TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME
(TEQIP) PHASE-II
VJTI, Matunga, Mumbai - 19

Final Performance Auditors Report
2015-16

(13th to 16th October 2016)

NATIONAL PROJECT IMPLEMENTATION UNIT (NPIU)
EdCIL House, 4th Floor, Plot 18-A, Sector 16-A
NOIDA - 201 301, Gautam Budh Nagar, Uttar Pradesh

Table A: Summary Performance Audit Evaluation Number-1/2/3/4

Name of Performance Auditor : Prof K C Patel
Dates of Performance Audit : 13th – 16th October 2016
Name of Institution with location : V J T I, Mumbai

Sr. No.	Area of Performance Audit	Remarks
1.	Project Implementation	1.07
2.	Implementation of Institutional Reforms	1.03
3.	Administrative and Managerial Efficiency Improvement	1.00
4.	Qualitative Improvements related to Education and Research	1.09
5.	Institutional Governance	1.26
6.	Support to Weak UG Students	1.00
	Average	*1.08*

Note:

For Table A, the Summary of Performance Audit Evaluation, is to be filled in by the Performance Auditor from the overall qualitative assessment for the Tables 1 to 6 as given ahead in this format for Performance Audit Report.

Dr V R Naik, Data Auditor
Prof K C Patel, Performance Auditor

References for Supporting Evidences (All Soft copies)

1. Institute Development Proposal

2. Institute Response Sheet from Head of the Institute and academic Grid

3. Data Auditor's Data Audit Forms

4. Presentation of Head of Institution

5. MoUs

6. Minutes of BoG Meetings

7. FMR of Sept. 2016

Dr V R Naik, Data Auditor
Prof K C Patel, Performance Auditor

Performance Auditors Report

Table-1: Project Implementation

Name of Performance Auditor : Prof. K C Patel
Dates of Performance Audit : 13th – 16th October 2016
Name of Institution with location : V J T I, Mumbai

Sl. No.	Aspect	Assessment Grade (1-3)	Supporting Evidence
1.	Progress in securing Autonomous Institution status from the affiliating University & the UGC within 2 years of joining the Project **OR** Effectiveness of utilization of academic autonomy possessed/ obtained	1	Autonomy from Academic year 2011-12 to 2016-17 By UGC vide letter No. 22-1/2011(AC) dated 19th July 2011 and Mumbai University letter No Aff/Recog/2889 of 2011 dated 20th Aug 2011 - Credit base relative grading system. - Continuous evaluation with two IST+TA+ESE - Need base Electives and open Electives are added (Cyber security, Smart Grid, IoT, Cryogenics, CFD, Project Management) - Noncredit mandatory courses - Industry participation in the Course delivery (Communication Technology (Wipro), heavy vessel design (L&T), Courses like Power Electronics) - Project paid Internship under MoU for PG students are ultimately enhancing the placement. - Reexamination after main examination. - Summer term for weaker students. - Showing answer books to the students - Mechanism of grievance redressal is in place.
2.	Sufficiency and quality of academic buildings	1.2	Yes; Adequate as per AICTE deficiency report of year 2016-17. Academic building facilities are adequate but it requires maintenance as being a old heritage building.

Dr V R Naik, Data Auditor

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Sl. No.	Aspect	Assessment Grade (1-3)	Supporting Evidence
3.	Progress/achievement in starting new PG programs as evidenced by: • Securing AICTE approval	1	Yes, as per AICTE EoA letter No. Western/1-690678381/2012/EoA dated 10th May. Two PG programs; 1. PG in Software Engg. with intake 24 2. PG in Project Management with intake 36
	• Establishment of laboratories		• Yes, Established High Performance Computing Laboratories and strengthen the existing laboratories of Computer department costing Rs. 59.98 Lakhs. • For project management PG program L&T project management Institute has given the softwares. Department strengthen the existing laboratories of Production department to cope up with the requirement of additional intake costing Rs. 37 Lakhs.
	• Adequacy of student enrolments		• Response of the students is good and since inception the admissions are as below. | Course	14-15	15-16	16-17
S/w	24	24	22
PM	36	36	27	
	• Cumulative number of assistantships granted		• Almost 75% students are GATE qualified and eligible for AICTE stipend. • Through TEQIP total 16 stipends are disbursed during 2012-14 & 2013-15 batches.
4.	Progress/achievement in strengthening existing PG programs as evidenced by: • Establishment of proposed laboratories	1	Yes • Every PG program is allocated Rs. 20.00 Lakh per program for procurement to strengthen the existing facility for the existing PG program.

