	1	11556.00	11556.00
76.	APLAB 4.5 DIGIT TRUE RMS AUTO RANGING MULTIMETER.	274	16/11/99	APLAB THANE	2	21199.00	42398.00
77.	FUNCTION GENERATOR	282	26/06/2004	SCIENTECH, PUNE	5	6700.00	33500.00
78.	20MHZ DUAL TRACE CRO	283	26/06/2004	SCIENTECH, PUNE	3	16500.00	49500.00
79.	EXPERIMENTAL BOARD	296	13/10/2008	BETA PUNE	5	4700.00	26438.00
80.	25MHz DSO(OSCILLOCOPE)	297	13/10/2008	BETA PUNE	1	22672.00	22672.00
81.	FUNCTION GENERATOR	299.1	29/09/2008	FALCON MUMBAI	5	4200.00	23625.00
82.	DMM	299.2	29/09/2008	FALCON MUMBAI	10	900.00	10125.00
83.	20MHz CRO	301	29/09/2008	BETA PUNE	10	13500.00	140400.00
84.	HARTLAY OSCILLATOR KIT	314(i)	25/09/2013	BEDARE ELECTRONICS	1	1688.89	1688.89
85.	ASTABLE MULTIVIBRATOR KIT	314(j)	25/09/2013	BEDARE ELECTRONICS	1	2008.89	2008.89
86.	PHASE SHIFT OSC. KIT	314(k)	25/09/2013	BEDARE ELECTRONICS	1	2008.89	2008.89
87.	FET CHARA. KIT	314(l)	25/09/2013	BEDARE ELECTRONICS	1	2888.89	2888.89
88.	TWO STAGE RC COUPLE AMPLI. KIT	314(m)	25/09/2013	BEDARE ELECTRONICS	1	2008.89	2008.89
89.	FORCED COMM. KIT	314(n)	25/09/2013	BEDARE ELECTRONICS	1	5688.88	5688.88
90.	AC PHASE CONTROL USING TRIAC KIT	314(o)	25/09/2013	BEDARE ELECTRONICS	1	2888.89	2888.89

91.	UNIVERSAL MOTOR KIT	314(p)	25/09/2013	BEDARE ELECTRONICS	1	12888.88	12888.88
92.	SCR CONVERTOR KIT	314(q)	25/09/2013	BEDARE ELECTRONICS	1	12888.88	12888.88
93.	SINGLE PHASE CONTROLLER KIT	314(r)	25/09/2013	BEDARE ELECTRONICS	1	5688.88	5688.88
94.	SMPS KIT	314(s)	25/09/2013	BEDARE ELECTRONICS	1	2488.89	2488.89
	VAT AT 12.5%	314(i-s)	25/09/2013	BEDARE ELECTRONICS	11	6642.12	6642.12
95	DMM	317	17/08/2016	Metrix Plus Instruments Pune	10	11800	11800.00
<b>TOTAL Rs</b>							<b>1136983.89</b>

### 6) Name of Lab: Biomedical Instrumentation Lab

Sr. No.	Equipment with Specification	Dead stock Reg.No.	Date of Purchase	Name of company	Qty.	Total Price Rs.
1	Pace maker Simulator/ Trainer	322(1)	19/10/2016	Sciencetech Indore	1	14764.00
2	EMG Simulator/ Trainer	322(2)	19/10/2016	Sciencetech Indore	1	15934.00
3	EEG Simulator/ Trainer	322(3)	19/10/2016	Sciencetech Indore	1	15295.00
4	12 lead Real Time ECG Trainer	322(4)	19/10/2016	Sciencetech Indore	1	32608.00
5	Respiration rate Monitor	322(5)	19/10/2016	Sciencetech Indore	1	13964.00
6	Blood Pressure Measurement Trainer	322(6)	19/10/2016	Sciencetech Indore	1	29054.00
7	Heart / Pulse rate Measurement Trainer	322(7)	19/10/2016	Sciencetech Indore	1	16900.00
8	Blood sugar Testing Kit	322(8)	19/10/2016	Sciencetech Indore	1	700.00
9	Fiber Optics Trainer	322(9)	19/10/2016	Sciencetech Indore	1	26291.00
				VAT & Freight		12414.00
Total Rs.						177924.00

### 31. Number of students receiving financial assistance from college, university, government or other agencies:

All Eligible candidates are receiving scholarship from Government.

### 32. Details on student enrichment programmes (special lectures / workshops



**/seminar) with external experts organized every year National level technical seminar & workshops.**

- Campus Recruitment Training
- Guest lecturers with Industry and academic experts.
- Seminars on Recent trends in the respective field.

### **33. Teaching methods adopted to improve student learning-**

- (1) Through Extra classes for weak students
- (2) Surprise tests,
- (3) Improvement tests
- (4) Tutorial classes,
- (5) feedback system & guidance of students
- (6) Providing students with 100 short questions
- (7) Group discussion
- (9) use of LCD Projectors for better understanding of subject.

**34. Participation in Institutional Social Responsibility (ISR) and Extension activities**  
Blood Donation Camps, Anti-ragging slogan, Road Safety awareness, Save Power awareness program etc.

### **35. SWOC analysis of the department and Future plans**

#### **Strength-**

1. The department is well furnished with laboratories and Equipments
2. The department is provided with modern Biomedical Instrumentation Lab.
3. The staffs are experienced and high skilled.
4. Affiliated by NMU Jalgaon.
5. The Department has B. E.

#### **Weakness-**

1. Quality of in –put in terms of students intellectual level is very weak.
2. Irregular publication of university results.

#### **Opportunities.-**

1. The students are doing their projects inside the campus with the guidance of guides.
2. The projects are done by the students with the recourses and energy available in the institute.

#### **Challenges-**

1. To get NAAC accreditation
2. To get 100% placement
3. To make all the students well expertise in practical fields.

#### **Future Plans:**

1. To establish a full-fledged Entrepreneurship Development Cell this will enable to improve the skills of students to start their own organizations.
2. To establish the consultancy service to the students about their career.
3. To implement innovative teaching methods to involve the students for their bright future to make every student expert Industry engineer.

## Evaluative Report of the Department

1. **Name of the department-** MECHANICAL ENGINEERING
2. **Year of Establishment-** 1996
3. **Names of Programmes / Courses offered (UG, PG)**  
UG – MECHANICAL  
PG – MECHANICAL - GENERAL
4. **Names of Interdisciplinary courses and the departments/units involved. -** NIL
5. **Annual/ semester/choice based credit system (programme wise)**

Semester	Theory credits	Sessional credits	Total credits
First	17	06	23
Second	16	07	23
Third	17	06	23
Fourth	17	06	23
Fifth	15	08	23
Sixth	15	08	23
seventh	15	08	23
Eight	12	11	23

6. **Participation of the department in the courses offered by other departments**

Department	Theory taught	Sessional taken
Civil	01(Ist SEM) ERT	03 Hrs/ WEEK
Electrical	02 (Ist SEM) PPE, IOM +01(IIInd SEM) NT	12 Hrs/WEEK & 03 Hrs/WEEK
Electronics & Telecommunication	--	--
Computer science	--	--

