SELF STUDY REPORT

for

ASSESSMENT AND ACCREDITATION

Submitted to

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

JAYPEE UNIVERSITY OF ENGINEERING AND TECHNOLOGY
GUNA

26 November, 2015

PREFACE

Prior to taking over as 1st Vice Chancellor of Jaypee University of Engineering & Technology, the first private university in MP, a service of over six years as Director of Jaypee Institute of Engineering & Technology aggregates to a total of 12 years of my association with this education hub, the institute of technology that has grown into a University. Though an extensive experience of 34 years as an academician and administrator helped me a lot, but nurturing a technical institution from its birth to adolescence has offered both: opportunities and challenges. Since its inception, this educational hub has garnered a reputation for providing quality education and has won the confidence of all stakeholders. Despite being located in a typical semi-urban setup, with limited medical facilities, poor transportation, and a dearth of recreational resources, the JUET has been able to attract and retain a number of good academicians. It is a matter to boast of having some professors who have been with us since the very beginning and contributed in the steady growth of the University. I take pleasure in declaring that together we have crossed milestones and set benchmarks in making JUET a venerable education hub of the central India.

With its prevailing strengths of dedicated and collaborative faculties, equanimous and self-less promoters, and a well equipped campus with state-of-the-art facilities, we firmly believe that the University will grow from strength to strength. We take this accreditation and assessment process as an opportunity to take a break and introspect ourselves, to postmortem the ongoing procedures, if required, only to revitalize them, and to take corrective measures wherever needed.

Although painstaking, but the overall efforts that have gone into building this self-study report registered a wonderful feeling of togetherness and a long-lasting learning experience in the minds of entire faculty and administration. The detailed discussions and deliberations have provided a different perspective to relook our efforts that have been invested in achieving our vision and mission. The team of faculty and staff that comprised the steering committee worked as a jelled team in true sense. Full of enthusiasm and dedication, the team left no stone unturned in collecting and presenting the data required for this report. The entire family of JUET joins me in accord to express its appreciation for the most time-consuming task done meticulously by this team.

We are particularly grateful to Prof. Shishir Kumar, the Coordinator of the Steering Committee, whose never-say-die attitude kept everyone engaged and motivated throughout.

N.J. Rao
Vice Chancellor
26 November, 2015

Executive Summary

Founded 50 years ago, the Jaypee Group has been transforming gigantic dreams into reality. Be it the area of Cement, Power, Engineering & Construction, Fertilizers, Real Estate, Expressways, Hospitality, Healthcare, Sports, Information Technology, or with a not-for-profit motto- Education, the Jaypee Group has recorded its distinct presence. Led by Shri Jaipraksh Gaur Ji, the founder of Jaypee Group and a passionate advocate of the cause of education, the Jaypee Institute of Engineering and Technology (JIET) was established in the year 2003. Started with 100-some-odd students and five faculty members, this education hub is now housing nearly twenty two hundred students and around 100 faculty members in different disciplines.

Recognizing the high standards of professional education, state-of-the-art facilities and supporting infrastructure at JIET, the Government of Madhya Pradesh, in April, 2010, accorded it the status of the first private University in the state of MP. Thus, formerly known as JIET, this educational hub is now formally called Jaypee University of Engineering and Technology (JUET). The University, ever since its inception as an engineering institute, has been trying to become a centre of excellence for education, training and research in the field of engineering and technology. The institute has followed the motto of "Education, Empowerment and Enlightenment" and continues it with more vigor after acquiring the status of the first private university of the state. Shri Jaiprakash Gaur Ji has desired to see this hub of education as a *Shanti-Niketan* accommodating five thousand inmates with a mission of producing professionals who shall possess world class entrepreneurship skills, critical thinking and innovativeness. JUET is engaged with conviction in fulfilling the desire of Shri Jaiprakash Gaur Ji.

The University is well connected with the road and situated on the National Highway No. 3, Agra-Bombay National Highway (A-B Road) near Raghogarh. Gwalior is 250 km to the north of it, Bhopal 190 km to the south and Indore 250 km's to the south. It is being guided by an accomplished administrator-cum-academician Prof. N. J. Rao, the honorable vice-chancellor, who, before taking up this position in 2010, has served full terms as Director JIET Guna (2003-10), Director Central Pulp and Paper Research Institute, and Director Institute of Paper Technology, IIT Roorkee. Prof. N.J.Rao, a staunch supporter of the fact: Teaching without Research Leads to Monotony, motivated several faculty members to do research. As a result, twenty faculty members have obtained their Ph.D. from JUET itself. It is the result of his never ending encouragement that 35 faculty members have presented their papers and attended conferences in India & abroad. JUET's success in the research front can be estimated from the figures that thirty three Ph.D. degrees have been awarded till date and it has obtained sponsored projects worth more than ₹ Fifty lacs.

Curricular Aspect

The University offers, Ph.D., M. Tech., B.Tech., Diploma, B.Sc., M.Sc./M.Tech. programmes. These courses are carefully designed to promote independent thinking, creativity and managerial skills in the students. There are nine departments which offer five B.Tech., nine M.Tech., three M.Sc. (leads to M.Tech.) programmes. The Ph.D. programme is available in all nine departments. Around 2200 students are currently enrolled in these programmes. A semester system is followed in all programmes. There is a strong faculty base of ninety seven faculty members, all having post-graduate qualification whereas around 48% of them are having Ph.D. degrees. A Choice Based Credit System (CBCS) became functional in its entirety from the 2014 batch admitted;

however it was being practiced in some degree since the inception of the University. CBCS is followed to provide a structured choice of electives drawn from different categories such as Humanities & Social Sciences, Mathematics, Basic Sciences and Engineering besides the core branch electives. The University acknowledges and emphasizes the importance of hands-on experience; hence all core courses have corresponding laboratory courses also. An encouragement for doing project work and mandatory industrial visits/ trainings adds to the overall practical exposure of the students. The success of the hands on - project work- industry exposure combo can be estimated from the fairly high rate of campus placements that take place in the University. The curriculum design and development process involves all stakeholders, and goes through various stages of refinement – faculty members and students, BOS, and then Academic Council. At all levels, external experts from academia and industry are invited to have wide inputs for discussion, and their recommendations are also taken into account. The curriculum is designed with utmost care to align with our mission of achieving academic excellence. Over the years, a good number of students have gone for higher studies abroad in some renowned universities. To name a few are Carnegie Mellon University, USA; University of Manitoba, Canada; University of Florida, Gainesville; University of Alabama, Tuscaloosa, USA; Max Planck Institute, Tuebingen Germany; Cornell University, USA; Oklahoma University, USA, etc., which indicates global acceptability of our curriculum and standards. At the national level, students are getting admissions in IITs, IIMs, etc., for post-graduate studies. The University has a well-established and structured system of collecting student feedback on all aspects of curriculum design, delivery and effectiveness. The feedback helps in continuous monitoring and improvement of teaching-learning process.

Teaching, Learning and Evaluation

The University aims at achieving quality and acknowledges its importance in teaching learning process and student performance evaluation, which are crucial indicators for judging the academic environment in a University. In order to achieve this, the University ensures that all admissions to its programmes are merit-based. The admission process is designed to assure complete fairness and transparency by offering admissions purely on the basis of merit at all-India competitive examinations such as JEE main, GATE etc. SC/ ST students are given due relaxation as per the criteria and policies set-up by the government. A fair amount of geographic diversity can be seen inside student population. Though a major chunk of students comes from MP, Delhi and UP, but students from almost every state of India can be seen inside the campus. To handle this diversity appropriately, the University takes numerous but well thought-about steps through carefully designed orientation programme, special English language courses, summer courses, and other bridge-courses so that no student feels isolated. For those who still find it difficult to adjust to the environment, the University offers need-based student mentoring and counseling. Faculty members are advised to counsel and encourage the students to freely discuss their issues whether related to academic or other matters. The academic schedule is prepared and notified before the commencement of each academic year, and is followed very strictly which reinforce our conviction of continuously improving teaching learning process. Course outlines, lecture schedules, time table, study material, learning objectives and outcomes for each course are made available online to students and faculty members through a central file server. The University encourages faculty members to develop innovative and effective teaching approaches. As a result, practices like collaborative teaching have been developed. Courses like term paper, seminar, projects, dissertation, and internship are seen as a supplement to conventional classroom teaching. In these courses, students are

allowed to choose topic of their interest and thus train themselves in self-learning skills and research. Faculty members are required to keep themselves updated, and facilities are extended for invited expert lectures, attending/ holding conferences, seminars, and workshops, faculty development programmes, Ph.D. supervision, sponsored research projects, study leave etc. Equipped with a rich collection of e-resources and print resources the Learning Resource Centre of the University provides every support to the seekers. The examination process is tuned for continuous evaluation, transparency, timeliness, objectivity and fairness. Question paper setting aims at promoting understanding of the subject rather than rote learning. All results are declared as per schedule of the academic calendar. At every stage, students are given ample opportunity to discuss their exam-evaluation with the concerned faculty members. The results are recorded and maintained through Institutional Resource Planning (IRP) software solution. Ph.D. evaluation follows a standard two-examiner system - one foreign and one Indian. The success of the teaching, learning and evaluation system prevalent in JUET can be assessed by the achievements of the passed out students— Prachi Ailawadhi, a student passed out in 2011, cleared the Indian Civil Services (2014 batch); Shrey Sangal, of batch 2010, is software engineer at Microsoft, Seattle, Washington, Jaskirat Singh, passed out in 2009, is law enforcement and public relation officer in Manitoba Government, Canada, just to name a few.

Research Consultancy and Extension

Research and innovation are integral components of academic activities of University as enunciated in the vision statement. A research committee known as DPMC has been formed with its well-defined roles of monitoring and providing course correction to each research student. The University does everything to promote sponsored research by its faculty members and some departments have made significant progress in this direction. Currently, three different sponsored projects are in progress with total funding amounts to nineteen lacs from different government agencies. In the past, eight different projects worth ₹ 0.5 crore have been completed. The University provides all facilities for these projects and also encourages by providing some initial funding. In order to create a good research base, the University has spent about ₹ 7 crores in the last four years towards equipments, softwares, journals and e-resources, Ph.D. fellowships, support for conferences and workshops, inviting experts, IT support and electricity etc. Collaborative research is another area taken up by the University for research promotion. A large number of faculty members are currently working in collaboration with researchers of other national and international institutes. To summarize, around forty JUET faculty members and around sixty five researchers are collaborating with seventy seven different national and international organizations of repute. The efforts invested in collaborations by the University resulted in more than two hundred publications and successful completion of three Ph.D. theses. The departments of the University regularly organize International conferences and workshops where eminent scientists and scholars from India and abroad are invited for keynote addresses. University departments are encouraged to conduct workshops and conferences on a regular basis. Workshops like "Intelligent Approaches for Object Oriented Modeling in Component Based Software Engineering (IAOOM)" and "National Workshop on Advancements in Network Communication & Security (ANCS)" are the results of such encouraging initiatives. In last two years, nineteen different workshops have been organized at the University. Eight international and national conferences have been taken place inside this campus in the last few years. With the growth of research facilities, the number of Ph.D. research scholars is continuously increasing. Currently

forty six scholars are registered in various disciplines. Almost all full-time scholars are paid fellowships. The research scholars make regular use of all lab facilities, and wherever particular equipment is not available, the University arranges facilities at other institution/organizations. The University has Rapid Prototyping Lab having an investment of rupees two crores and Advance Manufacturing Lab of rupees one crores in Mechanical Engineering department which are comparable to any of IIT, NITs of the country. Cement Research and Development Center (CRDC), Operator Training Simulator (OTS) and Jaypee Wind Engineering Application Centre (JP-WINCENTRE) are the three specialized research centers available inside the University to address special challenges of research programs. Students and faculty members of the University have published around seven hundred and thirty three research papers in peer-reviewed journals/conferences in the last five years. The average SNIP score of these papers is 0.769 and that of SJR is 0.728. The average citation as per Google Scholar is 4.725. The average impact factor of the journals in which publications have been done is 1.28. All the Ph. D. scholars are required to follow UGC norms of publications, although two publications in SCI index journal is desirable. On an average, 1.36 scholars per eligible faculty member are currently enrolled. University has a well defined official policy to check malpractices and plagiarism in research. Strict norms for plagiarism check are in place. All submissions to conferences held at the University have to satisfy the plagiarism norms otherwise papers are rejected. The University is also involved in providing consultancy through its Civil and CRDC departments. In the last four years, revenue of around ₹ 1 crore is generated through consultancies by the University.

Infrastructure and Learning Resources

The University has adequate physical infrastructure to facilitate teaching, research, extracurricular activities, and residential facility for faculty members, staff and students. The University campus is spread over 122.5 acres of land with built up area of 1, 38868.99 Sq.Mts. It has thirteen Lecture Theatres (LTs) in operation while furnishing of four additional LTs are in progress, thirty class rooms, fifty two laboratories, a three-floor library, conference halls, one thousand and eight hundred capacity multipurpose hall, 2255 hostel seats for students, one hundred and ninety two residences for faculty members and staff, and separate messes for boys (seating capacity 960) and girls (with a seating capacity of 240). The campus has 24 hour 100% power back-up through four DG sets. To provide an efficient work-place, all hostels, academic area and offices are centrally air-cooled/air-conditioned. Some other facilities which make the campus life more comfortable, safe and hassle-free include gyms, swimming pool, laundry, centralized water treatment and supply, tuck shops, two Bank ATMs, guest house, CCTV cameras for safety at various locations, ample reserved space for parking, a water body that embellishes the beauty of the campus and works as a reservoir as well that ensures sufficient water supply for various purposes round-the-year. To handle sudden unforeseen crisis, the University is well prepared with a medical dispensary having one full time medical officer and four paramedical staff. One fire fighting lorry with trained fire-fighting crew is always ready to counter urgencies inside the campus. The University houses a modern central library named as Learning Resource Centre (LRC) which is spread over three floors with proper air-conditioning. It has Internet availability through LAN ports with a bandwidth of 1 Gbps, an e-resources access area with desktops, reading area, about twenty nine thousand print books, more than eight thousand e-journals/books of ACM, IEEE, Springer etc., and computerized issue/return of books. The campus has a full-fledged Information Technology Cell (IT Cell) which manages all IT services and develops the IT infrastructure in the University. All faculty members, staff and students are allocated user id and password to avail these services.

The centre has deployed all major network security tools such as Firewall, Antivirus software systems, etc. to safeguard University network. The computer and network resources may be accessed only by the authorized members. The University has a computer-student ratio of 1:3 which gives sufficient opportunity to the students to make use of computer resources. All faculty members are provided with internet connected desktops in their office rooms. A unique feature of the University is provision of password protected space on a network drive to all faculty members. This drive is accessible from anywhere on the University LAN including class-rooms. Further, a Study Material folder is available to all students through a fileserver. For each subject, the course coordinator can upload necessary study material on the server which students can refer any time. These facilities go a long way in making information and knowledge available on-a-click.

Student Mentoring and Support

The University believes that our responsibility is not just imparting knowledge to the students but towards their overall development and welfare. Several programs are run that work towards personality development, career counseling, soft skills development, improving language skills, etc. Sufficient sports and gym facilities exist to keep the mind and body fit. Conferences, workshops, seminars, industrial visits, technical festivals, technical and cultural hubs, programming contests, publication of students' magazine are the activities that engage the students at various levels and help them to explore their strengths. Besides this, to ensure the protection of female students, the Women Harassment Cell is set in place. The University has a firm stand that none of its students, faculty members and staff members are deprived of the opportunities pertaining to their social backgrounds or any other cause. To ensure this, the Equal Opportunity Cell has been established. Financially also, the University tries to help needy students as much as possible. University helps in arranging educational loans through banks. From Jaypee India Scholars Fund, an amount of ₹ 6.55 lacs has been distributed in last four years as financial assistance to meritorious but economically poor students. From William Webster Scholarship a fund amounts to more than ₹ one lac is disbursed. Through Jaypee Employees' ward nearly ₹ 48 lacs have disbursed. Through Jaypee Schools Toppers, a sum of around ₹ 29.25 lacs has been disbursed. All full time Ph.D. scholars, and GATE qualified PG students are given fellowships/Teaching Assistance ship. In last four years, the University has paid fellowships/Teaching Assistance ship worth ₹ 2.2 crores. Deserving students are given assistance for attending conferences. The SC/ ST category students are given special attention and have been supported to get financial assistance from state government. In admission, the reservations are given as per government norms. The University has a dedicated placement cell comprising a Training & Placement officer and department representatives. The efforts of faculty members and the cell have made the placement scenario of the University highly commendable. Over 100 companies visit every year for selecting B. Tech. & M.Tech. students. More than 90% students get placed and the CTC offered ranges from three lacs to twenty two lacs. Recently some start-up companies have also started visiting the University.