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Prof K C Patel, Performance Auditor

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Sl. No.	Aspect	Assessment Grade (1-3)	Supporting Evidence
			• Structural department developed computing Facility with Auto CAD and FEM Analysis ANSIS s/w to give the software awareness to the PG students
			• Electrical developed Dynamics & Control Facility with Quanser Equipment.
			• RTSPS is established for power students.
			• Communication modules with antennas were in place for Electronics & communication students.
			• RAC Lab, Dynamics & vibration Labs were strengthen in Mechanical Department.
			• Humanoid ROBO facility is created.
			• Cloud Computing facility is established in Computer department.
	• Adequacy of student enrolments		92% (329 students out of 357 sanction Intake.)
	• Cumulative number of assistantships granted		Total 76 students granted assistanceships through TEQIP during year 2012-14 & 2013-15
5.	Progress/achievement in strengthening existing UG programs in Govt funded and aided institutions only as evidenced by: • Establishment of proposed laboratories	1	Yes Grant of Govt. of Maharashtra of Rs. 512 Lakhs for establishment of Biomedical Instrumentation Centre.
	• Adequacy of student enrolments		100%
6.	Improvements in Faculty Development as evidenced by: • Percentage/ increase in percentage of faculty benefiting from the Core Module of pedagogical training • Percentage of / increase in	1	• Two Pedagogical Training courses from NITTTR Bhopal was conducted in Dec 2014 and Dec 2015. Batches were of size 30 each. • Out of 89 faculties 60 have trained in these two programs. Hence 67.41% faculty were trained in pedagogy • Two days orientation for all adhoc faculty were arranged in the institute during

Dr V R Naik, Data Auditor

Prof K C Patel, Performance Auditor

Sl. No.	Aspect	Assessment Grade (1-3)	Supporting Evidence
	percentage of faculty benefiting from the Advanced Module of pedagogical training • Percentage of faculty with UG qualification registered/deputed for improving their qualification • Percentage of faculty deputed for subject domain training, seminars, etc. (*faculty benefiting from subject domain training are required to share their gains with peers and also put their report on training on institution's web site*)		Dec 2014 & Dec 2015. **100% adhoc faculty took benefit of the same** • 14 faculties are deputed in elite organizations for Ph D programs during the project period. 05 More will join under QIP from next academic year. • Six domain courses from IIT Bombay 02 domain course from IIT Madras and 02 training by Industry from Civil department were arranged. 100% regular faculty have undergone domain knowledge training. • **51 CEP courses** are arranged by VJTI where adhoc faculties were permitted. 50% adhoc faculties have undergone the training inhouse. • In addition 03 GIAN programs were conducted with the resource person from foreign Universities and two are in pipeline. Even PG and PhD students also enrolled for these courses.
7.	Generation, retention and utilization of the non-tuition fee revenue generated through various activities.	1	• Faculties are encouraged to do consultancy and testing with 70% – 30% distribution amongst faculty and institute for consultancy and 50%-50% for testing with no upper limit. • 30 days Special Leave is given in a year to interact with the outside world or for outside consultancy. • Institute is permitted to retain total tuition fees in addition to 100% salary grant for the sanction positions. • **One Cr** goes to four funds created during TEQIP period. • Salaries of the PG faculties and salaries of 16 positions created by BoG are paid. • Recurring expenditure of the Institute is borne through IRG.
8.	Engineering faculty positions in terms of: • Reduction in vacancies • Increase in faculty appointed on regular basis	1.5	• 6% reduction in vacant positions of regular sanction faculty positions (Total 98 regular faculties against 158 sanctioned faculty positions) • Yes, 6% increase in Faculty appointed on regular basis (10 New faculty appointed)

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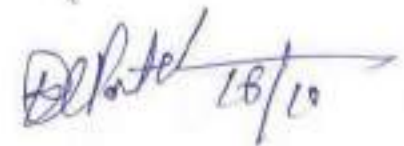| Sl. No.	Aspect	Assessment Grade (1-3)	Supporting Evidence
	• Increase in the number of faculty with at least a Master's degree		• Not Applicable as all faculty are with Master degree.
9.	Improvements in placement rate of UG pass outs	1	• Institute placement for UG is almost 92%. Average package per annum varies from **Rs. 2.42 Lakhs to 16 Lakhs.** • PG placement is enhancing through sending masters student to industry for second year to complete project in industry.
10.	Enhanced interaction with industry as evidenced by: • Increase in industry personnel registered for PG & Doctoral programs • Increase in industry personnel trained by the institution in knowledge and/or skill areas • Increase in the number of consultancy assignments secured by the institution • Increase in the number of students' and faculty visits to and/or training in industry • Increase in involvement of industry experts in curricula & syllabi improvements, laboratory improvements, evaluation of students and delivering expert lectures	1	Nil • 155 Industry personnel from IOCL, Marine Engineers and Dedecor • Process of designing the training module for central railway is going on and will be scheduled in Jan 2017. • Consultancy is evident from the IRG generated by the Institute. **Consultancy assignments were enhanced to 73 and 94 during last two years respectively from 58 in 2012-13.** • 06 Industrial visits of final year students along with faculty. • 22 students and 16 faculties are undergone industrial training. • 45 Industry persons were involved in syllabus framing • 10% faculties are involved in Industry collaboration and visited Tech Mahindra, Infosys, L&T, Customized Energy Solutions, Cummins & Siemens. • Every department is separate industry advisory boards with participation of the experts from eminent industry in their areas. • BoS also has industry nominee, hence, sufficient participation of industry in academic activities was evident. • L&T and Wipro shared the courses jointly for UG and PG programs.