7. **Courses in collaboration with other universities, industries, foreign institutions, etc.** NA
8. **Details of courses/programmes discontinued (if any) with reasons.** NA
9. **Number of teaching posts**

	Sanctioned	Filled
Professors	02	02

Associate Professors	04	04
Asst. Professors	12	06

**10. Faculty profile with name, qualification, designation, specialization, (D.Sc./D.Litt. /Ph.D. / M. Phil. etc.,)**

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
Prof. Dr. P. D. Patil	Ph. D	Principal	Mechanical	33	02
Prof. S. U. Patel	M. E.	Professor	Gas Tur. & G P	31	-
Prof. D. M. Patel	Ph. D Pursuing	Asso. Prof.	Design	27	-
Prof. K. T. Patil	M. E.	Asso. Prof.	General	27	-
Prof. M. H. Patil	M. E.	Asso. Prof.	Tribology	23	-
Prof. H. G. Patil	M. E.	Asso. Prof.	Ind. Engg. & Mgmt.	20	-
Prof. C. C. Patel	M. E.	Assist. Prof.	General	27	-
Prof. A. S. Patel	M. E.	Assist. Prof.	Manu. Engg.	12	-
Prof. G. A. Chaudhari	M. E.	Assist. Prof.	Manu. Engg.	18	-
Prof. H. K. Chavhan	M. E.	Assist. Prof.	Thermal	8	-
Prof. N. D. Patil	M. E.	Assist. Prof.	Thermal	8	-
Prof. U. U. Patil	M. E.	Assist. Prof.	General	8	-

**11. List of senior visiting faculty-** NA

**12. Percentage of lectures delivered and practical classes handled (program wise) by temporary faculty** NA

**13. Student -Teacher Ratio (program wise)** 1: 20.15

**14. Number of academic support staff (technical) and administrative staff; sanctioned and filled**

	sanctioned	Filled
Technical staff	5	3
Administrative staff	1	-

**15. Qualifications of teaching faculty with D.Sc/ D.Litt/ Ph.D/ MPhil / PG.**

Name	Qualification	Designation
Prof. Dr. P. D. Patil	Ph. D. Mechanical	Principal
Prof. S. U. Patel	M. E. GT & GP	Professor
Prof. D. M. Patel	Ph. D. (Pursuing)	Asso. Prof.
Prof. K. T. Patil	M. E. GENERAL	Asso. Prof.
Prof. M. H. Patil	M. E. TRIBOLOGY	Asso. Prof.
Prof. H. G. Patil	M. E. I.E.M	Asso. Prof. & I/c HOD
Prof. C. C. Patel	M. E. GENERAL	Assist. Prof.
Prof. A. S. Patel	M. E. Manu. Engg	Assist. Prof.
Prof. G. A. Chaudhari	M. E. Manu. Engg	Assist. Prof.
Prof. H. K. Chavhan	M. E.THERMAL	Assist. Prof.
Prof. N. D. Patil	M. E. THERMAL	Assist. Prof.
Prof. U. U. Patil	M. E. MECHANICAL-Gen	Assist. Prof.

**16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received** 01

**17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received.**

**Year 2013-14**

Sr. no.	Name of the event	date	Sponsors collaboration
1	Solar Radiation Resource Assessment Program	01/01/2014 to 01/01/2019	National Institute of wind Energy ,MNRE New Delhi

**Year 2014-15**

Sr. No.	Name of the event	date	Sponsors collaboration
1	Solar Radiation Resource Assessment	01/01/2014 to	National Institute of

	Program	01/01/2019	wind Energy ,MNRE New Delhi
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**Year 2015-16**

Sr. No.	Name of the event	date	Sponsors collaboration
1	Solar Radiation Resource Assessment Program	01/01/2014 to 01/01/2019	National Institute of wind Energy ,MNRE New Delhi

18. Research Centre /facility recognized by the University

NIL

**19. Publications:**

Publication per faculty	Number of papers published in peer reviewed journals (national /international) by faculty	Books Edited
Prof. Dr. P. D. Patil	11	01
Prof. S. U. Patel	06	-
Prof. D. M. Patil	06	-
Prof. K. T. Patil	-	-
Prof. M. H. Patil	-	-
Prof. H. G. Patil	07	-
Prof. C. C. Patel	-	-
Prof. A. S. Patel	02	-
Prof. G. A. Chaudhari	02	-
Prof. H. K. Chavhan	02	-
Prof. N. D. Patil	04	-
Prof. U. U. Patil	04	-

\* a) Publication per faculty

\* Number of papers published in peer reviewed journals (national / International) by faculty and students –For faculty as above and for students: Nil.

Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)

Monographs	NIL
Chapter in Book	NIL
Books Edited	YES
Books with ISBN/ISSN numbers with details of publishers	YES
Citation Index	NO
SNIP	NIL
SJR	NIL
Impact factor	YES
h-index -	NIL

**20. Areas of consultancy and income generated Revenue generated on assist an experimental project work in the institute laboratory by guidance** NIL

**21. Faculty as members in**

a) National committees: -	NIL
b) International Committee:-	NIL
c) Editorial Board:-	NIL

**22. Student Projects**

a) Percentage of students who have done in-house projects including inter departmental/program -	65 %
b) Percentage of students placed for projects in organizations outside the institution i.e.in Research Laboratories/Industry/ other agencies -	NIL

**23. Awards / Recognitions received by faculty and students.** NO

**24. List of eminent academicians and scientists/visitors to the department** NO

**25. Seminars/ Conferences/Workshops organized & the source of funding**

National	NIL
International:	
NIL	

**26. Diversity of Students**

Name of the Course (Mechanical Engineering)	% of students from the same state	% of students from other States	% of students from abroad
UG 2015-16	98 %	2 %	NA
UG 2014-15	97 %	3 %	NA
UG 2013-14	88 %	12 %	NA
UG 2012-13	82 %	18 %	NA

**28. How many students have cleared national and state competitive examinations such as**

**NET, SET, GATE, Civil services, Defense services, etc.: (2013-14 to 2015-16)**

GATE- **04**

Def- **01**

JRE /TOEFL- **06**

**29. Student progression**

Student progression	Against % enrolled
UG to PG	4 % to 8 %
PG to M. Phil.	-
PG to Ph.D.	-
Ph.D. to Post-Doctoral	-
<b>Employed</b>	
Campus selection 2013-14	07 %
Other than campus recruitment	38 %
Entrepreneurship/Self-employment	02 %

**30. Details of Infrastructural**

**facilities**

**a) Library:**

Name of the Book	No. Of copies
------------------	---------------



	<b>available</b>
Separate list attach*** (Departmental Library )	269
Central Library	1089

(\*\*\* Annexure I)

- b) **Internet facilities for Staff & Students -** YES  
 Net Lab with Broad band and BSNL  
 (Facilities available both for staff & students.)
- c) **Class rooms with ICT facility:-** NIL.
- d) **Laboratories:-**