Governance, Leadership and Management

After serving for around seven years as an engineering institute, JIET, and then as the University, JUET, under the aegis of Jaiprakash Seva Sansthan (JSS), "a not for profit" trust, this education hub has always respected the belief that education is the cornerstone of economic development and only education can assist India to become a

developed nation. JSS has kept itself away from the administrative and academic decision making of the University. Several statuary bodies have been created for governance and management. Board of Management (BOM), Academic Council (AC), and Board of Studies (BOS) are such statuary bodies that always guided the University with a beacon. The administrative positions are Chancellor, Vice-Chancellor, Director of research centers, Dean, HODs, Registrar and CFAO. All management policies are based on democratic principles of participative management. In order to have structured development of the University with a view to address knowledge advancements, changing needs, short-comings and outreach expansion, grievance redressal mechanism is in place. The University looks after the growth and development of its faculty members and support staff. It is a member of IUCEE (Indo-US Collaboration for Engineering Education). Several programmes have been conducted in last few years through this collaboration. JUET has several welfare schemes in operation, some of which are study leave, sabbatical leave, maternity leave, medical leave, LTA, EPF, furnishing allowance, leave encashment, books and periodical allowance, loan for medical emergency, etc.

The University provides highly conducive academic atmosphere. It provides freedom to faculty members to pursue academic pursuits of one's own choice. The University has highly sound financial footing. It has well established mechanism for monitoring effective and efficient utilization of financial resources through various levels of controls, review and audit. In case of deficit, the promoting body JSS provides support. The Institute also seeks bank loans for fulfilling its requirement and has created a corpus fund of Rs. five crores invested in fixed deposits.

Innovations and Best Practices

The University has an eco-friendly campus with efficient water harvesting and energy saving mechanism in place. It uses recycled water for all its gardening needs. The buildings have been designed to maximize utilization of natural light and natural cool air. A total of 2, 06,000 Sq.Mts. land is under the horticulture department. Two officers and twenty five gardeners have been employed for taking care of horticulture related activities. Six thousand and nine hundred trees and large number of hedges have been planted since the inception of this campus. The University has two Sewage Treatment Plants (STPs), to treat entire sewage of campus with handling capacity of 1500 cubic meter/day. This treated water is used for horticulture purposes in the campus while the solid waste is used as manure. The University is already proactively engaged in the activities like E-waste management and carbon neutrality. The University donates electronic items that become useless; however, the University prefers slight modifications and fixing to bring them back into operation. Buy back system, that includes giving electronic products back to the companies from where they were purchased, is promoted by the University. Instead of plastic cups, paper cups and plates are used for tea and snacks. Two solar water heaters in the students' mess are being used for washing purposes and solar energy based light is also being used in the department of Mechanical Engineering.

Several best practices have also been adopted, some of which are (a) effective teaching-learning system, (b) IRP tool – a tool for transparency and efficiency and (c) encourage research potential in students and faculty members. The University recruits highly qualified faculty members having good research and teaching experience. Around 48% of the faculty members are already Ph.D, thus ensuring that the quality education is imparted to the students. Well equipped with multimedia projectors, overhead

projectors, power point facility and computers with internet facility, the lecture theaters and class rooms are available at the disposal. State-of-the-art laboratories and LRC further reinforce our commitment to provide effective teaching-learning system. Every student is required to deliver power-point presentations and submit relevant reports of the mandatory project work as part of his/her B.Tech, M.Tech program, which offers a platform to work on his/her writing and communication skills. Curriculum designing is handled meticulously to provide ample elective subjects to ensure competency of the students in their respective areas of interest.

In order to have effective, transparent and efficient management of University affairs, a proactive approach has been adopted using ICT enabled environment (IRP tool and file servers). As a result, the University has been able to successfully implement academic calendar without any deviation since its inception. Webkiosk and central file servers are being used for information creation and dissemination in several domains such as (i) Personal: Employee salary, benefits details, types of leave, attendance, details in case of emergency, help in tax information (ii) teaching: student attendance, information about student not attending, (iii) exam: marks entry, grade entry, result, invigilation duty, (iv) Counseling and Performance Monitoring: to view the grades and regularity in attending classes/labs by the parents and the student himself/herself and to monitor the performance of the students by concerned teacher. Besides this, the IRP tool offers support for inventory management, human resource management, student fee management, etc.

The University encourages the faculty members and students to publish research papers, attend national / international conferences and to carry out consultancy work. Financial support is provided to the extent possible to those who present papers in national and international conferences. Access to various online journals is available in the field of engineering and sciences. Loaded with Internet facility, separate and comfortable sitting areas are provided by the University for faculty members and research scholars. Air conditioned sitting spaces in LRC are available for students which can also be used by students until late hours.

Access to online journals in different engineering and science fields helps the faculty members and students to carry out their research work efficiently. It is mandatory for all the research scholars (registered for Ph.D.) to give a presentation at the end of every semester where the valuable suggestions given by DPMC (Doctoral Programme Monitoring Committee) members regarding their work further boosts the quality of research work. Financial assistance is provided to those research scholars who need experimental set-ups for their Ph.D. work. Doctorate degree is awarded only after the rigorous review of the thesis by two potential examiners (one from India and other from abroad) specialized in that particular area of work. The University also publishes its own journal "JUET Research Journal of Science and Technology". The University also addresses the issue of plagiarism by continuously motivating the research scholars and faculty members to do good and innovative work. The University lay stress from early stages with an objective of enhancing technical competency, critical thinking and developing creativity and innovativeness at undergraduate level itself.

Table of Contents

SECTION B

SELF-STUDY REPORT

1. Profile of the University

1. Name and Address of the University:

Name	Jaypee University of Engineering and Technology	
Address	P.B. No.1, A.B. Road, Raghogarh, Dist: Guna	
City: Guna	State: Madhya Pradesh	Pin:473226
Website	www.juet.ac.in	

2. For communication:

Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Vice Chancellor	N.J. Rao	O:(07544)267002 R: (07544)267016	9425131082	(07544) 267011	nj.rao@juet.ac.in
Registrar	Brig O.P. Gurung	O: (07544)267051 R: (07544)267006	8120453283	(07544) 267011	om.gurung@juet.ac.in
Steering Committee Coordinator	Shishir Kumar	O: (07544)267051	9826711482	(07544) 267011	shishir.kumar@juet.ac.in

3. Status of University:

State University	
State Private University	√
Central University	
University under Section 3 of UGC (Deemed University)	
Institution of National Importance	
Any other (please specify)	

4. Type of University:

Unitary	√
Affiliating	

5. Source of funding:

Central Government	
State Government	
Self financing	√
Any other (please specify)	

6. a. Date of establishment of the university: 29/04/2010 (dd/mm/yyyy)

b. Prior to the establishment of the university, was it a/an

PG Centre   Yes [ ]   No [√]

Affiliated College   Yes [ ]   No [√]

Constitutional College   Yes [√]   No [ ]

Autonomous College   Yes [ ]   No [√]

Any other (please specify)   ………………………..

If yes, give the date of establishment: 02/08/2003 (dd/mm/yyyy)

7. **Date of recognition as a university by UGC or any other national agency:**

Under section	dd	mm	yyyy	Remark
i. 2f of UGC*	07	01	2011	Provisional
	10	09	2014	Final
ii. 12B of UGC				
iii. 3 of UGC#				
iv. Any other specify^				

* Enclose Certificate of recognition (Letters of recognition are enclosed as Annexure-1 & II)

Enclose notification of MHRD and UGC for all courses / programmes / campus/ campuses.

^ Enclose certificate of recognition by any other national agency/agencies, if any.

8. **Has the university been recognized**
   a. By UGC as a University with Potential for Excellence?

   Yes [ ]   No [√]

   If yes, date of recognition: …………… (dd/mm/yyyy)
   b. For its performance by any other government agency?

   Yes [√]   No [ ]

   If yes, Name of the agency : Department of Higher Education, Govt. of Madhya Pradesh, date of recognition : 29/04/2010 (dd/mm/yyyy)

9. **Does the university have off-campus centres?**

   Yes [ ]   No [√]

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

date of recognition : ………………… (dd/mm/yyyy)

10. Does the university have off-shore campuses?

Yes ☐   No ☑ √

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

date of recognition : …………………… (dd/mm/yyyy)

11. Location of the campus and area:

	Location*	Campus area in acres	Built up area in sq.mts
i. Main campus	Rural	122.5 Acres	139268.99
ii Other campuses in the country	--	--	--
ii. Campuses abroad	--	--	--

*Urban, Semi-Urban, Rural, Tribal, Hilly Area, Any other (please specify)

If the university has more than one campus, it may submit a consolidated self-study report reflecting the activities of all the campuses.

12. Provide information on the following: In case of multi-campus university, please provide campus wise information.

- JUET is a single campus, Unitary University.
- Auditorium/seminar complex with infrastructural facilities:

  2000 Seater air cooled Auditorium with modern audio-visual projection and stage facility. The auditorium also can be used for indoor games such as basketball, table tennis and badminton.

- **Sports facility:**
  - ❖ Playground : 5 Acre Sports Field with Foot Ball and Cricket ground with Cricket nets and 2 each Basket Ball and Volley Ball Courts and one Hand Ball Court.
  - ❖ Swimming pool: Available in Girl's Hostel
  - ❖ Gymnasium: Three Gymnasium in Hostels
  - ❖ Any other (please specify): Hard Tennis Court, TV Room and Table Tennis Room in each hostel (Please see attached **Annexure III**)

- **Hostel:**
  - ❖ Boy's hostel   :Yes
    - i.   Number of hostels   : 21 (1830 cubicles)
    - ii. Number of inmates   : 1491
    - iii. Facilities   : (Please see the attached **Annexure IV**)

  - ❖ Girl's hostel: : Yes
    - i.   Number of hostels   : 1 (425 cubicles)

ii. Number of inmates   : 343

iii. Facilities   : (Please see the attached **Annexure V**)

❖ Working women's hostel : No

i. Number of hostels

ii. Number of inmates

iii. Facilities

- **Residential facility** for faculty and non-teaching: Yes, 150 Flats for faculty and 42 flats for Non-teaching staff (Please see the **Annexure VI**)
- **Cafeteria** : 450 Seater
- **Health centre**-Nature of facilities available – inpatient, outpatient, ambulance, emergency care facility, etc:
  - (i) 6 Bed Campus Medical Centre with 1 MBBS Medical Officer & 5 paramedical staff with 24 x7 service.
  - (ii) Understanding with GAIL, Vijaypur Hospital (within 3 kms) & Two hospitals at Guna City (30 Kms away).

- Facility like banking, post office, book shops, etc.
  Banking: Extension counter one bank and ATM facility of two banks (OBC & AXIS).
  Post office: 2 Post Offices within radius of 5 Kms & all prominent courier services available
  Book Shops: Stationary shop, Multi facility shops, Cafeteria and Pantries Inside the campus.
- Transport facilities to cater to the need of students and staff: Two buses and one Marshal/Scorpio are available for student and staff use. Two Ambulances, One Fire Fighting Vehicle are also available for university use.
- Facilities for persons with disabilities: Separate ramps are constructed all around the academic block in the ground floor, besides the student messes and auditoriums.
- Animal house   : Not Applicable (Engineering University)
- Incinerator for laboratories   : Yes
- Power house   : Un-interrupted power supply of Demand Load of 1300 KVA independent feeder from MPSEB & University has 1890 KVA DG Sets for 100% power backup.
- Waste management facility   : The campus has Underground Sewage Disposal System with 1500 cubic meter per day capacity Sewage Treatment Plants. The reclaimed water is effectively used for horticulture through underground pipe system while solid waste is used as manure. The University has a tie up with M/s Deshwal Waste Management Pvt Ltd, for effective disposal of e-waste.

13. **Number of institutions affiliated to the university:**
    Not Applicable

Types of colleges	Total	Permanent	Temporary
Arts, Science and Commerce	Nil	Nil	Nil
Law	Nil	Nil	Nil
Medicine	Nil	Nil	Nil
Engineering	Nil	Nil	Nil
Education	Nil	Nil	Nil
Management	Nil	Nil	Nil
Others (specify and provide details)	Nil	Nil	Nil

14. Does the University Act provide for conferment of autonomy (as recognized by UGC) to its affiliated institutions?

If yes, give the number of autonomous colleges under the jurisdiction of the University

Yes ☐   No ☑   Number ☐

15. Furnish the following information:

Particulars	Number	Number of Students
a. University Departments		
Undergraduate	5	2036
Post graduate	7	37
Departments conducting Research	9	69
Diploma	2	107
b. Constituent colleges	Nil	Nil
c. Affiliated colleges	Nil	Nil
d. Colleges under 2(f)	Nil	Nil
e. Colleges under 2(f) and 12B	Nil	Nil
f. NAAC accredited colleges	Nil	Nil
g. Colleges with potential for Excellence (UGC)	Nil	Nil
h. Autonomous colleges	Nil	Nil
i. Colleges with Postgraduate Departments	Nil	Nil
j. Colleges with Research Departments	Nil	Nil
k. University recognized Research Institutes/Centers	Nil	Nil

16. Does the university confirm to the specification of Degree as enlisted by the UGC?

Yes ☑   No ☐

If the university uses any other nomenclatures, please specify.

17. Academic programmes offered by the university departments at present, under the following categories: (Enclose the list of academic programmes offered)

Programmes	Number
UG	5
PG	7
Integrated Masters	--
M.Phil	--
Ph.D	9
Integrated Ph.D.	--
Certificate	--
Diploma*	--
PG Diploma	--
Any other (please specify)	--
Total	21

* Admission to diploma program has been discontinued from 2015.

18. **Number of working days during the last academic year:** 261

19. **Number of teaching days during the past four academic years**

180 (2014)   180 (2013)   180 (2012)   180 (2011)

(Teaching days means day on which classes were engaged. Examination days are not be included)

20. **Does the university have a department of Teacher Education:**

Yes ☐   No ☑

If yes,
    a.   Year of establishment: (dd/mm/yyyy)
    b.   NCTE recognition details (if applicable)
        Notification No.:
        Date: (dd/mm/yyyy)
    c. Is department opting for assessment and accreditation separately?

Yes ☐   No ☐

21. **Does the university have a teaching department of Physical Education:**

Yes ☐   No ☑

If yes,
    c.   Year of establishment: (dd/mm/yyyy)
    d.   NCTE recognition details (if applicable)
        Notification No.:
        Date: (dd/mm/yyyy)
    c. Is department opting for assessment and accreditation separately?
       Yes ☐   No ☐

22. **In the case of Private and Deemed Universities, please indicate whether professional programmes are being offered?**

Yes ☐   No ☑ √

If yes, please enclose approval / recognition details issued by the statutory body governing the programme.

23. **Has the university been reviewed by any regulatory authority? If so, furnish a copy of the report and action taken there upon.**

(i) Expert Committee of Madhya Pradesh Private University Regulatory Commission visited on March 11-12, 2010. (Extraordinary Gazette Notification No. 3 of 2010 of Govt. of MP attached as **Annexure VII**)

(ii) Joint Expert Committee of UGC/AICTE visited during Februauy 10-12, 2012. (Copy of Report attached as **Annexure VIII**)

(iii) Activities of the University are closely monitored by Madhya Pradesh Private University Regulatory Commission.