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Sl. No.	Aspect	Assessment Grade (1-3)	Supporting Evidence
	• Increase in the number of sandwich programs between industries and the institution		• B Tech Production is the sandwitch program
	Average	**1.07**	

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Performance Auditors Report

Table 2. Performance Audit - Implementation of Institutional Reforms

Name of Performance Auditor   : Prof K C Patel
Dates of Performance Audit   : 13th – 16th October 2016
Name of Institution with location   : V J T I, Mumbai

SI. No.	Aspect	Assessment Grade (1-3)	Supporting Evidence
1.	Effectiveness of faculty evaluation by students as evidenced by: • Percentage/ increase in percentage of faculty evaluated by students in one or more subjects • Are results of evaluation properly used for teacher improvement? If yes, is the procedure adopted for teacher improvement including counseling appropriate and effective?	1.1	• 100% faculty is evaluated by the student with online system. • Student cast feedback regarding every subject taught to them during the current semester including practicals. • Suggestion boxes are kept in the department and also the student can interact to their class coordinators in case of difficulty. • Yes. 06 faculties found below average and counseling is carried out by Head of respective department for improvement. The feedback is shared with the faculty online through their logins. • Mentors are assigned to such faculty for guidance. • They are encouraged to register for pedagogical training and domain knowledge training courses • Best teacher awards were given on teachers' day on the basis of feedback. • Public felicitation of the teachers creates motivation to other faculty.
2.	Establishment of four funds and their sizes	1	Four Funds are established during TEQIP I in 2007 with Rs. 5000.00 in each fund • Policy of deposition of Rs. 5000000.00 per year was approved by BoG in 2008. • In 2014, BoG revised the deposition of Rs. 1.00 Cr per year in four funds. As on 31st March 2016

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Prof K C Patel, Performance Auditor

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Sl. No.	Aspect	Assessment Grade (1-3)	Supporting Evidence
			Corpus Fund : 27408117.00 **Faculty Development Fund:** 12415284.00 **Equipment Replacement Fund:** 34450265.00 **Maintenance Fund:** 23817323.00

3.	Offer of incentives to faculty for participation in consultancy, R&D and continuing education programs offered by the institution	1	• (As per Item No. 20, R72/2006 of the BoG Resolution: The BoG, VJTI resolved that, the proposal regarding sharing of course fee for CEP activities as under approved)
			     Institute share :- 30%
			     Distribution to faculty, staff and expenditure:-70%
			
			 • As per Item No. 20, R73/2006 of the BoG Resolution:
			 The BoG further resolved that there shall not be any upper limit a faculty member can earn by CEP activities.
			 The consultancy rules will be applicable for CEP activities.
			
			 • Distribution of the amount for consultancy 70% to faculty and 30% to Institute and testing 50% - 50%.
			 • Deputation with financial support from Institute for paper presentation in conference in India is once in a year.
			 • Special leave of 30 days in a year to visit industry, consultancy work, statutory Govt. works.
			 • Seed money for the initiation of R&D projects.

Average		**1.03**	

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Performance Auditors Report

Table-3. Performance Audit - Improvement in Administrative and Managerial Efficiencies

Name of Performance Auditor   : Prof K C Patel
Dates of Performance Audit   : 13th – 16th October 2016
Name of Institution with location : V J T I, Mumbai

S. No.	Aspect	Assessment Grade (1-3)	Supporting Evidence

1.	Modernization and decentralization of administration and financial management	1	• All four autonomies are granted by the Government of Maharashtra in 2004, with GR.
			• Board of Governors is the highest administration body having sanctioning authority for all financial and administrative matters of the Institute.
			• Statutory and non-statutory committees are formed for smooth functioning of the operation. i.e.
			    ○ Department Academic Committee (DAC)
			    ○ Purchase Committee
			    ○ Research Committee
			    ○ Industry Advisory Committee
			    ○ Board of Study
			
			As per BoG resolution Item No. 5 of 32nd BoG meeting held on 8th Aug 2013, financial power are delegated to the functionaries of the Institute. However, all purchases above Rs. 2.00 Lakhs need approval of the purchase committee of the Institute during execution.
			
			Head of the Institute:
			1. All kind of Expenditure including purchase under planned/non-planned grant-in-aid based on approved budget estimates : Upto Rs. 25 Lakhs
			2. Purchase of materials urgently required through single cash payment without quotation : Rs. 25,000/-

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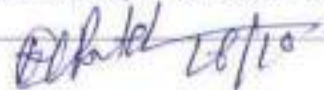|			

			3. Advertisement waiver clause : Rs. 10 lakhs
			4. Procurement of Civil Work
			   a. Direct award to registered contractor as per DSR : Upto Rs. 5 lakhs
			   b. Quotations from registered contractors : Rs. 5 to 20 Lakhs
			   c. Public tender with prequalification : above Rs. 20 Lakhs
			5. Procurement regarding hostels: Purchase of materials, items or execution of services urgently required through single cash payment without quotation: Upto Rs. 50000/- Per order.
			