**Name of the Lab: - Drawing Hall**

Sr. No.	Name of Equipement	Quantity	Page no of S.R.	Date of Supply	Cost of Equipment	
1	Drawing Model's	5 nos	09 & 10	10 /10	842	
2	Drawing Model's			25 /01		
A	Oblique section					
1	Rectangular Prism	01 nos				60
2	Rectangular Pyramid	01 nos				60
3	Triangular Prism	01 nos				60
4	Triangular Pyramid	01 nos				60
5	Square Prism	01 nos				60
6	Square Pyramid	01 nos				60
7	Pentagonal Prism	01 nos				60
8	Pentagonal Pyramid	01 nos				60
9	Hexagonal Prism	01 nos				60
10	Hexagonal Pyramid	01 nos				60
11	Cone	01 nos				60
12	Cube	01 nos				65
13	Cylinder	01 nos				60
B	Un-Sectional					
1	Rectangular Prism	01 nos				52
2	Rectangular Pyramid	01 nos				52
3	Triangular Prism	01 nos				52
4	Triangular Pyramid	01 nos			52	
5	Square Prism	01 nos			52	
6	Square Pyramid	01 nos			52	
7	Pentagonal Prism	01 nos			52	
8	Pentagonal Pyramid	01 nos			52	
9	Hexagonal Prism	01 nos			52	
10	Hexagonal Pyramid	01 nos			52	

11	Cone	01 nos			52	
12	Cube	01 nos			52	
13	Half sphere	01 nos			45	
14	Cylinder	01 nos			52	
					1506.00	
				Pro.Tax	120	
					1626	
				Octroi 4%	65.04	
				S. T. 4%	65.04	
					1756	
				Fright to	25	
					1781.08	
3	Drawing Instrument		10	24 / 06 /		
1	Graphex mini Drafter	01 nos			110	
2	Set. Square	01 no		Less 5%	5.50	
					104.50	
					11.50	
					116	
4	Drawing Board's Full-	200 Nos	11	26 /12	22200	
				Less Fright	1185	
					21015	
5	Drawing Board 's	250Nos	12	19 /03 /	115000	
6	Drawing Board 's	03Nos	12	17 /06	1380	
					116380	
7	Models		13			
	Cotter Joint	01 Nos			25/12/2013	900
	Knuckle Joint	01 Nos			25/12/2013	900
	Universal Coupling	01 Nos			25/12/2013	900
	Hooks coupling	01 Nos			25/12/2013	1000
	Muff coupling	01 Nos			25/12/2013	900
	Split muff coupling	01 Nos			25/12/2013	1000
	Flange coupling	01 Nos			25/12/2013	1200
	Protected type flange	01 Nos			25/12/2013	1400
	Geometrica instrument	01 Nos			25/12/2013	1400
	Types of keys	01 Nos			25/12/2013	1800
	Set of bearings	01 Nos			25/12/2013	1200
	Project of straight line	01 Nos			25/12/2013	4500
					17100.00	
				(-) discount	4702.50	
				Total	12397.50	
				12.5% VAT	1549.70	
				Total	13947.20	

**Name of the Lab: - Heat Engine Lab**

Sr. No	Name of Equipment	Quantity	Page no of S.R.	Date of Supply	Cost of Equipmen
1	Models		29	10 /10/	
1	Lever Safety valve	1 nos			280
2	Spring loaded Safety	1 nos			280
3	Stop Valve	1 nos			480
4	Feed Check Valve	1 nos			480
5	Fusible Plugs	1 nos			300
6	Pressure Gauges	1 nos			220
					2040
				Discount	81.60
				Less Fright	26
				S.T. 4%	115.94
					2048.34
2	Charts		29 & 30	254	
1	Hydro Electric plant lay	1 nos			125
2	Lancashire Boiler	1 nos			260
3	Bob-Cock & Wilcox	1 nos			185
4	Nuclear Power plant	1 nos			175
5	General Power plant	1 nos			155
6	Steam stop Valve	1 nos			145
7	Feed check Valve	1 nos			145
8	Blow off cock	1 nos			145
9	Dead Weight safety Valve	1 nos			200
10	Rams bottom safety	1 nos			190
11	Lever safety Valve	1 nos			145
12	High steam Low water	1 nos			200
13	Green's Economizer	1 nos			200
14	Super Heater	1 nos			175
15	Separating & Throttling	1 nos			150
16	Carburetors	1 nos			200
17	Pelton turbine	1 nos			175
18	Francis turbine	1 nos			200
19	Kaplan turbine	1 nos			200
20	Governing of pelton	1 nos			200
21	Hydraulic Reaction	1 nos			175
22	Hydraulic Intensifier	1 nos			150
23	Hydraulic Accumulator	1 nos			150
24	Hydraulic Ram	1 nos			175
25	Centrifugal Pump	1 nos		200	

26	Type's of Impeller's for	1 nos			175
27	Window Air Conditioner	1 nos			200
28	Lay out of ice-plant	1 nos			200
29	Bomb Calorimeter	1 nos			200
30	Boy's Gas law	1 nos			150
31	Orsat Apparatus	1 nos			175
					5520.00
				Packing	82
				S.T. 10%	560.20
				Forwarding	20
				Insurance	25
					6207.20
3	Model's			Oms\21\1	
	Water Gauges	1 nos	31		360
	Dead Weight safety Valve	1 nos			280
	Steam Injector	1 nos			440
	Steam Engine	1 nos			280
					1360
				Less 4%	54.40
				Less fright	25
				S.T. 6%	76.80
					1357.40
4	CHART'S		B-	01/01/198	
	Four stroke Diesel cycle	1 nos			70
2	Lubrication System	1 nos			70
3	Wankel Rotary system	1 nos			70
4	Combustion Chamber	1 nos			70
5	Principal Gear Box	1 nos			70
6	Fly wheel Magneto	1 nos			70
7	Mechanical Fuel pump	1 nos			70
8	Plunger Type Fuel	1 nos	31		70
9	Rotary Fuel injection	1 nos			70
10	Lubricating oil Filters	1 nos			70
11	Injection Nozzles	1 nos			70
12	Principal Turbo Charger	1 nos			70
13	Torque Converter	1 nos			70
14	Principal of Gas Turbine	1 nos			70
15	Fork Lift truck	1 nos			45
					1025
				Packing.	50
				S. T. 4%	43
				F.Paid	20

					1138.00	
5	Models			17\08\85		
1	Vertical water tube	1 nos	32		1280=00	
2	Cochran Boiler	1nos			1280=00	
					2560=00	
				S.T.6%	156=60	
					2713.60	
6	Models			14\07\86		
1	Combined High steam	1nos	32		480=00	
2	Anti priming Pipe	1nos			180=00	
3	Expansion Steam trap	1nos			400=00	
4	Float steam trap	1nos			480=00	
5	Greens economizer	1nos			900=00	
6	super heater	1nos			900=00	
					3340=00	
				Less freight	45=00	
					3295=00	
				Less	197=70	
					3097=30	
				S.T.6%	185=84	
					3283.14	
7	Models			29\09\86		
1	Model of Lancashire	1nos	33	Oms\115\ 9\86	1640=00	
2	Model of Bob-Cock	1nos				1640=00
3	Model of Locomotive	1nos				1640=00
4	Reducing Valve	1nos				440=00
5	Model of Steam Engine	1nos				800=00
					6160=00	
				Discount	246=40	
					5915=60	
				Less	156=00	
					5757=60	
				S.T. 6%	345=45	
					6103.05	
8	Wood fired Water Geyser	1nos	35	06\01\200	30500.00	
				WH-1699	3000.00	
				13\012001	27500.00	
9	Wood fired Water Geyser	1nos	35	06\01\200	21000.00	
				WH-1697	2000.00	
				13\012001	19000.00	
10	Wood fired Water Geyser	1nos	35	06\01\200	21000.00	
				WH-1698	2000.00	