24. **Number of positions in the university**

Positions	Teaching faculties			Non-teaching staff	Technical staff
	Professor	Associate Professor	Assistant Professor		
Sanctioned by the UGC / University / State Government					
Recruited	07	05	85	75	35
Yet to recruit	--	--	--	--	--
Number of persons working on contract basis	-	--	--	--	--

25. **Qualification of the teaching staff**

Highest qualification	Professor		Associate Professor		Assistant Professor		Total
	Male	Female	Male	Female	Male	Female	
Permanent Teachers							
D.Sc. /D.Litt.	0	0	0	0	0	0	0
Ph.D.	7	0	4	1	39	5	56
M. Phil.	0	0	0	0	0	0	0
PG	0	0	0	0	34	7	41
Total	7	0	4	1	73	12	97

Temporary teachers							
D.Sc. /D.Litt.	--	--	--	--	--	--	--
Ph.D.	--	--	--	--	--	--	--
M. Phil.	--	--	--	--	--	--	--
PG	--	--	--	--	--	--	--
Part-time teachers							
Ph.D.	--	--	--	--	--	--	--
M.Phil.	--	--	--	--	--	--	--
PG	--	--	--	--	--	--	--

26. **Emeritus, Adjunct and Visiting Professors**.

	Emeritus	Adjunct	Visiting
Number	--	2	--

27. **Chairs instituted by the university:**

	Chairs
School/Department	Nil

28. **Student enrollment in the university department during the current academic year, with the following details**:

Students	UG	PG	Integrated Masters	M. Phil	Ph.D.	Integrated Ph.D.	D. Litt./D.Sc	Certificate	Diploma	PG Diploma
	M / F	M / F	M / F	M / F	M / F	M / F	M / F	M / F	M / F	M / F
From the Madhya Pradesh State	626 / 153	18 / 12	0 / 0	0 / 0	36 / 18	0 / 0	0 / 0	0 / 0	90 / 1	0 / 0
From Other state of India	1069 / 188	01 / 6	0 / 0	0 / 0	13 / 2	0 / 0	0 / 0	0 / 0	16 / 0	0 / 0
NRI Students	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
Foreign Students	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0
Total	**2036**	**37**	**0**	**0**	**69**	**0**	**0**	**0**	**107**	**0**

LEGEND: M for Male and F for Female

29. 'Unit cost' of education

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

(a) Including the salary components = ₹ 1.67 lacs (2012-13), ₹ 1.56 lacs (2013-14), ₹ 1.45 lacs (2014-15)

(b) Excluding the salary component = ₹ 0.87 lacs (2012-13), ₹ 0.72 lacs (2013-14), ₹ 0.67 lacs (2014-15)

30.   Academic Staff College : No
- Year of establishment:
- Number of programmes conducted (with duration)
  - ❖ UGC Orientation
  - ❖ UGC Refresher
  - ❖ University's own programmes

31.   Does the university offer Distance Education Programmes (DEP)?

Yes ☐   No ☑

If yes, indicate the number of programmes offered.
Are they recognized by the Distance Education Council?

32.   Does the university have provision for external registration of students?

Yes ☐   No ☑

If yes, how many students avail of this provision annually?

33.   Is the university applying for Accreditation or Re-Assessment? Accreditation

Accreditation cycle: Cycle 1 ☑   Cycle 2 ☐   Cycle 3 ☐   Cycle 4 ☐

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

Cycle 1:   In Process

35.   Does the university provide the list of accredited institution under its jurisdiction on its website? : NA

Provide details of the number of accredited affiliated/ constituent /autonomous colleges under the university: NA

36.   Date of establishment of Internal Quality Assurance Cell (IQAC) and dates of submission of Annual Quality Reports (AQAR): NA

37.   Any other relevant data, the university would like to include (not exceeding one page).
Attached **Annexure IX**

मध्यप्रदेश राजपत्र

(असाधारण)

प्राधिकार से प्रकाशित

क्रमांक 273]	भोपाल, गुरुवार, दिनांक 29 अप्रैल 2010—वैशाख 9, शक 1932

विधि और विधायी कार्य विभाग

भोपाल, दिनांक 29 अप्रैल 2010

क्र. 2777-170-इक्कीस-अ-(प्रा.).—भारत के संविधान के अनुच्छेद 213 के अधीन मध्यप्रदेश के राज्यपाल द्वारा प्रख्यापित किया गया निम्नलिखित अध्यादेश सर्वसाधारण की जानकारी हेतु प्रकाशित किया जाता है.

मध्यप्रदेश के राज्यपाल के नाम से तथा आदेशानुसार,

राजेश यादव, अपर सचिव.

मध्यप्रदेश अध्यादेश

क्रमांक 3 सन् 2010

मध्यप्रदेश निजी विश्वविद्यालय (स्थापना एवं संचालन) संशोधन अध्यादेश, 2010.

"मध्यप्रदेश राजपत्र (असाधारण)" में दिनांक 29 अप्रैल 2010 को प्रथम बार प्रकाशित किया गया.

भारत गणराज्य के इकसठवें वर्ष में राज्यपाल द्वारा प्रख्यापित किया गया.

मध्यप्रदेश निजी विश्वविद्यालय (स्थापना एवं संचालन) अधिनियम, 2007 को संशोधित करने हेतु अध्यादेश.

यत: राज्य के विधान-मण्डल का सत्र चालू नहीं है और मध्यप्रदेश के राज्यपाल का यह समाधान हो गया है कि ऐसी परिस्थितियां विद्यमान हैं, जिनके कारण यह आवश्यक हो गया है कि वे तुरन्त कार्रवाई करें;

अतएव, भारत के संविधान के अनुच्छेद 213 के खण्ड (1) द्वारा प्रदत्त शक्तियों को प्रयोग में लाते हुए, मध्यप्रदेश के राज्यपाल निम्नलिखित अध्यादेश प्रख्यापित करते हैं:—

संक्षिप्त नाम.   1. इस अध्यादेश का संक्षिप्त नाम मध्यप्रदेश निजी विश्वविद्यालय (स्थापना एवं संचालन) संशोधन अध्यादेश, 2010 है.

मध्यप्रदेश अधिनियम क्रमांक 17, सन् 2007 का अस्थायी रूप से संशोधित किया जाना.

2. इस अध्यादेश के प्रवर्तित रहने की कालावधि के दौरान, मध्यप्रदेश निजी विश्वविद्यालय (स्थापना एवं संचालन) अधिनियम, 2007 (क्रमांक 17, सन् 2007) (जो इसमें इसके पश्चात् मूल अधिनियम के नाम से निर्दिष्ट है), धारा 3 में विनिर्दिष्ट संशोधन के अध्यधीन रहते हुए प्रभावी होगा.

अनुसूची का संशोधन.

3. मूल अधिनियम की अनुसूची में, कालम (1) से (6) में, निम्नलिखित अनुक्रमांक तथा उससे संबंधित प्रविष्टियां स्थापित की जाएं, अर्थात्:—

अनु-क्रमांक (1)	निजी विश्वविद्यालय का नाम (2)	प्रायोजी निकाय का नाम (3)	प्रायोजी निकाय की स्थापना की पद्धति (4)	मुख्य परिसर (5)	अधिकारिता (6)
"1.	जेपी युनिवर्सिटी, ऑफ इंजीनियरिंग एण्ड टेक्नालॉजी, राघोगढ़, जिला गुना (म.प्र.).	जयप्रकाश सेवा संस्थान ट्रस्ट, नई दिल्ली	रजिस्ट्रीकृत लोक न्यास (पब्लिक ट्रस्ट)	जेपी युनिवर्सिटी ऑफ इंजीनियरिंग एण्ड टेक्नालॉजी परिसर, राघोगढ़ जिला गुना (म.प्र.)	सम्पूर्ण मध्यप्रदेश.".

भोपाल :
तारीख   28 अप्रैल, 2010.

रामेश्वर ठाकुर
राज्यपाल,
मध्यप्रदेश.

भोपाल, दिनांक 29 अप्रैल 2010

क्र. 2778-170-इक्कीस-अ-(प्रा.).—भारत के संविधान के अनुच्छेद 348 के खण्ड (3) के अनुसरण में, मध्यप्रदेश निजी विश्वविद्यालय (स्थापना एवं संचालन) संशोधन अध्यादेश, 2010 (क्रमांक 3, सन् 2010) का अंग्रेजी अनुवाद राज्यपाल के प्राधिकार से एतद्द्वारा प्रकाशित किया जाता है.

मध्यप्रदेश के राज्यपाल के नाम से तथा आदेशानुसार,
राजेश यादव, अपर सचिव.

MADHYA PRADESH ORDINANCE
No. 3 OF 2010

THE MADHYA PRADESH NIJI VISHWAVIDYALAYA (STHAPANA AVAM SANCHALAN) SANSHODHAN ADHYADESH, 2010.

First published in the "Madhya Pradesh Gazette (Extra-ordinary)" dated the 29th April, 2010.

Promulgated by the Governor in the Sixty-first year of the Republic of India.

An ordinance to amend the Madhya Pradesh Niji Vishwavidyalaya (Sthapana Avam Sanchalan) Adhiniyam, 2007.

WHEREAS, the State Legislature is not in session and the Governor of Madhya Pradesh is satisfied that circumstances exist which render it necessary for him to take immediate action;

Now THEREFORE, In exercise of the powers conferred by clause (1) of article 213 of the Constitution of India, the Governor of Madhya Pradesh is pleased to promulgate the following ordinance:—

1. This Ordinance may be called the Madhya Pradesh Niji Vishwavidyalaya (Sthapana Avam Sanchalan) Sanshodhan Adhyadesh, 2010.

Short title.

2. During the period of operation of this Ordinance, the Madhya Pradesh Niji Vishwavidyalaya (Sthapana Avam Sanchalan) Adhiniyam, 2007 (No. 17 of 2007) (hereinafter referred to as the principal Act), shall have effect subject to the amendment specified in Section 3.

Madhya Pradesh Act No. 17 of 2007 to be temporarily amended.

3. In the Schedule to the principal Act, in column (1) to (6), the following serial number and entries relating thereto shall be inserted, namely:—

Amendment of Schedule.

Serial No.	Name of private university	Name of sponsoring body	Mode of forming sponsoring body	Main campus	Jurisdiction
(1)	(2)	(3)	(4)	(5)	(6)
"1.	Jaypee University of Engineering and Technology, Raghogarh, District Guna (M.P.).	Jayprakash Seva Sansthan Trust, New Delhi	Registered Public Trust	Jaypee University of Engineering and Technology Campus Raghogarh, District Guna (M.P.)	Whole of Madhya Pradesh.".

Bhopal :
Dated the 28th April, 2010

RAMESHWAR THAKUR
Governor,
Madhya Pradesh.

मध्यप्रदेश राजपत्र

(असाधारण)

प्राधिकार से प्रकाशित

क्रमांक 420]   भोपाल, शुक्रवार, दिनांक 13 अगस्त 2010—श्रावण 22, शक 1932

विधि और विधायी कार्य विभाग

भोपाल, दिनांक 13 अगस्त 2010

क्र. 4833-307-इक्कीस-अ-(प्रा.).—मध्यप्रदेश विधान सभा का निम्नलिखित अधिनियम जिस पर दिनांक 10 अगस्त, 2010 को राज्यपाल की अनुमति प्राप्त हो चुकी है, एतद्द्वारा सर्वसाधारण की जानकारी के लिये प्रकाशित किया जाता है.

मध्यप्रदेश के राज्यपाल के नाम से तथा आदेशानुसार,

राजेश यादव, अपर सचिव.

मध्यप्रदेश अधिनियम
क्रमांक २३ सन् २०१०.

मध्यप्रदेश निजी विश्वविद्यालय (स्थापना एवं संचालन) संशोधन अधिनियम, २०१०.

[दिनांक १० अगस्त, २०१० को राज्यपाल की अनुमति प्राप्त हुई, अनुमति "मध्यप्रदेश राजपत्र (असाधारण)" में दिनांक १३ अगस्त, २०१० को प्रथम बार प्रकाशित की गई.]

मध्यप्रदेश निजी विश्वविद्यालय (स्थापना एवं संचालन) अधिनियम, २००७ को संशोधित करने हेतु अधिनियम.

भारत गणराज्य के इकसठवें वर्ष में मध्यप्रदेश विधान-मंडल द्वारा निम्नलिखित रूप में यह अधिनियमित हो :—

१.   (१) इस अधिनियम का संक्षिप्त नाम मध्यप्रदेश निजी विश्वविद्यालय (स्थापना एवं संचालन) संशोधन अधिनियम, २०१० है.

(२) यह २९ अप्रैल, २०१० से प्रवृत्त हुआ समझा जाएगा.

अनुसूची का संशोधन.

२. मध्यप्रदेश निजी विश्वविद्यालय (स्थापना एवं संचालन) अधिनियम, २००७ (क्रमांक १७ सन् २००७) में, अनुसूची में, कालम (१) से (६) में, निम्नलिखित अनुक्रमांक तथा उससे संबंधित प्रविष्टियां अंत:स्थापित की जाएं, अर्थात्:—

अनु-क्रमांक (१)	निजी विश्वविद्यालय का नाम (२)	प्रायोजी निकाय का नाम (३)	प्रायोजी निकाय की स्थापना की पद्धति (४)	मुख्य परिसर (५)	अधिकारिता (६)
"२.	जे. पी. अभियांत्रिकी एवं प्रौद्योगिकी विश्वविद्यालय, राघौगढ़, जिला गुना (मध्यप्रदेश)	जयप्रकाश सेवा संस्थान न्यास, नई दिल्ली	रजिस्ट्रीकृत लोक न्यास	जे.पी. अभियांत्रिकी एवं प्रौद्योगिकी विश्वविद्यालय परिसर राघौगढ़, जिला गुना (मध्यप्रदेश)	सम्पूर्ण मध्यप्रदेश."

भोपाल, दिनांक 13 अगस्त 2010

क्र. 4834-307-इक्कीस-अ(प्रा.).—भारत के संविधान के अनुच्छेद 348 के खण्ड (3) के अनुसरण में, मध्यप्रदेश निजी विश्वविद्यालय (स्थापना एवं संचालन) संशोधन अधिनियम, 2010 (क्रमांक 23, सन् 2010) का अंग्रेजी अनुवाद राज्यपाल के प्राधिकार से एतद्द्वारा प्रकाशित किया जाता है.

मध्यप्रदेश के राज्यपाल के नाम से तथा आदेशानुसार,

राजेश यादव, अपर सचिव.

MADHYA PRADESH ACT
No. 23 of 2010

THE MADHYA PRADESH NIJI VISHWAVIDYALAYA (STHAPANA AVAM SANCHALAN) SANSHODHAN ADHINIYAM, 2010.

An Act further to amend the Madhya Pradesh Niji Vishwavidyalaya (Sthapana Avam Sanchalan) Adhiniyam, 2007.

Be it enacted by the Madhya Pradesh Legislature in the Sixty-first year of the Republic of India as follows:—

Short and commencement.

1. (1) This Act may be called the Madhya Pradesh Niji Vishwavidyalaya (Sthapana Avam Sanchalan) Sanshodhan Adhiniyam, 2010.

(2) It shall be deemed to have come into force from 29th April, 2010

Amendment of Schedule.

2. In the Schedule to the Madhya Pradesh Niji Vishwavidyalaya (Sthapana Avam Sanchalan) Adhiniyam, 2007 (No. 17 of 2007), in column (1) to (6), the following serial number and entries relating thereto shall be inserted, namely :—

Serial No. (1)	Name of Private University (2)	Name of Sponsoring body (3)	Mode of forming Sponsoring body (4)	Main campus (5)	Jurisdiction (6)
"1.	Jaypee University of Engineering and Technology, Raghogarh, District, Guna (M.P.).	Jayprakash Seva Sansthan Trust, New Delhi.	Registered Public Trust	Jaypee University of Engineering and Technology Campus Raghogarh, District Guna (M.P.).	Whole of Madhya Pradesh."

JAYPEE UNIVERSITY OF ENGINEERING & TECHNOLOGY, GUNA

STUDENT FACILITIES IN CAMPUS

1. Air Conditioned / Air Cooled Auditorium, Lecture theatres, Classrooms and Laboratories.

2. Air Conditioned and very well stocked Learning Resource Centre open upto 11.00 PM.

3. Air Cooled hostels with 3 bed configuration provided with all facilities and amenities like:-

    (a) Cleaned toilets and geyser fitted bathrooms.
    (b) Water Cooler fitted with purifiers
    (c) Gymnasium in cluster of 3-4 hostels
    (d) TV & TT halls in cluster of 3-4 hostels.