			Dean (RMF)/Dy. Director
			1. All kind of Expenditure including purchase under planned/non-planned grant-in-aid based on approved budget estimates : Upto Rs. 10 Lakhs
			2. Advertisement waiver clause : Rs. 5 lakhs
			
			Dean (R&D)
			1. All kind of purchase & other expenditure from projects, schemes & consultancies fund : Upto Rs. 2 Lakh
			HoD:
			   • Purchase of materials urgently required through single cash payment without quotation : Rs. 5000/-

2.	Responsiveness to students' academic and non-academic requirements	1	1. Credit transfer from IITs and foreign University is in place. 2. For the cultural mix students from SGGS Nanded, Raisoni Nagpur, Walchand College Sangli are encouraged to take semester admissions in the Institute. 3. Electives are offered from Sem VI to Sem VIII. Students have to select 03 courses out of 12 to 15 courses available. 4. Open Electives from other department are planned to offer at Sem VI & Sem VII. (Total 9) 5. M Tech courses are open for final UG students having more than 8.5 CGPI. 6. CR council is formed. 7. Special attention towards weaker students by way of providing more opportunity to clear the courses. 8. Students committees for management of technical and cultural activities are formed.

Dr V R Naik, Data Auditor

Prof K C Patel, Performance Auditor

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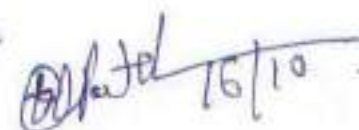|			
	✻		9. Grievance redressal cell with student participation is in place. 10. Summer term and make up examinations are in existence. 11. Students' mental ability test has been conducted by external agency. **(M/s HELIX Corporation)** 12. Individual counseling of the students by professional experts with the report of test was carried out.. **(M/s HELIX Corporation)**
3.	Responsiveness to faculty requirements	1	• 100% faculty were gone for subject domain training. • 60 faculties undergo pedagogical training from experts of NITTTR Bhopal. • Contractual faculty were undergone for orientation training. • 31 senior functionaries undergone management capacity training through IIMs. • 28 faculties went abroad for paper presentation and training. • 20 faculty got seed money for the R&D project after review from external experts. • Membership of professional body IET was given to 49 faculty members. • 16 faculty members attended industry training. • 02 faculty members were nominated on the board as representatives.
4.	Utilization of institutional resource s	1	During TEQIP • Three national conferences were arranged. 02 by Computer department and 01 by production Dept. • 03 International workshops with participation of foreign experts were organized. • 03 GIAN programs with participation of foreign resource persons were organized. • Two startup programs to enhance the awareness is organized by Entrepreneurship Cell. • Two International conferences with handshake with IIT Bombay and Geological Society of India were organized. • 51 CEP courses were organized inhouse. • 50% faculties were sent out for training and conferences in India.
5.	Maintenance of academic and non-academic infrastructure and	1	• BoG formulated BCC committee with the Chairmanship of Director in 28th BoG meeting held on 13th July 2012.

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	facilities		• Institute is having separate maintenance Cell under the leadership of Associate Dean Infrastructure Dr A S Wayal. • Addition Infrastructure planning and maintenance is planned by the committee. • BoG approved the budget in the 43rd BoG held on 28th April 2016 item No. 3. • Security and housekeeping services are outsourced through tendering process. • Equipment maintenance is carried out by the respective department.
6.	Extent of delegation of administrative and financial decision making powers to senior functionaries	1	• As per table No. 3-1, • Head is responsible for all the academic matters of the department including HR management. • Head is ex-officio Chairman of DAC, Industry advisory and BoS and represent in academic council.
	Average	**1.0**	

Dr V R Naik, Data Auditor

Prof K C Patel, Performance Auditor

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Performance Auditors Report

Table- 4. Performance Audit – Quality of Education and Research

Name of Performance Auditor : Prof K C Patel
Dates of Performance Audit : 13th – 16th October 2016
Name of Institution with location : V J T I, Mumbai

S. No.	Aspect	Assessment Grade (1-3)	Supporting Evidence
1.	Improvements in curricula and /or syllabi	1	• Credit based relative grading system is in place since 2004. • First cycle of curricula revision was initiated in 2004 and implemented from 2005 onward. • Industry advisory board with participation of experts from Industry is constituted for every department to give inputs. • Industry gives feedback during campus placement and cognizance has been taken. • As per the feedback from Industry, VJTI has introduced English proficiency test. • Student who failed in the test has to undergo 46 hrs language laboratory modules. It is compulsory for a student to clear the test during 4 years of graduation. • Three sets of electives were provided to the students from Sem VI onwards. • 09 Open Electives are offered out of which student has to select one.. • Students are encouraged for industry internship during summer vacation. • Faculty can include new topics in the course with proper information to the student at the start of semester. • Additional credit earn facility is available. Credits will be displayed on Grade sheet but not considered for CGPA calculations.
2.	Relevance of curricula and syllabi	1	• A curriculum is framed with the Participation of industry, academia, alumni and input from students. • Need base courses such as Cryogenics, Smart Grid, Non-renewable energy sources, IoT, cloud computing, earthquake Engg., security etc were introduced at different levels.