				13\012001	19000.00
11	Wood fired Water Geyser	1nos	36	06\01\200	30500.00
					1500.00
					1200.00
					27800.00
12	Educational WallCharts.			02\08\04	
1	S-6. S-9, S-10.	3 nos	36		480=00
2	AE-1, AE-2,	2 nos			320=00
3	AE-6. AE-18.	2 nos			320=00
4	H-2. H-3. H-4.	3 nos			480=00
5	AE-23	1 nos			160=00
6	R-1 R-2. R-4 .R-5,	4 nos			640=00
7	R-6. R-7. R-9.	3 nos			480=00
8	P-1. P-7. P-8,	3 nos			480=00
9	P-13. P-14. P-15,	3 nos			480=00
10	P-9. P-17,	2 nos			320=00
					4160=00
				Discount	208=00
					3952=00
				Bombay	604=66
				Add.	0.34
					4557.00
13	Charts	77 nos x	37	19/03/201	30030.00
				- Disc	7700.00
				- Tota	22330.00

**Name of the Lab: - Heat Transfer Lab**

Sr. No	Name of Equipment	Quantity	Page no of S. R.	Date of Supply	Cost of Equipmen
1	Heat Lab Equip.			02/04/87	
1	Thermal Conductivity	1 nos	64		7356=00
2	Stefen Boltzman App.	1 nos			6748=00
3	Parallel Flow / Counter	1 nos			7192=00
4	Emissivity	1 nos			8968=00
5	Heat Transfer Through	1 nos			9348=00
6	Thermocouple of	1 nos			7000=00
7	Critical Heat Flux App.	1 nos			6700=00
					53312=00
				Invoice for	42649=60
				Less	2132=50
					40517=10
				S. T. 6%	3038=80
					43555.90

2	Heat Lab Equip.		65		
1	“UNINSTA”	1 nos		27/03/87	21500=00
				C. S. T.10%	2150=00
					23650.00
3	Heat Lab Equip		65	10/4/87	
1	Thermal Conductivity of	1nos			7640=00
2	Heat Transfer From Pin-	1nos			12156=00
3	Heat Transfer in	1nos			8916=00
4	Heat Transfer Through	1nos			9696=00
5	Drop & Film	1nos			21548=00
					59956=0
				Invoice for	47964=80
				Less	2398=25
					45566=55
				S. T. 6%	3417=50
					48984.05
4	Finned Tube Heat	1nos	67	19/06/87	19800=00
				Invoice for	17820=00
				90%	1188=00
				S. T 6%	19008.00
5	Storage Water	1nos	69	12/08/04	3600=00
					3600.00
6	Stefan Boltzmann App.	1 nos	69	06/01/201	27000.00
2	Thermal conductivity of	1 nos.		3	30000.00
3	Parallel flow & counter			EEEEP/12-	35000.00
4	Thermal conductivity of			13/4	31000.00
5	Emissivity measurement				31500.00
				Total	154500.00
				Dis. 17%	26265.00
				Total	128235.00
				12% VAT	16029.00
				Total	144264.00

## Name of the Lab: - Fluid Mechanics Lab

Sr. No.	Name of Equipment	Quantity	Page no of S.R.	Date of Supply	Cost of Equipment
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1	Verification of	01 nos	75	25/12/2013	36700.00
2	Combine flow	01 nos			40700.00
3	Major & minor losses in	01 nos			36700.00
4	Reynold's apparatus	01 nos			25700.00
5	Redwood Viscometer	01 nos			30700.00
				Total	170500.00
				Dis. 27.5%	46887.50
				Total	123612.50
				12.5 VAT	15451.00
				Total	139064.00

**Name of the Lab:- Automobile Engineering**

Sr. No	Name of Equipment	Quantity	Page no of S.R.	Date of Supply	Cost of Equipmen t
1	Crank & slotted link	1 nos.	80	23/03/200	1500.00
2	Working model of	1 nos.			3840.00
3	Hydraulic Brake unit	1 nos			4560.00
4	Automobile part (self	1 nos			2700.00
				Total	12600.00
				12.5% VAT	1575.00
				Total	14175.00

**Name of the Lab:- Hydraulic Machine**

Sr. No	Name of Equipment	Quantity	Page no of S.R.	Date of Supply	Cost of Equipmen t
1	Models			27/1/86	
	Hydraulic Jack	1nos	85		300.00
	Pelton turbine	1 nos			900.00
	Kaplan turbine	1 nos			600.00
	Francis turbine	1 nos.			1100.00
				Total	2900.00
				Less freight	84.00
				Total	2816.00
			-	- Dis.	56.35
				Total	2759.65
				6%	165.55
				Total	2925.20
2	Models			11/02/198	
	Mixed flow runner	1	85	6	300.00
	Axial flow runner	1			300.00



	Radial & centrifugal	1		OMS/49/2/	300.00
	Radial turbine pump	1		86	800.00
	Air lift pump	1			200.00
	Deep well turbine pump	1			120.00
				Total	2020.00
			-	- Dis.	40.40
				Total	1979.60
			-	- Frei	70.00
				Total	1909.60
				6% sel	115.57
				Total	2024.17
3	Kaplan Turbine Test rig	1 nos.	87	6/1/2013	320000.00
				Dis.	54400.00
				Total	265600.00
				12.5%	33200.00
				Total	298800.00
4	Pelton wheel test rig	01 nos.	87	22	142700.00
5	Centrifugal pump test rig	01 nos			64700.00
6	Reciprocating pump test	1 nos			72700.00
				Total	280100.00
				Dis.	77027.00
				Total	203072.00
				12.5%	25384.00
				Total	228446.50

**Name of the Lab:- Tribology**

Sr. No	Name of Equipment	Quantity	Page no of S.R.	Date of Supply	Cost of Equipment
1	Journal Bearing	1nos	91	2/3/2004	39704
2	1H. P. (T.P.) Moter.	1nos		6/8/04	2410
3	Friction in Journal	1nos		25/9/04	36192
				Total	78306

**Name of the lab:- P.G -I Lab**

Sr. No	Name of Equipment	Quantity	Page no of S.R.	Date of Supply	Cost of Equipmen
1	Single cylinder diesel	1 nos.	101	06/01/201	110000.00

2	Mechanical heat pump	1 nos.		3	80000.00	
3	Exhaust gas analyser	1 nos.			95000.00	
				Total	285000.00	
				Dis. 17%	48450.00	
				Total	236550.00	
				12.5% VAT	29568.75	
				Total	266118.75	
4	Steffan Boltzman App.	1 nos	101	06/01/2013	27000.00	
	Thermal conductivity of	1 nos.			30000.00	
	Parallel flow & counter	1 nos.			35000.00	
	Thermal conductivity of	1 nos.			31000.00	
	Emissivity measurement	1 nos.			31500.00	
				Total	154500.00	
				Dis. 17%	26265.00	
			Total	128235.00		
			12% VAT	16029.00		
			Total	144264.00		
5	Four cylinder four stroke	01 nos.	102	25/12/2011	551700.00	
					Dis. 27.5%	151717.00
					Total	399982.00
					12.5% VAT	49997.00
				Total	449980.00	