4. 24 x 7 internet 1 Gbps connectivity in hostel.

5. 24 x 7 water and electric supply with Independent Feeder and DG back up.

6. Highly automated air cooled students messes separately for boys and girls.

7. Hospital with 4 paramedical staff, open 24 x 7.

8. Automated laundry facility with drying arrangements.

9. Sports facilities such as:

    (a) A large multipurpose play field for football & cricket
    (b) Two night lit basket ball, volleyball and handball court
    (c) Four badminton courts
    (d) Cricket nets with two cemented pitches.
    (e) Tennis court.
    (f) Swimming pool for girls
    (g) Indoor & air cooled sports hall for basket ball, badminton and table tennis

10. Shopping centers with facilities such as tuck-shop, grocery shop, multipurpose shop and barber shop.

11. Cafeteria and pantries which remain open by turn upto 18 hrs a day.

12. Banking service with two ATM of OBC & Axis Bank.

13. Facility for making PAN card and other related services.

JAYPEE UNIVERSITY OF ENGINEERING & TECHNOLOGY, GUNA

Air Cooled hostels with 3 bed configuration provided with all facilities and amenities like:-

- (a) Cleaned toilets and geyser fitted bathrooms.
- (b) Water Cooler fitted with purifiers
- (c) Gymnasium in cluster of 3-4 hostels
- (d) TV & TT halls in cluster of 3-4 hostels.
- (e) 24 x 7 internet 1 GB connectivity.
- (f) 24 x 7 water and electric supply with DG back up.

OCCUPANCY

		BOYS HOSTELS				
S. No.	Name of Hostels	Hostel No.	Bed Capacity	Occupied by staff	Allotted	Vacant
1.	Ashoka	H1	57	00	00	57
2.		H2	88	00	00	88
3.		H3	57	00	00	57
4.	Maurya	H4	75	00	72	03
5.		H5	67	02	59	06
6.		H6	78	00	68	10
7.	Chandragupta	H7	80	00	79	01
8.		H8	66	01	63	02
9.		H9	79	00	77	02
10.	Chankaya	H10	58	00	53	05
11.		H11	66	01	65	00
12.		H12	58	00	55	03
13.	Kautilya	H14	58	00	56	02
14.		H15	67	00	63	04
15.		H16	57	01	56	00

16.	**Siddharth**	H17	79	00	77	02
17.		H18	65	02	62	01
18.		H19	60	00	59	01
19.	**Shivaji**	H20	66	01	64	01
20.		H21	79	01	73	05
21.	**Vikramaditya**	H22	470	09	390	71
		Total	**1830**	**18**	**1491**	**321**

JAYPEE UNIVERSITY OF ENGINEERING & TECHNOLOGY, GUNA

Air Cooled hostels with 3 bed configuration provided with all facilities and amenities like:-

- (a) Cleaned toilets and geyser fitted bathrooms.
- (b) Water Cooler fitted with purifiers
- (c) Gymnasium in cluster of 3-4 hostels
- (d) TV & TT halls in cluster of 3-4 hostels.
- (e) 24 x 7 internet 1 GB connectivity.
- (f) 24 x 7 water and electric supply with DG back up.

OCCUPANCY

S.No.	Name of Hostel	Block No.	Capacity	Occupied by staff	Allotted	Vacant
1.		H-A	116	00	91	25
2.		H-B	120	01	110	09
3.	**Sharda Bhawan**	H-C	99	00	72	27
4.		H-D	90	00	70	20
		Total	**425**	**01**	**343**	**81**

JAYPEE UNIVERSITY OF ENGINEERING &TECHNOLOGY- GUNA

ACCOMMODATION STATUS AS ON NOVEMBER 2015

TYPE	DESCRIPTION			Remarks	
	ATS 1 (A to J Blocks)	ATS 2 (A to H Blocks)	BFA (1 Room Flats)	Faculty	Non Teaching
3 BHK	16			14	2
2 BHK		56		49	7
1 BHK			87	65	22
BFA (1 Room Flats)			25	18	7
Total	16	56	87	25	146	38
TOTAL	**184**			**184**	
Under Construction - 'J' Block Portion - 2 BHK 8					
G. Total 192					
Total Built up area: 21327 Sq. Mts.					

फोन : (0755)

मध्यप्रदेश निजी विश्वविद्यालय विनियामक आयोग
भोपाल (म.प्र.)

क्रमांक.........म.प्र.नि.वि.वि.आयोग,भोपाल   दिनांक   / 02 / 2010

प्रति,

1. डॉ. विनय कुमार पाठक   3. श्री एस0ए0के0 राव
    कुलपति   उप संचालक
    उत्तराखण्ड मुक्त विश्वविद्यालय   तकनीकीशिक्षा संचालनालय
    कुसुम खेडा हलद्वानी   सतपुड़ा भवन, भोपाल
    जिला–नैनीताल, (उत्तराखण्ड)–263139

2. प्रो0 पी0के0 सिंघल
    पूर्व निदेशक
    यूनिवर्सिटी इन्टीट्यूट ऑफ मैनेजमेंट
    जीव विज्ञान विभाग
    रानी दुर्गावती विश्वविद्यालय, जबलपुर–482001

विषयः–जय प्रकाश सेवा संस्थान द्वारा जे0पी0 यूनिवर्सिटी ऑफ इंजीनियरिंग एण्ड टेक्नालाजी रघोगढ़ (गुना) म0प्र0 (निजी विश्वविद्यालय) स्थापित किए जाने के संबध में निरीक्षण।

      मुझे यह आपको अवगत कराते हुए प्रसन्नता है कि विषयांतर्गत विश्वविद्यालय स्थापित किए जाने हेतु गठित निरीक्षण समिति में आपको आयोग द्वारा नामांकित किया गया है। संबधित संस्था से चर्चा कर निरीक्षण हेतु दिनांक 11 एवं 12 मार्च 2010 निश्चित की गई है।

      इस हेतु प्रयोजी निकाय द्वारा निर्धारित प्रपत्र में अपेक्षित जानकारी की प्रति आपको निरीक्षण के पूर्व उपलब्ध कराई जाएगी।

      अतः इस हेतु आपकी सहमति की प्रत्याशा में अनुरोध है कि प्रयोजी निकाय द्वारा अपने प्रस्ताव में एवं प्रपत्र में दी गई जानकारी के सत्यापन/भौतिक निरीक्षण उपरांत प्रपत्र में एक संयुक्त निरीक्षण प्रतिवेदन कृपया अद्योहस्ताक्षरी को उपलब्ध कराने का कष्ट करें।

      निरीक्षण हेतु आपको म0प्र0 शासन के प्रथम श्रेणी अधिकारी को अनुज्ञेय यात्रा भत्ता देय होगा। इसके अतिरिक्त निरीक्षण कार्य हेतु रुपये 1000/–का मानदेय भी प्रदान किया जावेगा।

      प्रदेश में निजी भागीदारी से विश्वविद्यालय अनुदान आयोग/ए0आई0सी0टी0ई0 तथा अन्य संबंधित नियामक संस्थाओं की अपेक्षाओं के अनुरुप उच्च गुणवत्ता के

खण्ड 4, आवास क्रमांक 1 व 2, भोज (मुक्त) विश्वविद्यालय परिसर, चूना भट्टी, कोलार रोड, भोपाल

मापदण्डो से युक्त निजी विश्वविद्यालय की स्थापना के उद्देश्य की पूर्ति हेतु आपके योगदान हेतु आयोग आपका आभारी रहेगा।

सधन्यवाद।

(डॉ0 पी0के0 खरे)
सचिव
मो0—9893041108

पृ.कमांक.....।1॰.../म.प्र.नि.वि.वि.आयोग,भोपाल   दिनांक   २६/02/2010

प्रतिलिपि:—

1. निजसचिव, मा. सभापति म0प्र0 निजी विश्वविद्यालय विनियामक आयोग,भोपाल।
2. संचालक, तकनीकी शिक्षा, सतपुडा भवन, भोपाल, डॉ. राव, उपसंचालक तकनीकी शिक्षा को उपरोक्त निरीक्षण हेतु अनुमति देने तथा इस हेतु निर्धारित तिथियों को उन्हें मुक्त करने के निवेदन सहित।
3. कुलसचिव रानी दुर्गावती विश्वविद्यालय, प्रो. सिंघल को उपरोक्त निरीक्षण हेतु अनुमति देने तथा इस हेतु निर्धारित तिथियों को उन्हें मुक्त करने के निवेदन सहित।
4. श्री मनोज गौर मैनेजिंग ट्रस्टी, जय प्रकाश सेवा संस्थान 63, बसंत लोक, वसन्त विहार नई दिल्ली 110057 कृपया उक्त निरीक्षण हेतु अपेक्षित व्यवस्था सुनिश्चित करने का कष्ट करें।

(डॉ0 पी0के0 खरे)
सचिव
मो0—9893041108

0755 2450 322

ज्ञान विज्ञान विमुक्त्ये

विश्वविद्यालय अनुदान आयोग
बहादुरशाह जफर मार्ग
नई दिल्ली-110 002
UNIVERSITY GRANTS COMMISSION
BAHADURSHAH ZAFAR MARG
NEW DELHI-110 002

Speed Post

F.No. 8-25/2010 (CPP-I/PU)

October, 2012

30 OCT 2012

The Registrar,
Jaypee University of Engineering & Technology,
AB Road, Raghogarh,
Distt. Guna – 473 226
Madhya Pradesh.

Sub: - Inspection of Jaypee University of Engineering & Technology, Guna (Madhya Pradesh) (State Private University).

Sir,

    I am directed to refer to the visit of the UGC Expert Committee to Jaypee University of Engineering & Technology, Guna (Madhya Pradesh) on 10th – 11th February, 2012 to assess the fulfillment of the criteria in terms of programmes, faculty, infrastructural facilities, financial viability, etc. as laid down from time to time by the UGC and other concerned statutory bodies and to inform that the Report was considered by the Commission in its 489th meeting held on 22nd October, 2012 (Item No. 5.11). The Commission resolved as under:-

    "The Commission considered the report of the UGC Expert Committee which visited Jaypee University of Engineering and Technology (Private University), Guna (Madhya Pradesh), report of the AICTE Expert Committee and advice of AICTE and decided that a copy of the report of the Expert Committee be posted on the UGC website. The University may also be requested to submit a compliance report in respect of the observations/suggestions made by the Committee and a copy of the compliance report may be placed before the Commission."

    Accordingly, the University to take action on the observations/suggestions of the Expert Committee and submit compliance report (one soft copy also) to UGC alongwith documentary proof. A copy of the Report is enclosed.

Yours faithfully,

(Raksha Pahwa)
Under Secretary

Encl: As above.

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UNIVERSITY GRANTS COMMISSION
BAHADURSHAH ZAFAR MARG
NEW DELHI – 110 002

REPORT OF THE UGC EXPERT COMMITTEE CONSTITUTED FOR AN ON-THE SPOT INSPECTION OF JAYPEE UNIVERSITY OF ENGINEERING & TECHNOLOGY, POST BOX NO. 1, A.B. ROAD, RAGHOGARH, DISTT.- GUNA (M.P.)- (MADHYA PRADESH STATE PRIVATE UNIVERSITY) TO ASSESS ITS ACADEMIC AND PHYSICAL INFRASTRUCTURE IN TERMS OF UGC (ESTABLISHMENT OF AND MAINTENANCE OF STANDARDS IN PRIVATE UNIVERSITIES) REGULATIONS, 2003.

I   **Background of the Institution:**

(a)   JUET Guna was established as an Engineering Institute as part of MoU signed between the State Govt. of Madhya Pradesh and the Jaiprakash Sewa Sansthan, New Delhi, the sponsoring body. The Institute started academic activities from August 2003.

(b)   Government of Madhya Pradesh vide Gazette Extraordinary No. 3 of 2010 dated 29th April 2010 approved it as the first private univesity in the State of Madhya Praesh under the provisions of Madhya Pradesh Niji Vishwavidyalaya Adhiniyam 2007. This was formally assented by His Excellency the Governor of Madhya Pradesh on 10th August 2010 for the establishment of Jaypee University of Engineering & Technology (JUET), Raghogarh, Guna (M.P.), vide Act No. 23 of 2010 published in Madhya Pradesh Gazette (Extraordinary) Notification Srl. No. 420 dated 13th August 2010 .

II   **Composition of the Expert Committee:**

1.   Prof. G.D. Yadav   Chairman
       Vice Chancellor
       Institute of Chemical Technology
       Nathalalal Parekh Marg, Matunga
       Mumbai 400 019

2.   Prof. Amitava Datta   Member
       Department of Power Engineering
       Jadavpur University
       Salt Lake Campus
       Kolkata 700 098

3.   Prof. S. Balasundaram   Member
       School of Computer & Systems Sciences
       Jawaharlal Nehru University
       New Delhi - 110067

4.	Prof. K. Aguan Dept. of Biotechnology & Bioinformatics North Eastern Hill University NEHU Campus, Shillong 793 022, Meghalaya	Member
5.	Prof. P. Ganesan Dept. of Mathematics Anna University, Chennai 600025	Member
6.	Prof. M.P. Poonia Mechanical Engineering Dept. MNIT, Jaipur	AICTE Nominee
7.	Dr. G.S. Chauhan Education Officer, UGC CRO, Bittan Market, Arera Colony,E-5, Bhopal, Madhya Pradesh	Member Secretary

The Committee was received by the Vice-Chancellor, Registrar, Chief Operating Officer (Education) and senior faculty members of the University on 10th February, 2012. The entire plan for two days (10th and 11th February, 2012) of visit was prepared and it was unanimously decided that the Committee would work for extended hours (from 9 AM to 9.30 PM).

The Vice-Chancellor made a power point presentation before the Committee and a detailed interaction took place during the presentation on various issues highlighted by him. A copy of the aforementioned presentation is enclosed herewith as **Annexure –A**.

The Chairman of the Committee in consultation with all the Members decided the road map of the entire visit (given in **Annexure – B**).

It was also decided that the individual departments/centres/sections would make their presentations before the Committee which will be followed by visit to their respective laboratories and class rooms. The Committee was immensely impressed by the general ambiance and up-keeping of the sprawling campus and minute attention paid to the various aspects of planning and execution. The Committee also interacted with the faculty, students and non-teaching staff regarding the facilities and benefits extended by the management and also invited their views regarding any suggestions/complaints for improvement of the over-all functioning of the university. The Committee was pleased to note that all of them expressed positive feelings about the functioning of the university and facilities provided to them.

Despite being located in a remote area of MP, which is both economically and socially backward, the university has been able to attract a good number of faculty from premier institutions and students from all corners of the country. The university has employed qualified couples as their teaching and non-teaching staff.

2

The university has built a good research culture through the involvement of faculty, research scholars and Post-graduate students. The university encourages its faculty to undergo career developments. It is nice to know that in a short span of time the university has produced a number of Ph.D. in various areas and enrolled a good number of students for doctoral study. Fellowships and teaching assistance ships are given to research scholars and qualified post-graduate students.

The university has a strong Placement Cell and more than 90% of students get placement through campus interview. All the students are sent for summer training during 7th Semester in reputed industries.