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			• Sufficient choice of courses is available for the students through electives. • Interdisciplinary projects are encouraged. • 02 academic audits by external experts Prof S C Sahastrabddhe, Ex. Dy. Director IITB, Prof Dipankar Choudhary and Prof Iyyar from IIT Bombay were carried out. Their suggestions were discussed with respective Heads of the department for academic improvement.
3.	Improvement in teaching-learning processes as evidenced by: • Use of teaching aids	1	Use of Teaching aids is encouraged such as; • Use of LCD projector • Smart boards • NPTEL available on Intranet • In addition 86 courses are also available from IIT Bombay and IIT Kharagpur. • Participated in MOOCs initiative of IIT Bombay. Every year atleast one course is offered online through MOOCs • Courses from Foreign University. • Online Journals
	• Continuous evaluation through quiz, assignments or mid-semester examinations etc. Sharing of answer scripts with students and explanation of the evaluation carried out		• Faculty on own can decide and declare the methodology to evaluate the students in continuous mode through quiz, assignment, GD, presentations. • Two in-semester tests are conducted during the semester. • Faculties submit the manuscript with solution to CoE. • These solutions are available to students after the examination. • Assessed answer books are shown to the students for counseling and improvement of the performance in the forthcoming examination. • Grievance redressal mechanism is in place.
	• Introduction of flexibility in program offerings		• Choice based grading system • Credit transfer scheme (IIT Bombay, foreign University) • Branch transfer in second year

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Prof K C Patel, Performance Auditor

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	• Increased availability of adequate electives		• Student can select the elective courses out of three sets and almost 4-5 courses are available in each elective group. • Department based open Electives 09 are offered to the students from other department as per their choice. • Additional credits can be earned

4.	Progress in securing accreditation of eligible UG & PG programs
	(institutions are to achieve target of 60% of eligible UG & PG programs accredited and/or applied for within 2 years of joining the Project)
		1.2	• All UG (8 Nos.) programs are accredited since 2003 and process of fourth phase of accreditation is going on.
			• Accredited and applied for Accreditation of the **UG program is as under;**
			   B. Tech Civil Engineering, 16th Sept 2011 (5 years)
			   B. Tech Production Engineering, 16th Sept 2011 (5 years)
			   B. Tech Computer Engineering, till 2017 (3 years)
			   B. Tech Electrical Engineering, till 2017 (3 years)
			   B. Tech Mechanical Engineering, till 2017 (3 years)
			Applied for on 21st July 2015;
			   B. Tech Textile
			   B Tech. Information Technology
			
			PG Programs:
			   M. Tech Electronics Engineering, 16th Sept 2011 (5 years)
			   M. Tech Mechanical- Machine Design, 01st July 2015 (2 years)
			   M. Tech Civil- Construction Management, 01st July 2015 (2 years)
			   M. Tech Civil- Structural Engineering, 01st July 2015 (2 years)
			   M. Tech Electrical- Control System, 01st July 2015 (2 years)
			   M. Tech Electrical- Power System, 01st July 2015 (2 years)
			Applied for on 21st July 2015
			   M. Tech Mechanical- Automobile Engineering
			   M. Tech Computer Engineering
			   M. Tech Civil- Environmental Engineering

5.	Increased collaboration with industry in R&D as evidenced by: • Increase in number of joint and industry sponsored R&D work undertaken	1	With impetus and encouragement from TEQIP institute enhanced interaction with Industry and almost 23 research projects were taken by the Institute. List of projects are as under; 1. Dynamic behavior of the conventional activated sludge process under organic shock loading