## Name of the Lab:- P. G -II Lab

Sr. No	Name of Equipment	Quantity	Page no of S.R.	Date of Supply	Cost of Equipment	
1	PC express G. force 8400	05 nos.	103	13/10/2011	12000.00	
					12.5% VAT	600.00
					Total	12600.00
2	Upgrading existing 5	NA	103	17/10/2011	138151.00	
					10.3%	14230.00
						152381.00
					5% VAT	7619.00
				Total	160000.00	
3	Lenovo think centre	16 nos.	103	4/10/2011	255238.08	

4	Laptop Dell Vastro 1540	01 nos.		682/01	27428.00
5	Projector Epson EBS-9	01 nos.	104		24952.00
				Total	52380.00
				5% Tax	2619.00
				Total	55000.00
6	Quick Heal 10 ussr 3	01	104	15/3/2013	9800=00

**Name of the Lab: - Metrology Lab**

Sr. No	Name of Equipement	Quantity	Page no of S.R.	Date of Supply	Cost of Equipmen
1	Zeiss Measuring	1nos	115	17/11/86	35000=00
				S. T. 6%	2100=00
					37100=00
				Less D. D.	74=00
				Total	37026.00
2	F T M, Poldi	1nos	115	19/12/86	505=00
				Ap Form	30=00
				V.P.P.	30=00
				Total	565.00
3	Profile Projector With	1nos	115	31/12/86	11000=00
				C. E. D. 15%	1650=00
					12650=00
				C.S.T. 10%	1265=00
				Total	13965.00
4	Monochromatic	1no	116	22/11/86	4635=00
				1%	46=00
					4681=00
				12.1%	560=83
				Total	5241.83
5	Optical Flat	1no	116	22/11/86	1405=00
6	Optical Flat	1no		22/11/86	2005=00
					3410=00
				1%	34=00
					3444=00
				12.1%	412=61
				Total	3856.61
7	Slip Gauge	1 Set	118	19/6/98	9850=00
				93 /98	50=00

				Total	9900.00	
8	Micrometer Out side.			22/5/98		
a	Size -0 to 1"	1no	118		1500=00	
b	Size 25 to 50mm	6nos			12600=00	
c	Size 0 to 25mm	1no			2000=00	
					16100=00	
				Packing&	150=00	
				Total	16250.00	
9				15/4/98		
1	Gauge M - 20	1no	118		4550=00	
2	Gauge M - 24	1no			4550=00	
	Thread Ring					
1	Gauge M - 20 X 2.5	1set			8000=00	
2	Gauge M - 24 X 3.0	1set			8000=00	
					25100=00	
				Packing&	150=00	
				Total	25250.00	
10	Combination set / 12"	2set	118	15 /4/98	18000=00	
b	Spirit Level	1no			22/5/98	400=00
					Total	18400.00
11				30 / 7 / 04		
1	Floating carriage	1no	119		39500=00	
2	Auto Collimator	1no			81370=00	
3	Angle Gauge Box	1no			38000=00	
4	Sine Center	1no			9800=00	
5	Straight Edge	1no			1350=00	
6	Plug Gauge set	1no			2800=00	
7	Gear Tooth Vernier	1no			13500=00	
8	Thread Micrometer	1no			9800=00	
					196120=0	
				Less	34321=00	
					161799=0	
				S. T. /C.S.T.	810=00	
				Total	162609.00	
12	Angle Dekker Machine	1NO	119	31	55000=00	
					C. S. T. 10%	5500=00
					Total	60500.00
13	Surface Plate	1no	120	13/8/04	7500=00	

				Less 10%	750=00
				Total	6750.00
14	Vernier Caliper 200 mm	2 nos.	121	5044	4500.00
	Dial vernier caliper 200	2 no.		31/08/201	9600.00
				Total	14100.00
				Packaging	500.00
				Total	14600.00
				12.5% VAT	1825.00
				Total	16425.00
15	Digital Micrometer	02 nos.	121	31/08/201	9865.00
	Dial gauge micrometer	2 nos.		2474	2647.00
				Total	12512.00
				12.5% VAT	1564.00
				Total	14076.00
16	1.Mechanical	01 no.	122	18/03/201	8000=00
	2. plunger Type dial	01 no.			1700=00
	3 parallel Test	01 no.			7000=00
	4 specimen set (concave	01 no.			22500=00
	5 portable surface	01no.			160000=0
	6 Lever type Dial 0.8 mm	01no.			3600=00
	7 Flexible Dial stand	01no.			2800=00
				Amount	205600=0
				Dis%	24672
					180.928=0
				Vat /	23294=00
					204.222=0
				Courier	5428=00
				Total	209650=0

**Name of the Lab:- Theory of Machine Lab**

Sr. No	Name of Equipment	Quantity	Page no of S.R.	Date of Supply	Cost of Equipmen	
1	Vibration Lab	1no	130	6 / 1 / 2000	49000.00	
2	Whirling of Shaft App.	1no	130		17000=00	
						66000=00
					Less	9900=00
						56100=00
					13% B.S. T.	7293=00
						63393=00
					T. O. T.1%	561=00
					63954=00	

				Plus	729=30	
				Total	64683.30	
3						
1	Governor Apparatus	1 no	130	29 / 8 /04	18500.00	
2	Static & Dynamic	1NO			16500.00	
					35000=00	
				Dis. 10%`	3500.00	
				Total	31500.00	
				15.3% Tax	4820.00	
				Total	36320.00	
4						
1	Slider crane		131	14/3/2009	5880.00	
	a) Reciprocating Engine	1 no.				
	b) Oscillating cylinder	1 no.				
	c) With-worth quick	1 no.				
2	Hydraulic Brake unit	1 nos.			9120.00	
3	Actual cut section gear	1 no.			10800.00	
4	Differential gear box	1 no.			2880.00	
5	Cycloid gear	1 no.			1320.00	
6	Band brake	1 no.			3120.00	
7	Internally expanding	1 no.			3240.00	
8	Plate clutch	1 no.			1920.00	
9	Conical friction clutch	1 no.		2040.00		
10	Oldham's coupling	1 no.		1320.00		
11	Cam & follower set					
	a) Plate cam	1 no.				
	b) Tangent cam	1 no.				
	c) cylindrical cam	1 no.				
	d) reciprocating knife	1 no.				
	e) End cam	1 no.				
					9600.00	
					51240.00	
				12.5% VAT	6405.00	
				Total	57645.00	
5	Generator of involutes	1 no.	131	7/4/2009	7500.00	
				12.5% VAT	938.00	
				Total	8338.00	