III   Inspection Report

S. No.		
1.	Name of the University with notification No. & date of State Govt.	Jaypee University of Engineering and Technology, Guna vide Act No. 23 of 2010 published in Exatra Ordinary Gazette Notification No. 420 of 13th August 2010.
2.	Registered Office of the University	Jaypee University of Engineering & Technology Campus, Post Box No. 1, A.B. Road, Raghogarh, Distt.- Guna (M.P.)- 473226 India
3.	Name & Headquarters of the Society /Promoting Agency.	Jaiprakash Sewa Sansthan Trust Administrative Office, 63 Basant Lok, Vasant Vihar, New Delhi –110 057
4.	Whether the Society / Agency is involved in promoting /running any other University/ Institution? If yes, give details.	Yes (1) Jaypee Institute of Information Technology, Sector-62, Noida, UP (2) Jaypee University of Information Technology, Waknaghat, Solan, HP
5.	Territorial Jurisdiction	Whole of Madhya Pradesh
6.	Date of Visit	10 Feb 2012 to 11 Feb 2012 The Committee unanimously decided to work extended hours on both days to finish the entire Inspection and Report writing within two days.
7.	Programmes permitted to be Offered by Gazette Notification of State Govt. and its reference.	Copy of First Ordinance No. 2 issued vide letter No. 338/MPPVVVC/dated 23.07.2011 attached as **Annexure 1**

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8.	Whether all documents requested by the Inspection Team were provided.	Yes
9.	If no, what are the deficit documents (List to be enclosed)	NA
10.	Whether Administrative authorities like Governing Council, Academic Council and BOS formed and minutes of their meeting produced?	Governing Council Academic Council Board of Studies (Minutes of last one year are enclosed) **(Annexure 2**
11.	Source of finance and quantum of funds available – From fees: From State Govt. From UGC From other sources (details)	Yes Nil Nil JSS **Annexure-3**
12.	Corpus Fund of the Society/trust shown to the Inspecting Team.	Yes. Rs. 5 crores **(Annexure-4)**
13.	Statement of income & expenditure for the last 3 years (year-wise)	Yes **(Annexure-5)**
14.	(i) Land Documents, if shown, area of land registered in the name of the University and its location in the state. (ii) Deposits made in the name of Society / University, separately or jointly with state authorities.	Yes. Photocopy of Lease deed of the land is attached as **Annexure-6**
15.	Administrative Office details: (i) Total plinth area, (ii) Built up area (iii) Separate offices for Vice Chancellor, Registrar, Finance Officer, Controller of Examination, Administrative Office, Committee room, students' waiting room etc.	951.6 Sqm 821 Sqm Chancellor's Office – 43.125 Sqm Vice Chancellor's Office – 32.20 Sqm Registrar's Office – 23.96 Sqm. CFAO's Office – 36 Sqm Controller of Exams – 25.96 Sqm. Administrative Office – 136.22 Sqm. Committee/Board Room – 122.21 Sqm. Students' Waiting Room – 461 Sqm.
16.	Building details etc. Permanent	Permanent : Covered Area : 97265 sq.m **(Annexure-7)**

4

17.	Give details of Library
	   (i) Covered area.
	   (ii) Number of books
	   (iii) Number of journals
	       (a) National
	       (b) International
		628 sq.m
		23,188
		7659
		376
		7283
		(Annexure-8)

18.	Number of Classrooms, give details.	62, including tutorial lab Annexure-9
19.	Number of Laboratories, give details.	71 labs Please see **Annexure-10** for Area details. **Annexure-11** for Equipment details
20.	Whether students already admitted? If yes, details of courses and the number of students admitted in each course during the last three years.	Yes. Diploma, B.Tech, M.Tech., Ph.D (**Annexure-12**)
21.	Whether any Off-Campus or Study/offshore Centre or Admission Centre/established outside the State/abroad.	No
22.	Whether functioning of the University have been computerized? If yes, to what extent?	Yes. Campus is connected with 1 Gbps dedicated line with campus-software line. **Annexure-13**

23.	(a) Research and Extension facility.	(a) **Annexure-14**
	(b) List of research publications for the last 3 years.	(b)

Dept	Journals Natl/Intl	Conference Natl/Intl	Books/Chapters
ECE	32	49	NIL
CSE	43	56	NIL
CHE	11	14	3
CE	21	23	3
ME	5	9	3
Math	39	NIL	NIL
Phy	17	34	NIL
HSS	3	6	NIL

Details are in **Annexure-15**

	(c) List of ongoing research projects with their source of funding.	(c) **Annexure-16**
24.	Future plans for starting new courses.	Individual Departments have made plans for expansion and addition of new courses. **Annexure-17**
25.	Whether courses in emerging areas introduced/proposed to be introduced.	Yes. **Annexure-18**

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26.	Whether approval of relevant statutory bodies obtained for starting professional/ courses/increased intake.	Yes. Approval has been obtained from the necessary regulatory bodies for the existing courses.
27.	Examination system.	Credit based continuous evaluation system. **Annexure-19**
28.	Number of sanctioned posts of Professors - Readers – Lecturers. (Please give a list of faculties with their qualification/scales of pay).	Prof. - 17 Associate Prof.–30 Assistant Prof. - 76 Faculty in position: 120+3 (Visiting Professors) **Annexure-20**
29.	Names, designations, qualifications and publications of the existing teaching staff (department-wise).	Details are attached in **Annexure-21.**
30.	Whether the faculty members organized or attended International/National Conferences Workshops, if so, give details.	Yes.

Dept	Attended	Organized
ECE	16	8
CSE	47	6
CE	14	2
CHE	22	8
ME	12	1
Phy	29	1
Math	44	4
HSS	25	0

Detail info is in **Annexure-22**

31.	Linkages with other Institutions (National & International, give details).	Yes **Annexure-23**
32.	Whether Non-teaching staff appointed, if yes give details.	Yes **Annexure-24**
33.	Whether Institution is following UGC pay scale for teaching staff.	Compensation package of JUET is higher than the UGC pay. The salary of the University staff is directly deposited in their bank accounts. **Annexure-25.**
34.	Facilities for faculty and staff.	There are very good facilities for both faculty and staff. For details see **Annexure-26**
35.	Facilities for students.	24 hours internet facility, bank ATM, transport, medical etc. are available in the campus **Annexure-27**
36.	Sport and games facilities with details.	Facilities for various sports exist in the campus. **Annexure-28**

37.	Hostel facilities available, if any.	Hostel facility is available for every student who desires to stay in the campus. More than 90% of the students stay in hostels. **Annexure-29**
38.	Other facilities available at the Institute(s) give details.	Training & Placement Activity. 24 hours Power Back-up and filtered water facilities. The Institute has its own water-purification plant to supply 24 hours water for the campus needs. **Annexure: 30** Student Youth Activity **Annexure: 31**

IV. Status of the University as per UGC (Establishment of and Maintenance of Standards in Private University) Regulations, 2003

1.	Whether this University has been established by a separate State Act. Indicate the name of the Act.	Yes MP Niji Vishwavidyalya (Sthapna Avam Sanchalan) Sansodhan Adhiniyam 2010, vide Act. No. 23 of 2010 Notified in Gazette (Extraordinary) Notification No. 420 of 13th August 2010.
2.	Is it a unitary University having adequate facilities for teaching research, examination and extension services specify in brief?	Yes
3.	(i) Has the University opened any off campus centre(s)/ study centre/off shore campus centre (s) outside the State/country?	No
	(ii) If yes, whether the University has taken approval of concerned State Govt. / UGC before starting the centre (s). Give details of each centre in terms of infrastructure students, faculty and other academic facilities etc.	NA
	(iii) If the University have opened off-shore center. If so, whether the approval of the Govt. of India and Govt. of host country taken. Give details and enclose documents, if any.	NA

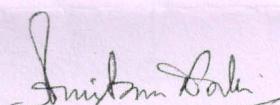|		
4.	Whether the University fulfills the minimum criteria in terms of programmes, faculty, infrastructural facilities, financial viability, and other physical and academic infrastructural requirements as laid down from time to time by the UGC and other concerned statutory bodies such as the All India Council for Technical Education (AICTE), the Bar Council of India (BCI), the Distance Education Council (DCE), the Dental Council of India (DCI), the Indian Nursing Council (INC), the Indian Medical Council of India (MCI), the National Council for Teacher Education (NCTE), and the Pharmacy Council of India (PCI) etc. as the case may be. **(Specific observations of the nominee of the concerned statutory council (s) may be given)**	Yes, As per the norms of UGC/AICTE .
5.	Whether the courses of studies prescribed for a first degree and / or post graduate/diploma programmes have been approved by the respective academic bodies of the Private University, such as board of Studies, Academic Council and governing Executive Council. (enclose a certificate from the University in this regard).	Yes Certificates attached (**Annexure-32**)

6.	Whether the admission procedure and fixation of fees is in accordance with the norms / guidelines prescribed by the UGC and other concerned statutory bodies. Please also specify the following:-
	
	   i. Admission Procedure.
	   ii. Basic of fee fixation.
	   iii. Fee structure for the different courses run by the University.
		Yes
		As per approved ordinance & approval of MP Private University Regulatory Commission, Bhopal (MP).
		
		Admission Procedure, Relevant Ordinance & Fee Structure are attached as <u>**Annexure-33**</u>

7.	Whether the University is running any course not specified under Section 22 of the UGC Act. Please give details.	NA
8.	Whether the faculties appointed by the University fulfill the minimum the qualifications prescribed by the UGC/respective Statutory Council.	Yes

V.   **Observations of the Committee:**

1.   The university satisfies all criteria as per terms of reference which are given below:

a)   The Committee examined all infrastructural facilities including academic building, administrative buildings, laboratories, class-rooms, central library, hostels, mess and recreational facilities including sports. These are the state of the art facilities and the maintenance is really excellent.

b)   The university has provided adequate facilities for teaching, research, examination and research facilities. The Committee also interacted with the faculty, students and non-teaching staff regarding the facilities and benefits extended by the management and also invited their views regarding any suggestions/complaints for improvement of the over-all functioning of the university. The Committee was pleased to note that all of them expressed positive feelings about the functioning of the university and facilities provided to them.

c)   The university has fixed fees which are commensurate with the facility they have provided and there was no complaints whatsoever from the students side.

d)   Various authorities of the university are in place in accordance with the provisions laid down in the Private Universities Act.

e)   The qualifications and pay scale and service conditions of the faculty appointed by the university are also in accordance with the UGC/AICTE norms and in particular better than the UGC prescribed norms.

f)   The academic programmes are designed as per the relevant statutory councils i.e. UGC/AICTE norms.

g)   The university does not have any off campus or off shore campus.

h)   The university has not started any courses which are not prescribed in UGC norms. They are adhering to the norms and standards prescribed by UGC/AICTE.

i)   The university has qualified faculty and infrastructure as per the norms of UGC/AICTE and indeed they are offering higher compensations.

j)   The university has provided all information in its website.

2. The Committee has observed that the management of the University has provided a fantastic ambiance and invigorating atmosphere in order to attract and retain talent at all levels. There was a sort of vibrancy on the campus and all those associated with felt a sense of belonging and gratitude. Such a private university richly deserves all accolades and encouragement in its journey to provide higher education to the society.
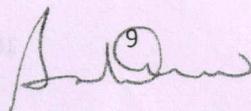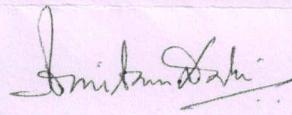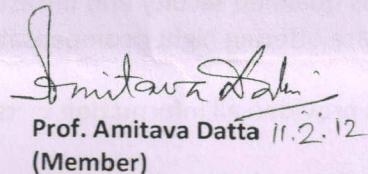
VI. Suggestions

1. The university should provide reservations to weaker section of the society in appointment of faculty, support staff and admission of students as per the provisions of government policy when they qualify for government assistance.

2. There should be departmental libraries for the benefit of students and faculty.

3. Language laboratory timings should be extended including contact hours for developing communications skills.

4. There is a need of appointment of teachers with specialization in English language for the language laboratory.

5. A separate post of Controller of Examinations should be created and filled.

6. Students' Counselor (with training in psychiatry) should be available on the campus.

7. Medical facilities should be augmented.

8. The university needs to augment the transportation facility for students.

9. There is a need to establish a faculty club with adequate recreational facility.

10. Since the university is located in an isolated place, the Committee feels that a shopping mall or bazaar should be encouraged to be set up in the vicinity of the campus.
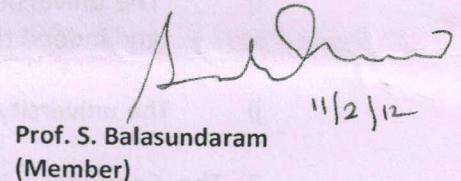
RECOMMENDATIONS

The Committee strongly and enthusiastically recommends that Jaypee University of Engineering and Technology, Raghogarh, District Guna (M.P.) fulfills all the norms as per the **UGC (Establishment of and Maintenance of Standards in Private University) Regulations, 2003** and also AICTE norms.
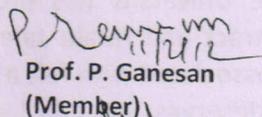
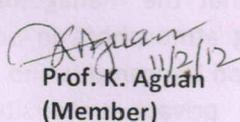|		
11.2.12	Amitava Datta 11.2.12	11/2/12
Prof. G.D. Yadav (Chairman)	**Prof. Amitava Datta** (Member)	**Prof. S. Balasundaram** (Member)
11/2/12	11/2/12	
Prof. P. Ganesan (Member)	**Prof. K. Aguan** (Member)	**Prof. M.P. Poonia** (AICTE Nominee)
11.2.12		
Dr. G. S. Chauhan (Member Secretary)		
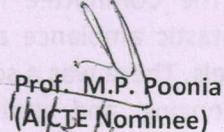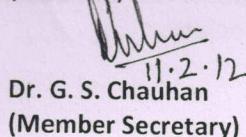
JAYPEE UNIVERSITY OF ENGINEERING & TECHNOLOGY, GUNA

EXCELLENT INFRASTRUCTURE FACILITIES AT JUET GUNA

Road

The campus is connected with main NH-3 Agra-Bombay Road at km stone 358/480 with its main gate on East of the road. The campus has 4.5 km long 7 meter wide concrete tarmac roads maintained in excellent condition and provided with side drains. The other circular road and inner service roads help in controlling traffic inside the campus. The roads are well lit by street lights.

Electric Supply

To meet our peak power demand we have contract demand load of 1300 KVA from MPSEB. We have two sub-stations to distribute the power within the campus. We also have four DG sets of combined capacity of 1890 KVA for 100% power back up.

Water Supply

a)   The University has elaborate water supply system. We draw raw water from Gopisagar dam at Pagara and after initial storage / cleaning pump it to the Institute through a 14 km long underground pipeline.

b)   The water supply system holds a capacity of 14 lacs liter of water against our current demand of 7 lacs liters.

c)   We have another 26 lacs liters underground storage capacity with filtration / chlorination and pumping facility in the campus. Thus the University presently holds 40 lacs liter of water storage capacity.

d)   We are in the process of laying another pipeline for augmenting our water supply for future requirements.

Sewage Disposal

The campus has 2 underground sewage disposal system with a 1500 cubic meter per day capacity sewage treatment plant. The reclaimed water is effectively used for horticulture through under ground pipe system while solid waste is used as manure.

Medical Support

i)   The University has one full time medical officer with four paramedical staff

ii)   The hospital complex comprises of two separate wards for boys and girls, a pharmacy, a laboratory and consulting chamber for medical officers.

iii)   The hospital has two dedicated ambulances at its disposal for move of patients to hospitals outside the campus.

Transport

The University has sufficient transport to meet the requirement such as:

     i)   Two, 42 seater and 52 seater buses.

     ii)   One Firefighting lorry fitted with latest equipment and trained Fire Fighting Crew.

     iii)   Two trucks for domestic purpose.

     iv)   Ten light vehicles.

Services

Facilities for following exist in the campus:

     a)   Annapurna (Boys & Girls students) messes

     b)   Cafeteria

     c)   Tuck-shop

     d)   Barber shop

     e)   Multi purpose shop

     f)   Beauty parlor for girls

     g)   Swimming pool for girls

     h)   Swimming pool for boys (Planned)

     i)   Three Gymnasiums for boys & girls

     j)   ATM / Banks (OBC & Axis)

Horticulture

In order to keep our 122.5 acre campus green and beautiful we are employing approximately 40 gardeners and three horticulture experts. The effort is evident by beautiful ambiance.

Schooling

In order to meet the primary and higher secondary level educational requirements of children of faculty and staff a modern higher secondary school is run by name of Jay Jyoti School in the campus.