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		2. Accelerated in vessel composting using household waste
		3. Noise mapping of silent zones in Mumbai (Govt Hospitals and schools in Mumbai)
		4. Up-gradation/ fabrication of the beam capacity
		5. low cost with high gain multi band notch micro-strip antenna with ultra wideband communication
		6. Design of LDPC error correcting codes coding
		7. performance analysis of bearing
		8. Distortion analysis of investment casting to improve process-cycle time
		9. Experimental study for analyzing electrical thermal performance characteristics in photovoltaic/ thermal system
		10. Experimental study of condensation heat transfer in helical coil
		11. Experimental investigation of self-priming venture scrubber
		12. Development of value aided textile material for advanced sport textile application using coating and laminated technology
		13. Utilization of Physiochemical modified recycled textile fibers in civil engineering applications
		14. Modeling &Analysis of Complex Power Grid as a Cyber-Physical System
		15. Modeling & PIC Based Simulations of Relativistic Nonlinear Phenomenon in Magnetron
		16. Bifurcation Analysis of Cascade Failures in Power Grid: Northern Grid Blackout Case Study
		17. A System Theoretic Approach for Modeling and Sequencing the Execution of Component Models for Adapting Parallel Processing in Complex Process Simulation Tool
		18. Probabilistic Analysis of Cascade Failures
		19. Deposition of High k Dielectric Thin Films Using Non-linear Dynamic Gaseous Plasma
		20. Passivity-based Control of Under-actuated Non-linear Dynamical Systems
		21. Synchronization Control of Nonlinear Heterogeneous Systems & Hybrid Energy Management Systems
		22. Development of Non-linear Control Law using Multilevel SVM for Suppressing Inverter Non-linear Distortions with Low Harmonics
		23. Development of Experimental UWB Systems

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	• Increase in financial contribution by industry for R&D		

<table>
<tr><th>Sr. No.</th><th>Industry</th><th>Contribution in Lakhs</th></tr>
<tr><td>1</td><td>L& T Electrical & Automation</td><td>40.00</td></tr>
<tr><td>2</td><td>Emerson Process Management</td><td>40.00</td></tr>
<tr><td>3</td><td>ISGF</td><td>5.00</td></tr>
<tr><td>4</td><td>PORTESCAP</td><td>18.00</td></tr>
<tr><td></td><td>TOTAL</td><td>103.00</td></tr>
</table>

6. Increase in percentage of revenue from externally funded R&D projects and consultancies in the total revenue of the institution from all sources — **1**

IRG is continuously increasing since 2010. Projects ongoing in the year 2015-16

Sr. No	Head	Amount
1	R&D Projects (RPS)	3669353.00
2	QIP Grant	1020132.00
3	Consultancy	28963359.00
4	CEP, Rental & Interest	20741530.00
TOTAL		54394374.00
5	Fees (*Tuition Fees*)	142263471.00

7. Increase in the number of publications in refereed journals — **1**

With the research culture building in the Institute the publication as well on increase.

Academic Year	10-11	11-12	12-13	13-14	14-15	15-16
NJ	09	21	42	46	81	54
INJ	06	40	81	151	94	131

Almost 5 times increase over the rate of publication in 2010-11

8. Increase in the number of patents filed — **1.5**

Awareness regarding patent and process was created amongst the faculty and researcher on the campus. Ultimately it leads to filing the patents in the project duration.

Academic Year	10-11	11-12	12-13
Patents Filed	01	01	03

Average — **1.09**

Dr V R Naik, Data Auditor

Prof K C Patel, Performance Auditor

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Performance Auditors Report

Table 5. Performance Audit - Performance in the Governance of Institutions

Name of Performance Auditor : Prof. K C Patel
Dates of Performance Audit : $13^{th} - 16^{th}$ October 2016
Name of Institution with location : V J T I, Mumbai

The objective of an Institutional Governance Review is to assist institutions, using an evidence-based approach, in their self assessment of current Governance Practice. A thorough review will indicate the level of effectiveness of institutional governance and the Governing Body, and identify action points for improvement. It will also indicate that:

- The conduct of the Governing Body is in accordance with the standards of behavior that the public should rightfully expect.
- The Governing Body and the individual Governors are exercising their responsibilities in the interest of the institution as a whole.
- The Review has been undertaken by a Group who have internal and external credibility to undertake such exercise.

	INSTITUTIONAL GOVERNANCE REVIEW TEMPLATE	Assessment Grade (1-3)	Supporting Evidence
1.	A. PRIMARY ACCOUNTABILITIES		
	• Has the Governing Body approved the institutional strategic vision, mission and plan – identifying a clear development path for the institution through its long-term business plans and annual budgets?	1	• 9th BOG , dt.5th March 2007; Item No.3, Vision-Mission of Institute is approved. • 23rd BOG, dt.13th November 2010, Item No.3, Discussion on master plan 2020. • BoG suggested to prepare long term plan for 2050. • BoG approached Chief Minister for part implementation of long term plan and Rs.50 cr. is sanctioned for partial implementation of long term plan 2050..
	• Has the Governing Body ensured the establishment and monitoring of proper, effective and efficient systems of control and accountability to ensure	1	• 2013-14 Budget approval by Finance Committee dt.13th May 2013. • 27th BOG, dt. 9th March, 2012. Item No.4: (ii) Constitution of current finance committee. • 28th BOG, dt.13th July 2012, Item No.5 (ii) Formation of BCC.