## Name of the Lab:- CADD Center

Sr. No.	Name of Equipment	Quantity	Page no of S.R.	Date of Supply	Cost of Equipment
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1	L. C. D. Projector	1no	135	8/10/03	161044
2	1000 VA On line UPS	1no	135	9/3/04	52500
3	Computer Software Ansys introductory	1no	135	9 / 8 /2004	170500
4	L. G. 52 X R /W	1no	135	31/8/04	1600
5	AUTO- CAD 2005.	5 nos	136	23 /8/04	157500
6	CATIA V 5		136	15 / 7 /04	418000
7	Sam sung	1no	136	1/10/05	750
8					
1	40 GB HDD	02 no	137	30 / 1 / 06	4100
2	16 Ports Ethernet	01 no			2350
9				2 /03 /2007	
1	16 Port Switch	01 no	137		12600
2	8 Port Switch	01no			8650
	Cabling	305 Mtrs			6710
3	D-Link Ethernet Card	10 nos			8000
4	Software Solution For	10 nos			12000
5	D-Link Card	20 nos			36000
6	Software	20 nos			24000
7	DDR - 2 - 512 - MB -	03 nos		6600	
10	Lenovo	15 pc	138	24 / 9/2007	315000
11				6 / 10 / 08	
1	Printer Xerox Phase	01 Qty.	138		5100
12	Desktop Computer	15 Qty			20 /1 2009
13					
1	Ram 2 GB DDR3	9 no.s	139	12/10/2011	8550.00
2	Ram 2GB DDR2	2 nos.			2700.00
3	D-link Port 8 port switch	2 nos.			1900.00
4	PCi express G Force	5 nos.			12000.00
				Total	25150
				5% VAT	1257.00
				Total	26408.00
14	PCi Express G force	5 nos.	139	13/10/2011	12000.00
				5% VAT	600.00
				Total	12600.00
15	Upgrading exiting 5 user		139	17/10/2011	138151.00
				10.3 service	14230.00
				5% CST	7619.00
				Total	160000.00
16	Toward installation		140	17/10/2011	4533.00

				Service tax	467.00
				Total	5000.00
17	Lenevo think centre		140	4/10/2011	427300.00
18	Laptop Dell Vostro 1540	1 nos.	140	4/01/2012	55000.00
				682/01	
19	LCD Projector	1 nos.	141	12/10/2016	27000.00
				433/10	
20	LENOVO Think Center	10 nos.	141	12/10/2016	267000.00
				429/10	

**Name of the Lab:- Thermodynamics Lab**

Sr. No.	Name of Equipment	Quantity	Page no of S.R.	Date of Supply	Cost of Equipment
1	Bomb – Calorimeter	1 no	145	12/ 7 /04	38595
2	Models		145	25 /10 / 04	80856
3	Centrifugal air	1 set	146	29/10/2004	217404
4	MODEL		146		53874
5	Steam boiler	1	147	26/4/05	8816
6	Two stage air	1	147	25/12/2013	72700.00
				Dis. 27.5%	19992.00
				Total	52707.00
				12.5% VAT	6588.00
				Total	59295.90

**Name of the Lab:- Engg. Metallurgy**

Sr. No	Name of Equipment	Quantity	Page no of S.R.	Date of Supply	Cost of Equipmen
1	Metallurgical	1	151	639 644	6777.00
	x-y platform	1		4/10/1986	375.00
				Total	7152.00



2	Optical pyrometer	1	151	24/10/86	8770.90	
3	Portable type fluorescent	1 set	151	19/2/87	5400.00	
				Less	2160.00	
				Balace	3240.00	
					2160.00	
				Total	5400.00	
4	Toshiba magnetic crack	1	152	26/3/87	17700.00	
				Less 5%	885.00	
					16815.00	
				R. of central	660.00	
					17475.00	
				Sales tax@	1048.50	
				Against	18523.50	
				Less 5% ret.	840.75	
				Total	17682.75	
5	Muffle furnace lab size	1	153	27/10/87	9000.00	
				Packing &	300.00	
					9300.00	
				Sales tax@	372.00	
				Total	9672.00	
6-	Abrasives belt grinder	1	155	26/11/99	9900.00	
	Double disc polishing					27990.00
		1				400.00
					Total	28300.00
3	Binocular Metallurgical	2				45000.00
4	Trinocular Metallurgical	1				30000.00
5	Microscope access	1 set				
6	Emery polishing paper	1 doz			26/11/99	250.00
7	Silicon carbide water	6 doz				1350.00
8	Emery belt grinder	1				80.00
9	Polishing aluminum	500 gm				850.00
10	Polishing cloth	2 no				120.00
11	Pyrometric etching	500 ml				950.00
12	Cold setting resin set com	1 set		26/11/99	800.00	
13	Raw material sample	3 no			300.00	
					127950.00	
				Sr no 14	972.00	
					128922.00	
				Sales tax@	6744.00	
				1% TOT	843.00	

				Fright	4000.00
				Total	140509.00
				Less %	972.00
					139537.00
					1981.00
				Total	137556.00
7	Over head projector senior model MBE 506C with twin lamn svstem	1	158	18/10/99	8750.00
				Packing &	275.00
					9025.00
				Sales tax	722.00
				Total	9747.00
8					
1	Jominy & quench test	1	158	CC-22	18900.00
2	Muffle furnace max.	1			27000.00
3	Jominy fixture for	1			12900.00
4	Test specimen for	2			7200.00
5	Test specimen for dye	2			5000.00
6	Advanced tool maker	1			72000.00
9	Extra accessories for tool		159		
1	Graticule matric thread	1 no			1500.00
2	Graticule matric thread	1 no			1500.00
3	Graticule matric	1 no			1500.00
4	Graticule 55 deg angle	1 no			1500.00
5	Graticule 60 deg angle	1 no			1500.00
6	With worth thread 60-	1 no			1500.00
7	With worth thread 24-	1 no			1500.00
8	Centre holding device	1 no			4500.00
9	V block	1 no			3000.00
10	Vee support	1 no			3000.00
					164000.00
				Discount	11480.00
				Total	152520.00
10	a) Rockwell cum brinell	1 no.	160	CC-129	49750.00
	b) Standard metrological	1 set			13500.00
				Total	63250.00
				1.4%	886.00
					64136.00
				2%	1283.00
					65419.00
				Add freight	1250.00
					66669.00

				12.5% VAT	8334.00
				Total	75003.00

**Name of the Lab:- Refrigeration & Air Conditioning Lab**

Sr. No	Name of Equipment	Quantity	Page no of S.R.	Date of Supply	Cost of Equipmen
1	Refrigeration cycle test	1	161	13/12/99	70000.00
2	Air conditioning cycle	1	161		80000.00
					150000.00
				Add excise	24000.00
				Add Sales	13920.00
				Add turn	1740.00
				Add	1392.00
					191052.00
				90%	171946.80
				10%	19105.20
				Total	191052.00
3	Water cooler	2	162	1/2/2000	58221.00
4/	Ice plant trainer (RAC10)	1	163	2/3/2004	57000.00
4/	Orsat gas apparatus	1	163	B991F	4750.00
4/	Single stage gas turbine	1	163	501664	5700.00
4/	Steam turbine model	1	163	EEE/IN/04	1140.00
				/115-	68590.00
				2/3/04	5487.00
				Sub total	685.90
				S.T@	548.72
				Total	75312.00

**31. Number of students receiving financial assistance from college, university, government or other agencies- - NO**

**32. Details on student enrichment programmes (special lectures/workshops/seminar) with external experts Organized every year National level technical seminar & workshop.**

- Campus Recruitment Training
- Personality Development Programs
- Guest lecturers with Industry and academic experts.
- Seminars on Recent trends in the respective field

**33. Teaching methods adopted to improve student learning-**

- Study Assignment Method
- Demonstration Method
- Use of LCD, OHP.
- NPTEL Lectures
- Seminar Method

#### **34. Participation in Institutional Social Responsibility (ISR) and Extension activities**

- Blood Donation Camps,
- Anti-ragging slogan,
- Road safety awareness,
- Save Power awareness program etc.