Infrastructure – Built up Area

S/No.	Description	Plinth Area (Sq.Mts)	Built up Area (Sq. Mts)
1	Annapurna (Construction).	625.37	625.37
2	Field Hostel – 1.	683.45	683.45
3	Boy's Hostel H1 to H3.	1940.60	5650.00
	Boy's Hostel H4 to H6.	1940.60	5650.00
	Boy's Hostel H7 to H9.	1940.60	6722.00
	Boy's Hostel H10 to H12.	1940.60	5650.00
	Boy's Hostel H14 to H16.	1716.30	5618.00
	Boy's Hostel H17 to H21.	2830.94	10400.00
4	Academic Block – I.	3080.00	5679.00
5	Academic Block Extn.	573.21	1586.15
6	Academic Block – II & Lecture Theatre	3029.00	6593.00
7	Academic Block – III	2866.00	5700.00
8	Accommodation Type ATS –I (A to H).	2990.56	8758.00
9	Accommodation Type ATS – II (A to H).	2896.00	7284.00
10	Field Hostel (old girl hostel).	509.95	1500.00
11	New girl's hostel.	4469.97	14665.00
12	Main Annapurna.	2690.00	4397.61
13	Laundry.	305.00	305.00
14	Bachelor Accommodation.	362.73	1045.00
15	School Building.	1752.10	5192.00
16	Multipurpose hall.	3020.00	5000.00
17	Mechanical lab.	1550.00	1550.00

S.No		Area (Sq.Mts.)	Value (₹ in Lacs)
18	Civil lab.	1732.00	1732.00
19	Sub-Station I & II.	720.00	720.00
20	Visitors lounge near W.T.P.	268.22	490.00
21	Water treatment plant.	330.22	330.22
22	STP.	575.19	575.19
23	UG Tank.	803.00	803.00
24	LTs 6 to 12	976.00	2600.00
25	Boys Hostel (H-22)	1827.00	8800.00
26	Cafeteria	1098.00	2325.00
27	Accommodation ATS 1 (I & J)	1118.00	4240.00
28	Wind Engineering Application Centre	2860.00	6000.00
29	Peripheral Boundary Wall for 120 Acre- 3743 mtr.	-	
	Total	**56020.61**	**138868.99**
30	Under Construction new STP		400.00
	G. Total		**139268.99**

Laboratory Facilities

S.No	Laboratory	Area (Sq.Mts.)	Value (₹ in Lacs)
	Mechanical Engineering Department		
1	Engineering Thermodynamics Lab	193.45	03.54
2	Fluid Mechanics & Machinery Lab	302.00	07.61
3	Strength of Materials Lab	217.87	06.90
4	Workshops	355.00	15.00
5	Rapid Prototyping Lab	242.00	200.14
6	Advance Manufacturing Lab		100.02
7	Dynamics & Machines Lab	243.00	14.10
8	Engineering Graphics Lab (Common with Civil Engineering)	305.00	00.88
9	Thermal Power Plant Simulator Lab	108.00	64.00
	Civil Engineering Department		
10	Geotechnical Engineering Lab	156.00	12.79
11	Structural Engineering & Concrete Lab	290.00	43.75
12	Environmental Engineering Lab (Common with Chemical Engineering)	240.00	21.32

13	Highway Engineering Lab	100.00	08.27
14	Surveying Lab	25.00	08.33
15	Engineering Graphics Lab	305.00	00.87
16	Fluid Mechanics Lab (Common with Chemical & Mechanical Engineering)	302.00	05.00
	Computer Science Engineering Lab		
17	Advance Networking Lab	100.91	09.05
18	Computer Lab – I	104.25	12.20
19	Computer Lab – II	188.04	21.91
20	Computer Lab – III	164.28	28.82
21	Computer Lab – IV	188.04	25.15
	Chemical Engineering Department		
22	Process Simulation Lab	105.00	44.25
23	Instrumentation Process Control Lab	240.00	20.58
24	Chemistry Lab	240.00	13.66
25	Environmental Engineering Lab (common with Civil Engineering)	240.00	00.00
26	Chemical Reaction Engineering Lab	100.00	02.83
27	Mass Transfer Operations Lab I & II (Common with Mechanical Engineering)	290.00	13.57
28	Heat Transfer Operations Lab I & II (Common with Mechanical Engineering)	170.00	07.49
29	Solid Fluid Mechanical Operations Lab	240.00	04.59
30	Fluid Mechanics Lab (common with Civil Engineering)	120.00	5.00
31	Cement Testing Lab (CRDC), Boiler & Compressor House	100.00	45.43
32	Research Lab	90.00	10.00
	Electronics & Communication Engineering		
33	Basic Electronics & Electrical Lab	105.00	06.89
34	DSP Lab	115.00	33.55
35	VLSI Lab	116.00	32.03
36	Digital & Micro Processor Lab	100.00	10.08
37	Communication Lab – 1 & 2	162.00	34.98
38	Analog Electronics Lab	100.00	12.77
39	Power Electronics Lab	116.00	06.47
	Physics Department		
40	Physics Lab I	125.00	09.98
41	Physics Lab II	125.00	01.04
	Humanities & Social Sciences		
42	Language Lab	115.00	21.00
	TOTAL	**7137.93 Sq.Mts.**	**9.46 Crores**

Computerization of University

Fully networked campus connected with 8 Mbps dedicated line. Entire campus Wi-Fi/ LAN connected.

All the institute activities - right from the stage of inviting admission applications till the passing out of the student to maintaining his history, are handled by the **Campus Connect** software.

Through **Campus Connect** package all the activities relating to all the departments like Counseling and Admission, Examination and Results, Student Information System, Student Accounting & Financial Management, HRM & Payroll, Purchase, Receiving and Inventory, Fixed Asset Management, Training & Placement and Alumni Services are maintained. Students and Staff members in these different departments all see the same information and can update it.

Currently the following activities of the University are managed through **Campus Connect.**

- Counseling & Student Master Data Creation
- Student Information System
- Student Reaction Survey
- Examination Management
- Student Fee Management
- Financial Accounting System
- Human Resource Management System
- Fixed Asset Management
- Purchase / Receiving / Inventory
- Web-Kiosk for student and staff

CRITERION I

CURRICULAR ASPECT

CRITERION I: CURRICULAR ASPECTS

The Institute started functioning since August 03, 2003 and admitted students to B. Tech. degree in following four engineering disciplines:

- Electronics and Communication Engineering (ECE),
- Computer Science & Engineering (CSE),
- Civil Engineering (CE),
- Chemical Engineering (CHE),

The commencement of Mechanical Engineering (MEC) was in 2008. The institute was transformed to University in 2010 and over a short span, the University has developed academic programmes of high quality in the domain of Electronics and Communication Engineering, Computer Science & Engineering, Civil Engineering. Chemical Engineering and Mechanical Engineering, which are crucial to meet the specialized technical manpower needs of the industry and nation.

All the programmes of the University are in those areas which are important for national development and are well recognized by industry and employees.

1.1 CURRICULUM DESIGN AND DEVELOPMENT

1.1.1 How is the institutional vision and mission reflected in the academic programmes of the university?

In order to fulfil the vision and mission of the University, JUET in a short span has been able to develop academic programmes of extremely high quality in the domain of CSE, ECE, CE, CHE and MEC which are crucial to meet the specialized technical manpower need of the industry and nation.

Side by side, the University is actively involved in research programmes. The University also provides a platform by organizing seminars/ workshops on emerging areas from time to time.

Methodology adopted to pursue the academic programs helps in overall development of personalities of the budding professionals.

1.1.2 Does the university follow a systematic process in the design and development of the curriculum? If yes, give details of the process (need assessment, feedback, etc.).

Yes, the University follows a systematic process in the design and development of the curriculum. The inputs received from the industry and experts, feedbacks from students and teachers are analyzed and after brainstorming recommendations are forwarded to departmental Board of Studies (BOS). After discussion in BOS, necessary changes are recommended to Academic council for adoption. Similarly inputs for new courses and feedback on existing courses are taken from the students for further improvement.

1.1.3 How are the following aspects ensured through curriculum design and development?

- **Employability**
- **Innovation**
- **Research**

Courses provide a thorough understanding of basic concepts, analytical skills, critical understanding of applications often with hands-on experience through laboratory experiments and mini projects. The teaching is based on interactive teaching-learning concept. Communication skills of the students are enhanced through related courses and presentations by the students in most of the courses. This approach ensures employability of our students, as is evident from high rate of campus placement.

Some of the courses in the curriculum are administered in lecture cum project mode or field work and in a large number of courses, students are required/ encouraged to take up mini projects. These help in developing innovative and creative skills amongst the students.

The curriculum has rich component of minor and major projects, dissertation, term paper, internship and association of students with on-going research projects of the faculty. Sometimes the projects are on live industrial problems. The students are encouraged to attend conferences, present their work and publish research papers in high quality journals. These help in development of research skills in students.

1.1.4 To what extent does the university use the guidelines of the regulatory bodies for developing and/or restructuring the curricula? Has the university been instrumental in leading any curricular reform which has created a national impact?

The University fully follows guidelines issued by regulatory bodies like UGC, AICTE. In fact many guidelines are already followed such as semesters system and Choice Based Credit System (CBCS).

1.1.5 Does the university interact with industry, research bodies and the civil society in the curriculum revision process? If so, how has the university benefitted through interactions with the stakeholders?

The University continuously interacts with industry, research bodies and civil society for curriculum revision. Experts from industry and research organizations are part of Departmental board of studies. Their expert advices have helped in revision of course contents, new course design that have benefitted the University. Feedback of courses from students is also taken at the end of each semester and is considered during curriculum revision.

1.1.6 Give details of how the university facilitates the introduction of new programmes of studies in its affiliated colleges.

Not Applicable.

1.1.7 Does the university encourage its colleges to provide additional skill-oriented programmes relevant to regional needs? Cite instances (not applicable for unitary universities).

Not Applicable

1.2   Academic Flexibility

1.2.1 Furnish the inventory for the following:

- **Programmes taught on campus**
  The University presently offers the following programmes:

  1. B.Tech. (4 years) programmes in

    a. Electronics and Communication Engineering,

    b. Computer Science & Engineering,

    c. Civil Engineering,

    d. Chemical Engineering, and

    e. Mechanical Engineering

  2. M.Tech. (2 years) programmes in

    a. Electronics and Communication Engineering,

    b. Computer Science & Engineering,

    c. Construction Management,

    d. Environmental Engineering

    e. Structural Engineering

    f. Mechanical Engineering

    g. Geotechnical Engineering, and

    h. Chemical Engineering

3. M. Sc. programme in Mathematics, Physics, Chemistry

4. Ph.D. programmes in

   a. Electronics and Communication Engineering,

   b. Computer Science & Engineering,

   c. Civil Engineering,

   d. Mechanical Engineering,

   e. Chemical Engineering,

   f. Chemistry,

   g. Mathematics

   h. Physics, and

   i. Humanities & Social Sciences

5. Diploma Programmes in

   a. Mechanical Engineering

   b. Civil Engineering

- **Overseas programmes offered on campus**
  Not Applicable

- **Programmes available for colleges to choose from**
  Not Applicable

1.2.2 Give details on the following provisions with reference to academic flexibility

a. Core / Elective options

All courses offered by the university are divided into core and elective. The students are guided by the faculty to opt for various electives as per their interests and skills.

b. Enrichment courses

Industrial training is an essential part of the B. Tech. curriculum. In addition, short term courses have been conducted by visiting faculty and a few companies. Some electives, e.g., Ethics, Human Aspects of Information Technology; Problem Solving and Research Methodology, etc., offered by various departments help in enriching the curriculum with different perspectives. A number of workshops are also organized by the students professional bodies to enrich students with latest technologies.

c. Courses offered in modular form

The departments have created and offered some composite courses in which more than one teacher teaches the topics of curriculum in a 3 or 4 credit courses. This approach may be further strengthened in future. This helps in providing benefits of individual expertise to students.

d. Credit accumulation and transfer facility

The B. Tech. curriculum allows the final semester students to go to industry e.g. Infosys, Foreign Universities e.g. University of Florida to complete their last semester. In the case of students pursuing their projects with the Industry, the evaluation is done jointly by the University and the Industry. The University is in the process of having more such arrangements with selected Indian and foreign universities.

e. Lateral and vertical mobility within and across programmes, courses and disciplines

JUET allows lateral entry of students from other institutes in the second year of B. Tech. programme.

1.2.3 Does the university have an explicit policy and strategy for attracting international students?

The University plans to attract international students in future. At present the University aims on Indian students.

1.2.4 Have any courses been developed targeting international students? If so, how successful have they been? If 'no', explain the impediments.

Not Applicable

1.2.5 Does the university facilitate dual degree and twinning programmes? If yes, give details.

Not yet

1.2.6 Does the university offer self-financing programmes? If yes, list them and indicate if policies regarding admission, fee structure, teacher qualification and salary are at par with the aided programmes?

JUET is a private self-financing University and as such all programmes offered are self-financing with uniformity of admission criteria, fee structure, teacher qualification and salaries etc.

1.2.7 Does the university provide the flexibility of bringing together the conventional face-to-face mode and the distance mode of education and allow students to choose and combine the courses they are interested in? If 'yes,' give operational details.

The University does not offer distance mode of education. However three are courses which are offered by the faculty through videoconferencing facility.

1.2.8 Has the university adopted the Choice Based Credit System (CBCS)? If yes, for how many programmes ? What efforts have been made by the university to encourage the introduction of CBCS in its affiliated colleges?

The University since its inception is following a Credit based credit system for all offered programmes. The University has introduced Choice based credit system as per UGC guidelines for the batch starting July 2015.

1.2.9 What percentage of programmes offered by the university follow:

- Annual system : NIL
- Semester system : 100 %
- Trimester system : NIL

1.2.10   How does the university promote inter- disciplinary programmes? Name a few   programmes and comment on their outcome.

The University currently offers following interdisciplinary programme:

- M. Tech (Environmental Engineering) by department of Civil Engineering in collaboration with department of Chemical Engineering.

Another following interdisciplinary M. Tech. is in process of approval :

- M. Tech. (Computational Informatics) by department of CSE in collaboration with department of Mathematics, Humanities and Social Sciences. (Under the process of approval)

1.3   Curriculum Enrichment

1.3.1 How often is the curriculum of the university reviewed and upgraded for making it socially relevant and/or job oriented / knowledge intensive and meeting the emerging needs of students and other stakeholders?

Every department of university conducts Board of Studies (BOS) once in a year to review curriculum as per the suggestions of experts and requirement of industry. University usually holds one Academic Council Meeting in one semester.

1.3.2 During the last four years, how many new programmes at UG and PG levels were introduced? Give details.

The Institute constantly looks for growth keeping in mind the societal needs and the developmental trends. The following programmes have been introduced in last four years:

- Inter-disciplinary Programmes
  - M. Tech (Environmental Engineering) by department of Civil Engineering in collaboration with department of Chemical Engineering
  - M. Tech. (Computational Informatics) by department of CSE in collaboration with department of Mathematics, Humanities and Social Sciences. (Under the process of approval)

- Programmes in emerging areas
- M. Tech (Structural Engineering) by Dept. of Civil Engineering

The University has also introduced a number of courses in emerging areas. Few courses introduced in emerging areas are:

- Grid Computing
- Computational Intelligence
- Swarm Intelligence & Applications
- Digital Forensics and Cyber Crime
- Storage Area Networks
- Queuing Networks
- Cognitive Sciences
- Component Based Software Engineering
- Computer Aided Design (CAD)
- Computer Aided Manufacturing (CAM)
- Additive Manufacturing (AM)
- Non Destructive Methods of Inspection
- Industrial Statistical Quality Control
- Nonlinear Dynamics Applications
- Laser Beam Machining (LBM)
- Advanced Composite Materials
- Advanced Metrology and Computer Aided Inspection

1.3.3 What are the strategies adopted for the revision of the existing programmes? What percentage of courses underwent a syllabus revision?

Revision of existing programmes is done as and when required and based on recommendations of UGC/AICTE/industry demand. Minor adjustments/ alterations in course contents are taken up continuously taking into account the feedback from students and faculty as well as contemporary developments. New electives in emerging areas are added almost every semester after due approvals and less popular elective courses are dropped or revised after due internal review. Almost all courses have undergone a syllabus revision.