Dr V R Naik, Data Auditor

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	financial sustainability		• 28th BOG, dt.13th July 2012, Item No. 8(2) Formation of Purchase Committee. • 32nd BOG dt.8th Aug.2013, Item No.4 (ii) - approval for the Budget of 2013-14. Budget is prepared at Institute level, Recommended for approval by Finance Committees and approval by BOG for each financial year. • Budget approval of 2016-17 approved in 43rd meeting of BoG, Item No. 3, dated 28.04.2016
	• Is the Governing Body monitoring institutional performance and quality assurance arrangements?	1	• 29th BOG, dt.8th Nov.2012, Item No.5 (i) Formation of Academic Board per University statute. • Instruction to form all committees including monitoring committees at department level.
	• Has the Governing Body put in place suitable arrangements for monitoring the head of the institution's performance?	3	• Formally not in place. However, overall performance is always discussed in the meetings.
2.	B. OPENNESS & TRANSPARANCY IN THE OPERATION OF GOVERNING BODIES		
	• Does the Governing Body publish an annual report on institutional performance?	1	• 31st BOG, dt.18th March 2013, Item No. 3, approval to the List of Diploma and Annual Report 2012-13 publications. • 27th BOG, dt. 9th March 2012, Item No.3 (i), approval of the List of Diploma and annual report 2011-12 publication. • Annual report is presented during convocation by the Chairman BoG and Member Secretary of BOG (Director) every year
	• Does the Governing Body maintain, and publicly disclose, a register of interests of members of its governing body?	1	• The BOG is as per the statute of university. • There is balance of skills, experience and competence among members of the BoG. • Clarity of responsibility amongst BOG members.. • BOG hold 3 to 4 times in a year.

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	• Is the Governing Body conducted in an open a manner, and does it provide as much information as possible to students, faculty, the general public and potential employers on all aspects of institutional activity related to academic performance, finance and management?	1	• Minutes of Meeting of BOG are available in Director's Office and on Institute website. • Circulars/internal notification and GR are available in Registrar's office and on websites.
3.	**C.** **KEY ATTRIBUTES OF GOVERNING BODIES**		
	• Are the size, skills, competences and experiences of the Governing Body, such that it is able to carry out its primary accountabilities effectively and efficiently, and ensure the confidence of its stakeholders and constituents?	1	• Size of Governing Body is sufficient with balance of industry, R&D and academia and Govt. regulators. • Faculty Members are the part of BoG by nomination as per guidelines. • There is good balance of skills, experience and competence.
	• Are the recruitment processes and procedures for governing body members rigorous and transparent? Does the Governing Body have actively involved independent members and is the institution free from direct political interference to ensure academic freedom and focus on long term educational objectives?	1.5	• BOG is formed by State Government after due considerations and deliberations. • Except Director who is member secretary of BOG and two nominations from faculty all other members are independently selected by State Govt. and are eminent personalities in their field.
	• Are the role and responsibilities of the Chair of the institution	1	• Role and responsibilities of Chairman BoG, Head of the Institute and other officials are clearly mentioned in GR of 31st March 2004 and 23rd Oct. 2012.

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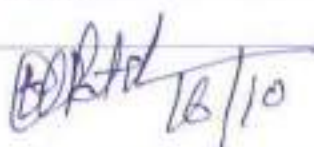|				
		and the Member Secretary serving the Governing Body clearly stated?		
		• Does the Governing Body meet regularly? Is there clear evidence that members of the governing body attend regularly and participate actively?	1	• BOG Meetings are held regularly 4 to 5 times a year. • Mandatory committees such as Finance, BCC and Purchase are formed. • Nominee of Chairman BoG act as a Chairman of Finance and BCC and the minutes of these committees are placed to BOG for discussion and deliberation.
4.	D.	**EFFECTIVENESS AND PERFORMANCE REVIEW OF GOVERNING BODIES**		
		• Does the Governing Body keep their effectiveness under regular review and in reviewing its performance, reflect on the performance of the institution as a whole in meeting its long-term strategic objectives and its short-term indicators of performance/success?	2	• The governing body keeps their effectiveness under regular review through rigorous discussions in the meeting. Review of annual reports and action taken reports. . • As per the development plan whether the Institute is achieving its goal is being deliberated and line of action is finalized. • Review after frequent intervals as deemed necessary to remove the bottlenecks in the part of development.
		• Does the Governing Body ensure that new members are properly inducted, and existing members receive opportunities for further development as deemed necessary?	1.5	• External members are holding high and responsible positions in their parent organization. Their level of competence is very high. • Nominated faculty members and Director undergo MDP at reputed institutes. • Program was arranged, "Pathways to Leadership", at IIT Bombay, during 23rd to 25th April 2010. • Program was arranged, "Build People to Build Institute" at VJTI by external expert Mr. Gore.
5.	E.	**REGULATORY COMPLIANCE**		
		• Does the Governing ensure regulatory compliance* and, subject to this, take all final decisions on matters of	1	• University Autonomous Statute Compliance. • AICTE approval for academic year for conduct of courses and compliance. • State Government approvals for running the courses, and compliance. • State Government approvals for running the courses, recruitments and