#### **35. SWOT analysis of the department and Future plans**

##### **Strength-**

- The department is well furnished with laboratories and Equipments
- The department is provided with modern computer Lab.
- The staff are experienced and high skilled.
- Affiliated by NMU Jalgaon
- The Department has both Under-Graduate & Post- Graduate course.

##### **Weakness-**

- Quality of input in terms of student's intellectual level is very weak.
- Irregular publication of university results.

##### **Opportunities-**

- The projects are done by the students with the recourses and energy available in the institute.
- Students improve their skills by organizing and participating in departmental activities through MESA

##### **Threats-**

- Decline in admission of students to course.
- Lack of employment opportunity due to non availability of industry in nearby area.

##### **Future Plans:**

- To establish a full-fledged Entrepreneurship Development Cell this will enable to improve the skills of students to start their own organizations.
- To build MOU with industry
- To avail grants for projects, modification of laboratories through various institutes / organization.

- To establish the consultancy service to the students about their projects and their career guidance
- To get NAAC accreditation
- To get 100% placement
- To make all the students well expertise in practical fields.

## Evaluative Report of the Department

1. **Name of the department-** Applied Science
2. **Year of Establishment-** 1983
3. **Names of Programmes / Courses offered (UG, PG, M.Phil., Ph.D., Integrated Masters; Integrated Ph.D., etc.)**  
UG – B. E. (All Branches)
4. **Names of Interdisciplinary courses and the departments/units involved.-** Nil
5. **Annual/ semester/choice based credit system (programme wise)**

semester	Theory credits	Sessional credits	Total credits
First	17	6	23
Second	16	7	23

### 6. Participation of the department in the courses offered by other departments

Department	Theory taught	Sessional taken
Civil	Engg.Mathematics-III	I
Electrical	Engg.Mathematics-III	I
Computer science	Engg.Mathematics-III	I
IT	Engg.Mathematics-III	I
Instrumentation	Engg.Mathematics-III	I
Mechanical	Engg.Mathematics-III	II
Electronics & Telecommunication	Engg.Mathematics-III	II

7. **Courses in collaboration with other universities, industries, foreign institutions, etc.** - NA
8. **Details of courses/programmes discontinued (if any) with reasons.**  
- Programme of I.T. Branch is discontinued in 2015-16 due to lack of admitted students in 2014-15.
9. **Number of teaching posts**

	Sanctioned	Filled
<b>Professors</b>	--	--
<b>Associate Professors</b>	--	--

<b>Asst. Professors</b>	06	06
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**10. Faculty profile with name, qualification, designation, specialization, (D.Sc. / D.Litt. / Ph.D. / M. Phil. Etc.,)**

Name	Qualification	Designation	Specialization	No. of Years of Experience	No. of Ph.D. Students guided for the last 4 years
Prof. R. G. Patil	M.Sc. M.Phil	Assistant Professor	Mathematics	37	-

**11. List of senior visiting faculty-**

NIL

**12. Percentage of lectures delivered and practical classes handled (programme wise) By temporary faculty**

NIL

**13. Student -Teacher Ratio (programme wise)**

15:1

**14. Number of academic support staff (technical) and administrative staff sanctioned and filled**

	sanctioned	Filled
Technical staff	--	--
Administrative staff	01	01

**15. Qualifications of teaching faculty with DSc/ D.Litt/ Ph.D/ MPhil / PG.**

Sr. No	Name	Qualification	Designation
01	Prof. R. G. Patel	M.Sc. , M.Phil	Assit.Prof. in Mathematics
02	Prof. J. P. Patil	M.Sc.	Assit.Prof. in Physics
03	Prof. V. S. Patil	M.Sc.	Assit.Prof. in Physics
04	Prof. Mrs. M. S. Chaudhari	M.A. , M.Com	Assit.Prof. in English

05	Prof. D. A. Patel	M.Sc. , B.Ed.	Assit.Prof. in Mathematics
06	Prof. J. P. Chaudhari	M.Sc. , B.Ed.	Assit.Prof. in Chemistry

**16. Number of faculty with ongoing projects from a) National b) International funding agencies and grants received** -NIL.

**17. Departmental projects funded by DST - FIST; UGC, DBT, ICSSR, etc. and total grants received.** -NIL

**18. Research Centre /facility recognized by the University** -NIL

**19. Publications:**

\* a) Publication per faculty

\* Number of papers published in peer reviewed journals (national / International) by faculty and students –For faculty as above and for students: Nil.

\* Number of publications listed in International Database (For Eg: Web of Science, Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, etc.)

\* Monographs NIL

\* Chapter in Book NIL

\* Books Edite NIL

\* Books with ISBN/ISSN numbers with details of publishers submitted at the time of visit. Yes

\* Citation Index Yes  
Yes submitted at the time of visit.

\* SNIP NIL

\* SJR NIL

\* Impact factor Yes  
Yes submitted at the time of visit.

\* h-index - NIL

20.Areas of consultancy and income generated Revenue generated on assist an experimental project work in the institute laboratory by guidance of Dr. C.R. Deo. (Documents to be submitted as the time peer team visit.)



**21. Faculty as members in**

- a) National committees :- -NIL  
 b) International Committees:- -NIL  
 c) Editorial Boards:- -NIL

**22. Student projects**

a) Percentage of students who have done in-house projects including inter departmental/programme.

b) Percentage of students placed for projects in organizations outside the institution i.e. in Research laboratories/Industry/other agencies Nil

**23. Awards / Recognitions received by faculty and students.** -NIL

**24. List of eminent academicians and scientists / visitors to the department**

**25. Seminars/ Conferences/Workshops organized & the source of funding**

-NIL

**26. Diversity of Students**

-NIL

**28. How many students have cleared national and state competitive examinations such as NET, SLET, GATE, Civil services, Defence services, etc.:**

GATE- 05

**29. Student progression**

<b>Student progression</b>	<b>Against % enrolled</b>
UG to PG	NIL
PG to M.Phil.	NIL
PG to Ph.D.	NIL
Ph.D. to Post-Doctoral	NIL
<b>Employed</b> <ul style="list-style-type: none"> <li>● Campus selection 2013-14</li> <li>● Other than campus recruitment</li> </ul>	NIL
Entrepreneurship/Self-employment	NIL

**30. Details of Infrastructural facilities**

a)Library:

No. of Volumes	No. of Titles
1828	673

**b) Internet facilities for Staff & Students: Broad band Facilities available both for staff & students**

Name of the Lab: -Engg. Physics Lab

Sr. No.	Name of Equipment	Qty.	Page no of stock Register	Date of Supply	Cost of equipments
1	He-Ne Laser	01	01	26/07/1990	18634=00
2	Ultrasonic interferometer	01	01	23/09/1990	8100=00
3	Spectrometer	02	01	31/08/1990	2070=00
4	Leak transformer	02	01	31/08/1990	480=00
5	Photocell apparatus	02	01	31/08/1990	3300=00
6	H.T.Power supply	02	02	31/08/1990	1300=00
7	E/M App. Bar Magnet Method	02	02	31/08/1990	4700=00
8	CRO 5"	02	02	31/08/1990	6200=00
9	Function Generator	02	02	31/08/1990	4550=00
10	Multimeter (Sanwa) Model P-3	01	02	31/08/1990	380=00
11	Multimeter (Sanwa) Model-300BTR	01	02	31/08/1990	705=00
12	Forbidden Band Gap Apparatus	02	02	31/08/1990	2950=00
13	Diode Char. Apparatus	02	02	31/08/1990	800=00
14	Transistor Char. Apparatus	02	03	31/08/1990	1800=00
15	Electromagnet EM-10	01	03	31/08/1990	6500=00
16	Power Supply for Electromagnet	01	03	31/08/1990	4500=00
17	Spare pole piece for above	01 pair	03	31/08/1990	900=00
18	Gauss meter with hall prob.	01	03	31/08/1990	2400=00
19	Solar cell char. Apparatus	02	03	31/08/1990	6200=00
20	Ultrasonic Diffraction Apparatus	02	03	31/08/1990	12000=00
21	ERPS o-300V,100mA	02	04	31/08/1990	1550=00
22	Resistance Box 1-5000 ohm	02	04	31/08/1990	480=00
23	Resistance Box 1-10000 ohm	02	04	31/08/1990	530=00

24	Portable Sound Level meter	02	07	02/10/1991	7000=00
25	Regulated power supply 0-15V	02	08	28/10/1991	4422=80
26	15 MHz dual trace CRO	02	10	07/02/1992	20050=00
27	Function Generator	02	10	07/02/1992	11500=00
29	Network power supply	04	10	07/02/1992	7160=00
29	Ultrasonic inter ferometer	01	11	06/10/1995	13250=00
30	Digital Sound Level meter	01	12	05/09/2008	5000=00
31	Digital Multimeter	05	12	05/09/2008	3525=00
32	Hysteric Curve Demonstrator	01	12	50/09/2008	2420=00
33	Solar cell Char. Apparatus	01	12	05/09/2008	9020=00
34	Fiber optics trainer	02	12	05/09/2008	16500=00
35	Four prob Method	01	13	22/12/2012	13700=00
36	E/M App. Bar Magnet Method	01	13	22/12/2012	15000=00
37	Digital Multimeter	05	13	22/12/2012	6500=00
38	Digital Lux meter	01	13	05/12/2012	2800=00
39	Canon Printer LBP-2900	01	15	12/10/2016	7300=00
40	Wi-Fi Router D-Link	01	13	01/04/2015	1300=00
41	Practical Table	09	---	16/11/1990	17100=00

**Name of the Lab: - Engg. Chemistry Lab**

Sr. No.	Name of Equipment	Qty.	Page no of stock Register	Date of Supply	Cost of equipments
1	Teakwood Practical Table	08	02	16/11/1990	60000=00
2	Distillation Unit	01	03	06/10/1995	9600=00
3	Digital Balance	01	05	10/04/2010	23500=00
4	Hot Air Oven	01	01	02/10/1990	4482=00
5	Digital PH Meter	02	01	02/10/1990	4760=00
6	Colorimeter	01	02	22/06/1991	3780=00
7	Digital PH Meter	01	05	05/01/2009	3850=00
8	Digital conductivity meter	01	05	05/01/2009	4100=00
9	Lovibond comparator	02	01	02/10/1990	2720=00
10	Disk cell universal	01	01	02/10/1990	170=00
11	Balance K. roy	02	01	02/10/1990	2110=00
12	Weight Box Analytical	03	01	02/10/1990	885=00
13	Stop Watch	04	01	02/10/1990	3400=00
14	Heating Mental(500ml)	01	01	02/10/1990	535=00
15	Hot Plate	01	02	02/10/1990	1400=00

16	Magnetic Stirrer	01	02	02/10/1990	1186=00
17	Copper Voltmeter	04	03	06/10/1995	4200=00
18	Hair Drier	01	03	06/10/1995	725=00
19	Stop Watch	05	03	06/10/1995	3500=00
20	Heating Mental(500ml)	10	04	05/09/1996	10120=00
21	Glass Ware	--	--	02/10/1990	48300=00 (consumable)

**31. Number of students receiving financial assistance from college, university, government or other agencies.**

Eligible students get scholarship from Government as per norms.

**32. Details on student enrichment programmes (special lectures / workshops/seminar) with external experts Organized every year National level technical semenar&workshops.**

- Campus Recruitment Training
- Personality Development Programs
- Guest lecturers with Industry and academic experts.
- Seminars on Recent trends in the respective field

**33. Teaching methods adopted to improve student learning-1.** Through Extra classes for weak students(2)., Surprise tests,(3) Improvement tests(4), Tutorial classes, (5)feedback system& guidance of students by mentors(6). Providing students with 100 short questions (7).Group discussion (9) using LCD, OHP.

**34. Participation in Institutional Social Responsibility (ISR) and Extension activities**

Blood Donation Camps, NCC activities, Red cross camp  
Anti-ragging slogan, road safety awareness, Red reborn camp,  
Save Power awareness program etc.

**35. SWOT analysis of the department and Future plans**  
**Strength-**

- The department is well furnished with laboratories and Equipments
- The department has Modrob lab.
- The department is provided with modern computer Lab.
- The staffs are experienced and high skilled.
- Affiliated by NMU Jalgaon.
- The Department has both B. E & M.E.
- 

**Weakness-**

1. Quality of in –put in terms of students intellectual level is very weak.
2. Irregular publication of university results.

3. Improper matching of Theory and practical as prescribed by university.

**Opportunities.-**

1. The students are doing their projects inside the campus with the guidance of guides.
2. The projects are done by the students with the resources and energy available in the institute.

**Challenges-**

1. To get NAAC accreditation
2. To get 100% placement
3. To make all the students well expertise in practical fields.

**Future Plans:**

1. To establish a full-fledged Entrepreneurship Development Cell this will enable to improve the skills of students to start their own organizations.
2. To establish the consultancy service to the students about their projects and their career guidance.
3. To implement innovative teaching methods to involve the students for their bright future to make every student expert Industry engineer.



Outward No. VAE/NAAC/2016-2017/ 902

Date: 25/03/2017

## Declaration by the Head of the Institution

I hereby certify that the data included in self-study report (SSR) are true to the best of my knowledge.

This SSR is prepared by the institution after internal discussions and no part thereof has been outsourced.

I am aware that the peer team will validate the information provided in this SSR during the peer team visit.

  
Dr. P. D. Patil

Principal  
**PRINCIPAL**

P.S.G.V.P. Mandal's,  
D.N.Patel College of Engineering,  
SHAHADA, Dist.Nandurbar