1.3.4 What are the value-added courses offered by the university and how does the university ensure that all students have access to them?

A good number of value-added courses are offered by the university, which are open to students across all branches.

- Presentation and Communication Skills
- English (Audit Course)
- Group and Cooperative Processes
- Managerial Economics
- Financial Management
- Social and Legal Issues
- Project Management
- Industrial Psychology
- Entrepreneurship Development
- Principles of Management
- Human Resource Management
- Marketing Management
- Financial Planning
- Consumer Behaviour
- Strategic Management
- Total Quality Management
- C/C++ programming
- MATLAB programming
- Environmental Studies

Some courses are also offered along with the industries which are as per the requirement of the industry.

1.3.5 Has the university introduced any higher order skill development programmes in consonance with the national requirements as outlined by the National Skills Development Corporation and other agencies?

Not yet

1.4 Feedback System

1.4.1. Does the university have a formal mechanism to obtain feedback from students regarding the curriculum and how is it made use of?

Yes. Feedback is collected in the last week of teaching in each semester for every theory and laboratory course by a nominated coordinator of other department. The anonymity is maintained by asking the students not to mention their names on the forms, thus ensuring free and fair feedback. The feedback is then analyzed and submitted to departmental Board of Studies for updation of curriculum. [Annexure 2.3.16]

1.4.2 Does the university elicit feedback on the curriculum from national and international faculty? If yes, specify a few methods such as conducting webinars, workshops, online discussions, etc. and its impact.

Yes. The University elicit feedback on the curriculum from various parts of the globe. Experts from various countries have been invited to visit the campus and provide feedback on the curriculum.

1.4.3. Specify the mechanism through which affiliated institutions give feedback on enrichment and the extent to which it is made use of.

Not Applicable

1.4.4 What are the quality sustenance and quality enhancement measures undertaken by the university in ensuring the effective development of the curricula?

To ensure the quality sustenance and quality enhancement various measures are undertaken by the University as and when required, keeping in view the following guiding philosophy from the curriculum perspective:

Sustained Disciplined Work

The ability to put in sustained and disciplined hard work over a sufficient length of time is one of the key factors to success in professional life. A typical semester is designed in an intensive and a modular fashion with an emphasis on regular and continuous work. The continuous evaluation system is designed to encourage this concept. Day-to-day work evaluation for practical subjects is done to encourage the students for self learning and to improve his/her performance.

Self Learning

In its attempt to move away from teacher-cantered learning to student-specific learning, the curriculum actively encourages self learning. For this purpose 15% of the time allotted to theory and tutorial classes is suggested to be marked for independent study.

Flexibility in Pace of Learning

The evaluation system makes special provision for different paces of learning for different students. Yet, it attempts to inculcate respect for deadlines. Thus, while specifying a time limit within which tutorial/practical work must be completed, there is scope to submit such work beyond the deadline. However, there will be a small penalty for late submission. The faculty will notify of the penalty for late submission for each tutorial/practical session and also the time upto which late submissions will be accepted.

Design Orientation

The curriculum is structured so that basic implementation skills and design skills are interwoven together. Thus, for example, a student of Programming Systems learns not only how to program but also how to design programmes too.

Quality Consciousness

Students should be aware of the importance of continuous improvement, building zero-defect products and doing quality work. All courses will emphasize on quality as an integral part of teaching. Students will be taught how to test and certify their laboratory work and how to evaluate the worth of theoretical results.

Co-operative Working

Given the complexity of technological problems of today large teams must work together to provide solutions. Thus, it is very important to learn group dynamics and to work in teams. Through co-operative work wherever possible, the University will encourage students to learn to select good teams, resolve leadership and group issues and in general, to make effective groups. During experiment based courses students form a group of three-four students and work together. These inculcate the habit of working in groups and learn coordination. Various contents of HSS courses provide opportunities to make presentations with other branch students. It develops co-operative working and enhance interpersonal skills.

CRITERION II

TEACHING LEARNING AND EVALUATION

2.1 STUDENT ENROLMENT AND PROFILE

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

Following measures are taken to ensure wide publicity and transparency in admission process:

Publicity:

➢ Admission related events, schedules and relevant information are widely advertised in leading national newspapers and magazines, educational web portals, social media, and University website.

➢ A wide publicity drive is undertaken for interaction with students and distributing leaflets/ write-ups providing information regarding the University. The advertising material is also distributed at JEE examination centres spread across various cities covering maximum part of the country.

➢ A wide publicity and reach to aspiring students are ensured by participation in education fairs organised by various renowned organisations and media houses.

➢ Admission Brochures including admission form and information booklet are sold in all major cities belonging to different states through arrangements made with renowned banks and other establishments.

➢ Aspiring students can also obtain Application Brochures from the university campus and from other three sister institutions i.e. JIIT Noida (U.P.), JUIT Wakanghat (H.P.) and JU Annopshahar (U.P.).

➢ A candidate has both the options; either to apply online or submit suitably filled application as a hard copy.

Transparency:

➢ The admission brochure contains complete information regarding eligibility criteria, admission process, programmes available, fee structure etc.

➢ The University follows an absolutely transparent process of admission in all its programmes. For B.Tech, the complete admission process is software controlled; ensuring merit based counselling which is carried out in front of the shortlisted candidates and their parents.

➢ During counselling, the details of available and filled seats are projected live on the screens in the counselling halls. During counselling, all relevant information like availability of seats in various courses at any stage is shown to students and parents. This helps the students in filling their choice form and ensures the transparency of the admission process.

> ➢ The updated details are made available on the University's website at regular intervals.

> ➢ The results of the PG and Ph.D. programmes are also made available on the University's website.

2.1.1. Explain in detail the process of admission put in place by the university. List the criteria for admission:(*e.g.*: (i) merit, (ii) merit with entrance test, (iii) merit, entrance test and interview, (iv) common entrance test conducted by state agencies and national agencies)other criteria followed by the university (please specify).

For admission to courses at various levels, different process and criterion are being used.

B. Tech. (Bachelor of Technology) programmes

(a) Minimum qualification for admission to the first year B.Tech. shall be the qualifying higher secondary school certificate examination (10+2) scheme with Physics, Chemistry and Mathematics conducted by CBSE, New Delhi, Board of M.P., or an equivalent examination from a recognized Board.

(b) Non-resident Indian (NRI) candidates shall also be eligible for admission in B.Tech. in accordance with directives of the Government of India/Govt. of Madhya Pradesh, provided they satisfy the criterion of clause (a) as above.

(c) The admissions to B.Tech. course shall be governed by the rules of the UGC/AICTE or any other competent authority of the Govt. of India or the Govt. of Madhya Pradesh.

(d) Candidate should have appeared in Joint Entrance Examination (JEE) conducted by CBSE and have passed 10 + 2 from any recognized board for admission in the University. Production of original JEE admit card and result card at the time of admission is compulsory.

(e) For the admission to the programmes in **ECE, CSE, CHE, CE and MEC**, the candidates shortlisted strictly on the basis of all India JEE Main score announced by the CBSE are called for counselling. The admission is offered on the basis of merit and choice of programme exercised by the candidates during the counseling.

(f) For JEE based admission, candidates seeking admission are required to submit JUET application form with all necessary information along with JEE roll no., and score of JEE(Main) as declared by CBSE. Candidates satisfying eligibility criteria are called for counseling.

(g) Vacant seats available after JEE score based admission are allotted on 10+2 merit.

B.Tech. (Lateral Entry):

A candidate who has qualified the polytechnic diploma course/B.E./B.Tech. – Ist Year in related branch of engineering or B.Sc. – 03 Yrs degree course with Physics, Chemistry and Mathematics from any recognized university, technical board or equivalent shall also be eligible for admission to B.Tech. – IInd Year through Lateral Entry process.

(a) Minimum qualification for direct admission to second year Bachelor of Technology course termed as Lateral Entry shall be as per the prevalent norms of the Govt. of India/Government of Madhya Pradesh.

(b) For diploma pass candidate admission will be based on merit comprising of total marks obtained in relevant examination.

(c) B.Tech. /B.E. and B.Sc. candidates will have to appear in Lateral Entry Entrance Test.

M. Tech. programmes

The admissions to these programmes are based on merit drawn on the valid GATE Score of the students who fulfil the eligibility criteria or through Postgraduate Entrance Test conducted by the University.

Ph. D. programmes

➢ The admission to available seats in Ph.D. programmes is made through an all India entrance test conducted by the University in accordance with the UGC instructions and guidelines of 2009 on the subject. Candidates, who fulfill the minimum eligibility criteria, are required to take the written test. The shortlisted candidates are thereafter put through an interview.
➢ The candidates having qualified in GATE, NET/SLET or equivalent examinations and candidates in receipt of fellowship from the Govt. agencies like CSIR, DST, etc., are allowed to take the interview directly.
➢ The final selection is based on the recommendations of the selection committee.

2.1.3   **Provide details of admission process in the affiliating colleges and the university's role in monitoring the same.**

Not Applicable.

2.1.4   **Does the university have a mechanism to review its admission process and student profile annually? If yes, what is the outcome of such an analysis and how has it contributed to the improvement of the process?**

Yes, the University have a mechanism to review its admission process and student profile annually. Once the admission process is over, a comprehensive review of admission process and student profile is done. A general feedback about the students is also taken from faculty members. This feedback along with student profile is reviewed. Other than Vice chancellor, Dean, Registrar, all head of

departments and senior faculty members take part in this review. The outcome of this review is further reported to Academic Council for its advice; especially external members from academia and industry. Similar exercise is done again at the time of beginning of admission process. These reviews help to improve the planning and the strategies for the next year admission. As a result of these activities, JUET has emerged as preferred destination for students.

2.1.5 **What are the strategies adopted to increase / improve access for students belonging to the following categories:**
* **SC/ST**
* **OBC**
* **Women**
* **Persons with varied disabilities**
* **Economically weaker sections**
* **Outstanding achievers in sports and other extracurricular activities**

➤ The reservation policies as announced by the government time to time are implemented for providing admission to SC/ST categories and students with differently-abled as per national policy on reservation. The admission criterion for such students is clearly defined in the admission procedure document. The University, being a private unaided self-financed University, does not have reservation for candidates of OBC category and economically weaker sections. To increase/improve access to candidates belonging to above categories, University provides proactive assistance to these students in getting scholarships and other benefits provided by State and Central Government.

➤ At University level 'William Webester scholarship' and Soft loan under 'Jaypee India Scholars Fund' were being provided for outstanding students belonging to economically weaker sections.

➤ University is also providing fee concessions to Jaypee Group employees' wards. These concessions are intended to help economically weaker employees. Fee waivers are based on grade of employees; lowest grade employee gets the maximum concession.

➤ Other than these, University provides conducive socio-cultural environment to make their stay at University safe, comfortable and fruitful.

2.1.6 **Number of students admitted in university departments in the last four academic years**

Categories	2012-13		2013-14		2014-15		2015-16	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	9	6	15	4	21	3	12	03
ST	0	0	0	0	1	0	01	00
OBC	109	16	117	4	138	17	63	09
General	457	122	354	86	384	82	323	72
Total	575	144	486	94	544	102	399	84

2.1.7 Has the university conducted any analysis of demand ratio for the various programmes of the university departments and affiliated colleges ? If so, highlight the significant trends explaining the reasons for increase/decrease.

The University regularly reviews the admission process and conducts analysis of demand ratio of its various academic programmes. The analysis of demand ratio for last 3 years is given below in a table.

Programmes	Year	Number of Applications	Number of students Admitted	Demand Ratio
B.Tech.				
	2015	2062	459	4.4
	2014	1650	547	3.0
	2013	1880	468	4.0
M.Tech.				
	2015	31	12	2.5
	2014	59	25	2.3
	2013	45	21	2.1
Ph.D.				
	2015	55	13	4.2
	2014	32	19	1.6
	2013	25	17	1.4
Diploma				
	2015	N.A.	N.A.	N.A.
	2014	61	40	1.5
	2013	148	67	2.2

2.1.8 Were any programmes discontinued / staggered by the university in the last four years? If yes, please specify the reasons.

Due to prevailing regional socio-economic reasons and change in industrial demand, few programs are either discontinued / re-named or modified in the last four years to match with the market demand or to provide a nomenclature/ name with due focus on the specialization or to enhance global acceptability.

Name of programme	Specialized area	Year discontinued / re-named or modified)	Reason for discontinue
B.Sc. (Hons.)	Physics, Chemistry, Mathematics	2013	Continued poor demand ratio due to local socio-economic reasons.
Diploma (3 year)	Cement Technology & Building Material	2013	Decreased demand of industry specific programme.
Diploma (3 year)	Thermal Power	2014	Decreased demand of industry specific

	Plant Technology		programme.
Diploma (3 year)	Civil Engineering	2015	Poor demand.
Diploma (3 year)	Mechanical Engineering	2015	Poor demand.

2.2   CATERING TO STUDENT DIVERSITY

2.2.1   Does the university organise orientation/induction programme for freshers? If yes, give details such as the duration, issues covered, experts involved and mechanism for using the feedback in subsequent years.

Yes, University organise orientation/induction programme for fresher's. In the beginning of each academic session first two to three days are fully devoted for this orientation. It is organized at two levels - at the University level and the Departmental level.

The University level orientation programme covers all fresh students from all programmes i.e. B.Tech, M.Tech. and Ph.D. etc. The major activities are:

➢   Address by the Vice-chancellor.

➢   The Registrar provides detailed information on available facilities on campus, instructions on standing orders, Dos and Don'ts for comfortable stay in university campus.

➢   Dean academic explains about the academic system, evaluation process, grades and grading procedure. Time table coordinator tells students, how to read and identify their class schedules.

➢   HODs of all departments brief about their departments providing essential information which deemed important and useful for fresher's.

➢   By the chief warden /Discipline committee head students are briefed about the ragging. They are asked not to involve themselves in such act and if victimised by seniors, immediately report it to the competent authorities of the campus.

➢   JUET Youth Club (JYC) Coordinator briefs about Co-curricular and extra-curricular activities.

➢   Other unit heads like Chief Account Officer, Librarian, IT-Support and Training and placement officer provide relevant information concerned to the fresher's so that these students can have easy and unhesitant access to these available supports.

➢   A full campus visit at the end of this orientation programme make fresher's familiar with the academic area such as lecture theatres, class rooms and labs and civil amenities available in the university campus.

Departmental level orientation of UG, PG and Ph.D. students are organized separately. The purpose of this orientation programme is to acquaint the students with the faculty members of the department, courses and laboratories, etc.

2.2.2   Does the university have the mechanism through which the differential requirements of   the student population are analysed after admission and before the commencement of classes? If so, how are the key issues identified and addressed?

Students of diverse background take admission in the academic programmes of the University; therefore there are various issues / differential requirements of the student population. One of the key issues observed by the University is the English language. Many students have been found to have poor English background, particularly those who have passed 10+2 examination from Hindi medium schools. Poor English background poses great difficulties to these students which results into their poor performance in various subjects. To address this issue, University offers an audit course in English in the first year in addition to the compulsory Presentation and Communication Skills course. The English competency is judged on the basis of marks in English and medium of education in 10+2 level. Identified students are advised to register in this audit course. A fully equipped language laboratory is available to the students for enhancing their reading / writing and listening skills. The table below presents the year-wise number of students who have registered themselves in this audit course:

Course Code	Course Name	Number of Students Registered			
		2012-13	2013-14	2014-15	2015-16
14B11HS199	English	82	80	68	80

In addition to English few bridge courses are also offered to address the differential requirements of the students.

2.2.3 Does the university offer bridge/remedial/add-on courses? If yes, how are they structured into the time table? Give details of the courses offered, department-wise/faculty-wise?

Yes, other than English, University offers many bridge/remedial/add-on courses for the students due to their varying requirements. Lateral entry B.Tech. students register for identified essential courses from the first year which they have not studied at their earlier institution. These courses bridge the gap between existing and requisite knowledge. For diploma pass lateral entry students special bridge course in Mathematics, Physics and English are also offered. A faculty counsellor in consultation with timetable coordinator helps the students in choosing these courses so that these courses can be easily structured in available slots.