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	fundamental concern of the institution.		admission to various courses.
	• Does the regulatory compliance include demonstrating compliance with the 'not-for-profit' purpose of education institutions?	1	• Yes. Institute is run for not for profit. Being the autonomous institute owned by Government of Maharashtra, audit is done by Auditor General and State Finance every year.
	• Has there been accreditation and/or external quality assurance by a national or professional body? If so, give details: name, status of current accreditation etc	1.2	• Institute is accredited by National Board of Accreditation and fourth cycle of accreditation. • Accredited and applied for Accreditation of the **UG program is as under;** B. Tech Civil Engineering, 16th Sept 2011 (5 years) B. Tech Production Engineering, 16th Sept 2011 (5 years) B. Tech Computer Engineering, till 2017 (3 years) B. Tech Electrical Engineering, till 2017 (3 years) B. Tech Mechanical Engineering, till 2017 (3 years) **Applied for on 21st July 2015;** B. Tech Textile B Tech. Information Technology **PG Programs:** M. Tech Electronics Engineering, 16th Sept 2011 (5 years) M. Tech Mechanical- Machine Design, 01st July 2015 (2 years) M. Tech Civil- Construction Management, 01st July 2015 (2 years) M. Tech Civil- Structural Engineering, 01st July 2015 (2 years) M. Tech Electrical- Control System, 01st July 2015 (2 years) M. Tech Electrical- Power System, 01st July 2015 (2 years) **Applied for on 21st July 2015** M. Tech Mechanical- Automobile Engineering M. Tech Computer Engineering • M. Tech Civil- Environmental Engineering
Average		**1.26**	

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Table - 6. Performance Audit - Support to Weak Students

Name of Performance Auditor : Prof K C Patel
Dates of Performance Audit : 13th – 16th October 2016
Name of Institution with location : V J T I, Mumbai

S. No.	Aspect	Assessment Grade (1-3)	Supporting Evidence
1.	Percentage of students that complete the full first year and transit successfully to Second Year	1	Transition Rate in first attempt for 2015-16 is 97.92% for UG and PG is 82.77% | Yrs	10-11	11-12	12-13	13-14	14-15	15-16
---	---	---	---	---	---	---
UG	93.32	89.93	89.38	88.75	92.54	97.92	
2.	Effectiveness of techniques used for identifying weak students	1	• The evaluation by external agency (M/s Helix) with the tests conducted for all the students of UG & PG. • Reports are shared with the students and 15-20 minutes personal counseling was done by the professional mentors from Helix. • Weaker students are identified from the first In-semester Test marks.
3.	Conduct of remedial teaching throughout academic session	1	• Yes. On verifying the attendance sheet it is found that remedial teaching of 8 to 16 hrs was carried out for first year students during summer terms for weaker students. • Mentoring by senior student is done for few courses such as Mathematics, Physics and Mechanics. • With all these initiatives the transition rate after reexamination has been improved to 97 to 98% over the years. Maximum 20 to 22 students use to register for the first year courses in summer term.
4.	Conduct of specialized soft skills and professional skills training	1	• Training module in the language laboratory of 45 hrs is available and mandatory for the student who failed in VJTI EL Test. • In addition the HRs from different industry interacts with the student when come for Campus placement. • Subject like communication skill and presentation skill is included in

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			curriculum.
5.	Increase in the number of campus interviews	1	• 216 industries visits campus for placement and average placement is 92%
6.	Establishment and functioning of a Finishing School	1	• Seven finishing schools were arranged for the students. • Focused on the soft skills, domain knowledge and professional softwares are in use.
7.	Increase in the number of internal and external students that attend high intensity training conducted by the Finishing School	1	• 416 students get benefited with seven programs.
Average		**1.0**	

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Performance & Data Audit Feedback

(Feedback to the Institution, SPFU, NPIU & Relevant Mentor)

ame of Performance Auditor : Prof K C Patel
Dates of Performance Audit : 13th – 16th October 2016
Name of Institution with location : V J T I, Mumbai

Improvements noticed on shortcomings reported during earlier Performance Audits

Nothing specific regarding shortcomings observed in the previous performance audit reports.

Brief statements on continuing shortcomings and reasons thereof

1. Rearrangement of lab equipment/set ups/Machineries in some of the laboratories of Textile, Mechanical & Production Department by removing the old (Non-used) equipment/set ups/Machinaries.
2. Evaluation and continuous assessment of practical/term-works/Assignments must be strengthen.
3. Recruitment of vacant positions of sanction posts of faculty should expedited.
4. Vacant positions of non-teaching and support staff should be appointed as per the present requirement of the departments for proper maintenance and repair of the equipments/machinery.
5. Availability of Wi-Fi facility for the student should be strengthen.
6. Accessibility of e-Journals for UG and PG students should be increased.
7. Digital Library should be established.
8. Strengthen the soft skill training facility for the students.
9. Practical external assessment for final year students should be incorporated in the scheme to enhance the importance of hand on and practical work.

Recommendations for Mentors

Core and advance modules of pedagogical training have not yet commenced. NPIU may be requested to initiate action on this activity

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