2.2.4 Has the university conducted any study on the academic growth of students from disadvantaged sections of society, economically disadvantaged, physically handicapped, slow learners etc. ? If yes, what are the main findings?

Although University does not conduct any formal study on the academic growth of students from disadvantaged sections of society, economically disadvantaged and physically handicapped students, these students are identified as slow learners based on their academic performance. University put special effort to monitor the academic growth of all the students. A comprehensive analysis of the results is done after every formal test. The academically poor performers are identified and corrective measures such as personal counselling by faculty member, special

attention during class and extra classes are arranged to improve the academic performance. For few courses, if possible, separate sections are created for backlog students to avoid timetable clash and give them a special attention. The details of few extra and special classes held and number of students benefitted during last semesters may be summarised below:

Semesters/Session	Subjects code	Name of Course	Number of students	Department	Nature of extra class
I Semester, 2014-15	14B11PH111/ 10B11PH111	Physics-I	154	Physics	For weak students
I Semester, 2014-15	14B11CI111/ 10B11CI111	Introduction to Computers and Programming	160	CSE	For weak students
I Semester, 2014-15	4B11EC111/ 10B11EC111	Electrical Circuit Analysis	192	ECE	For weak students
I Semester, 2014-15	14B11MA111	Maths-I	98	Maths	For weak students
II Semester, 2014-15	14B11PH211	Physics- II	14	Physics	For repeaters (failed students)
II Semester 2014-15	14B11PH211	Physics- II	60	Physics	For weak students
	14B11CI211	Data Structures	65	CSE	
II Semester Sem, 2014-15	14B11ME413	Fluid Mechanics	111	MEC	For weak students
II Semester, 2014-15	14B11EC211	Basic Electronics Devices and Circuits	264	ECE	For weak students
I Semester, 2015-16	14B11PH111/ 10B11PH111	Physics-I	45	Physics	For repeaters (failed students) of B.Tech.
I Semester, 2015-16	14B11CI11	Introduction to Computers and Programming	80	CSE	For weak students
III Semester, 2015-16	14B11EC317	Digital Electronics	45	ECE	For weak students
I Semester 2015-16	14D11PH111	Physics-I (diploma)	2	Physics	For repeaters (failed students) of Diploma

2.2.5 How does the university identify and respond to the learning needs of advanced learners?

Another aspect of addressing the diverse needs of students is to respond to the learning needs of advanced learners. Advanced learners are identified by teacher's assessment, formal tests, and personal interaction in and outside the classes. The specific strategies for the advanced learners are as follows:

- University offers student centric learning in terms of flexible academic system. In

B. Tech. program an ordinary student registers for 23-28 credits in a semester. An advanced learner student is allowed to take up some extra courses as per his/her interest. However, duration of the program remains unaltered. For example, students of B.Tech (ECE) who opt for final semester at University of Florida takes additional course like Operating Systems etc. before joining at University of Florida.

- The students are encouraged to do projects and mini projects in advanced topics under the guidance of faculty members. LRC has huge collection of books covering highly specialized topics. Availability of e-resources and journals further satisfy the quest of advanced learners.
- JYC, through its events provides platform for participation in quiz, debate and problem solving/decision making exercise.
- Advanced learners are encouraged participation in technical societies as their office bearers. This helps them to utilize their capabilities at maximum and evolve them as 'Team Leaders'.
- Resource persons from industries and academic institutions are invited to give guest lectures on advanced topics for the benefit of the students.
- They are advised to undertake competitive exams like GATE, CAT, GMAT, TOEFL, GRE etc. and encouraged for higher studies. The faculty members help the students in preparation of these exams. Professional guidance from the experts is also arranged in the campus.

2.3 Teaching-Learning Process

2.3.1 How does the university plan and organize the teaching learning evaluation schedule (academic calendar, teaching plan, evaluation blue print, etc.)

The University has a well established system of organizing teaching, learning and evaluation processes. Every semester, academic calendar is finalized by a committee consisting of Dean, Registrar and Controller of Examination well before the start of the academic session and on approval, the same is notified to all through University's website. The academic calendar is meticulously crafted to include all academic activities covering registrations, classes, examinations, evaluation, results schedule, holidays and vacations, etc. A sample academic calendar for even semester of academic year 2015-16 is given below. The University strictly adheres to the Academic Calendar and there have been no overrun in the past.

ACADEMIC CALENDAR EVEN SEM 2016
JAN 2016 to JUN 2016 A.Y. 2015-16

January 16							February 16							March 16						
Mo	Te	We	Th	Fr	Sa	Su	Mo	Te	We	Th	Fr	Sa	Su	Mo	Te	We	Th	Fr	Sa	Su
30	31			1	2	3	1	2	3	4	5	6	7		1	2	3	4	5	6
4	5	6	7	8	9	10	8	9	10	11	12	13	14	7	8	9	10	11	12	13
11	12	13	14	15	16	17	15	16	17	18	19	20	21	14	15	16	17	18	19	20
18	19	20	21	22	23	24	22	23	24	25	26	27	28	21	22	23	24	25	26	27
25	26	27	28	29	30	31	29							28	29	30	31			

April 16							May 16							June 16						
Mo	Te	We	Th	Fr	Sa	Su	Mo	Te	We	Th	Fr	Sa	Su	Mo	Te	We	Th	Fr	Sa	Su
				1	2	3	30	31					1			1	2	3	4	5
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30			

Registration for all Ph.D./M. Tech./B.Tech./Diploma	:	05th Jan, 2016
Commencement of classes	:	06th Jan, 2016
Last date of Registration (with late fee)	:	09th Jan, 2016
Last date for amendment in registered course(s)	:	14th Jan, 2016
Summer Internship (Ind. Trng) Reports, Grades & Notices	:	25th Jan. 2016
Test I (T-1) (4 days)	:	15th Feb to 18th Feb. 2016 (7th week)
Showing of Answer Scripts of T1 to Students & declaration of Result of T-1	:	25th Feb 2016
De-Equinox/Fest	:	26th to 28th Feb 2016
Meeting of BOM/AC on confirmation)	:	March, 2016 (Dates
Mid Semester Break (Holi) Students & Faculty	:	21st to 26th Mar 2016
Mid Term Seminars of Projects	:	28 Mar to 2 Apr 2016
Practical Examination (P-1) [HODs to issue schedule]	:	4 Apr to 9 Apr 2016
Test 2 (T-2) (4 days)	:	11th Apr to 14th Apr 2016 (15th week)
Showing of Answer Scripts of T2 to Students & declaration of Result of T-2	:	18th Apr 2016
Mid Term Project Viva for all (HODs to issue schedule) 2016	:	20th Apr to 26th Apr
Project Allocations for next Semester	:	07th May 2016
Submission of Projects by all	:	18th May 2016
Practical Examinations (P-2)	:	16May-21May 2016
Students Feed Back	:	16May-21 May 2016
Conclusion of Class for all Courses	:	21st May 2016
Test 3 (T-3) End Sem Examination (6days)	:	23 May-28 May 2016
Summer Vacation (except final year students of B. Tech/ M. Tech & Training for III years students.	:	1st Jun to 16th Jul 2016
Project Viva-Voce of B.Tech./M.Tech. final year students	:	30 May-04 June 2016.
End Semester Presentation of Ph.D. Scholars	:	6 Jun to 11 Jun 2016
Showing of Answer Scripts of ESE to students	:	4th Jun 2016
Submission of Answer Scripts sheet of T-3	:	6th Jun 2016
Submission of Grades of the Semester	:	6th Jun 2016
Submission of grades of Project Viva-Voce of B.Tech./M.Tech. final year students by the Departments/HODs	:	7th Jun 2016
Submission of question paper for Supplementary Examination	:	8th Jun 2016
Result finalization meeting	:	10th Jun 2016
Declaration of Semester Result by the Registrar	:	11th Jun 2016
Semester declared closed	:	11th Jun 2016
Faculty Vacation	:	13Jun-12 Jul 2016
Registration for Supplementary Examinations	:	13 Jun-20 Jun 2016
Makeup Practical Examinations	:	23 Jun-25Jun 2016
Supplementary Examination	:	28Jun-30 Jun 2016
Submission of SEs Result by the Course Coordinators	:	2nd Jul 2016
Declaration of SEs Result by the Registrar	:	3rd Jul 2016
Registration for Next Semester for old students	:	18th Jul 2016

LIST OF HOLIDAYS FOR STUDENTS

Republic Day	:	26th Jan, 2016
Maha Shivratri	:	7th Mar, 2016
Holi	:	23rd Mar, 2016
Ram Navmi	:	15th Apr, 2016

REGISTRAR

2.3.2 **Does the university provide course outlines and course schedules prior to the commencement of the academic session? If yes, how is the effectiveness of the process ensured?**

Course outlines, lecture schedules, time table, study material, learning objectives and outcomes for each course are made available online to all students and faculty members through a file on server in a Resource for Students folder. A thoughtfully prepared lecture plan is also provided to students at the beginning of the course by course coordinators. A sample course outline and lecture plan are given below:

<div align="center">

COURSE DESCRIPTION
</div>

Title: Physics-I (Common for all branches)
Course Code: **14B11PH111**   (3 1 0)   **Credit:**   **4**

Objective & Learning outcomes
Broadly, the study of Physics improves one's ability to think logically about the problems of science and technology and obtain their solutions. The present course is aimed to offer a broad aspect of those areas of Physics which are specifically required as an essential background to all engineering students for their studies in higher semesters. At the end of the course, the students will have sufficient scientific understanding of different phenomena associated with modern developments in Physics.

Course Outline

Relativity: Frames of reference, Galilean transformation, Michelson Morley Experiment, Postulates of special theory of relativity, time dilation and length contraction, twin paradox, Lorentz transformations, addition of velocities, Relativistic Doppler effect, Mass variation with velocity, Mass-energy relation, electricity and magnetism. Brief discussion on General theory of Relativity, Black holes, bending of light by gravity, gravitational red shift, global positioning system(GPS).   (10 Lectures)

Elements of Quantum Mechanics:

Quantization of Radiation: Black body radiation, Wein,s law, Rayleigh Jeans law, Planck's law of radiation, photo electric effect Compton scattering.

Quantization of Matter: Atomic spectra, Bohr model of hydrogen atom, Frank hertz experiment, Matter waves, de Broglie hypothesis, Davisson Germer experiment, wave packets, phase and group velocity Heisenberg's uncertainty principle, Schrödinger wave equation and its applications to the free particle in a box, potential barrier and Harmonic oscillator. Quantum numbers, Spin and orbital angular momentum, L-S and j-j coupling, Atoms in magnetic field, Zeeman effect.   (15 Lectures)

Statistical Mechanics: Micro and Macro states, temperature and the partition function, Concept of Entropy, Shannon's information entropy, Maxwell-Boltzmann, Bose-Einstein and Fermi-Dirac distributions and their applications.   (7 Lectures)

Elements of Solid State Physics: Basic ideas of bonding in solids, Crystal structure, X-ray diffraction, Band theory of solids, Distinction between metals, semiconductors and insulators. (5 Lectures)

Lasers: Principle and working of laser, Different types of lasers (He-Ne Laser, Ruby Laser, Semiconductor Laser), Applications of Lasers, (3 Lectures)

Text Book

1. A. Beiser, Concepts of Modern Physics, 6th Edition, Tata McGraw Hill.

Reference Books

1. J. R. Taylor, C. D. Zafiratos, M A Dubson, Modern Physics for Scientist & Engineers, Pearson Education.
2. K. Krane, Modern Physics, Wiley India
3. J. Bernstein, P M Fishbane, S Gasiorowicz, Modern Physics, Pearson Education.
4. B. B. Laud, Laser and Non-Linear Optics, New Age International (P) Ltd.
5. R. Resnick, Introduction to Special Relativity, John Wiley & Sons.

Detailed Lecture Plan

Title: Physics-I (Common for all branches)
Course Code: 14B11PH111   (3 1 0)   Credit: 4

Theory of Relativity

1. Fundamental ideas of Newtonian Mechanics, frames of references, Galilean transformations,
2. Michelson-Morley Experiment and its outcome.
3. Inadequacy Galilean relativity, Postulates of Special Theory of Relativity, Lorentz's Transformation.
4. Consequences of Special Relativity e.g., length contraction and time dilation, twin paradox, relativistic addition of velocities.
5. Relativistic Doppler effect, Momentum in light of special relativity
6. Variation of mass with velocity, mass-energy equivalence,
7. Relativity and Electromagnetism.
8. Noninertial frames of reference and basic ideas of General Theory of Relativity.
9. Black Holes and Bending of light by gravitational field.
10. Gravitational Redshift and Global Positioning Systems.

Introductory Quantum Mechanics

11.   A brief discussion about inadequacies of Classical Mechanics in experiments dealing with radiation and atomic phenomena.
12. Quantization of Radiation: Introduction to Black-body radiation, Rayleigh-Jeans law, Wien's distribution law.

13. Quantization of Radiation: Planck's hypothesis of light quanta and correct explanation of black-body radiation.
14. Quantization of Radiation: Compton Effect, Photoelectric effect
15. Quantization of Matter: Atomic Spectra, Bohr's of Hydrogen atom, Franck-Hertz Experiment.
16. Quantization of Matter: de Broglie's hypothesis and matter waves, Davisson-Germer Experiment,
17. Wave packets, phase and group velocity of wave packets. Heisenberg's Uncertainty Principle and its applications.
18. Quantization of Matter: Introduction to Schrödinger's equation, postulates of quantum mechanics, Probabilistic interpretation of wavefunction.
19. Applications of Schrödinger's equation in cases of free particle and particle confined to a one-dimensional box.
20. One dimensional potential step and potential barrier. Quantum mechanical tunneling.
21. Quantum mechanical treatment of simple harmonic oscillator.
22. Brief introduction to quantum mechanical problems in three dimensions, central field problems.
23. Discussion of quantum mechanical treatment of hydrogen atom (Qualitative).
24. Quantum numbers. Orbital and Spin angular momenta, L-S and J-J couplings.
25. Atoms in magnetic fields, Zeeman Effect.

Statistical Mechanics

26. General introduction of applications of statistics in mechanics. Macroscopic and microscopic systems.
27. Micro and Macro States, Temperature and Partition Function.
28. Concept of Entropy and its connection with statistical mechanics.
29. Shannon Entropy in Information theory.
30. Maxwell Boltzmann Statistics and its applications.
31. Bose-Einstein Statistics and its applications.
32. Fermi Dirac Statistics and its applications.

Elements of Solid State Physics

33. Basic ideas of bonding in solids.
34. Crystal structure.
35. X-Ray Diffraction.
36. Introduction to Band Theory of Solids.
37. Distinction between metals, semiconductors and insulators on the basis of band theory.

Lasers:

38. Principles and working of LASERs.
39. Types of LASERs *e.g.,* He-Ne LASER, Ruby LASER and Semiconductor LASERs
40. Applications of LASERs.

The effectiveness of this process is ensured by continuous upgradation of content and plan based on the feedback. A course work file is maintained by every faculty taking a course. Course work file contains lecture plan, tutorials and their solutions, test papers and solutions and important notes. At the end faculty member taking the course shares

his experience in the form of detailed remarks and suggestions. Appropriate modifications are then recommended by departmental BOS for inclusion of these suggestions.

2.3.3 Does the university face any challenges in completing the curriculum within the stipulated time frame and calendar? If yes, elaborate on the challenges encountered and the institutional measures to overcome these.

There has been no overrun slippage in the academic calendar schedule. The course coordinator of each course acts as a nodal point and coordinates with other faculty taking the same course. Regular meetings (with in the department) of the faculty members are held to ensure the timely completion of the course. The faculty lagging behind takes extra classes to meet the timeline.

2.3.4 How is learning made student-centric? Give a list of participatory learning activities adopted by the faculty that contributes to holistic development and improved student learning, besides facilitating life-long learning and knowledge management.

he University lays emphasis to make the learning process to be student-centric. University offers Choice Based Credit System in line with UGC initiative. Availability of large number of electives through flexible academic system offer opportunity to students to study the courses of their choice. Participatory learning activities adopted by the faculty that contributes to holistic development and improved student learning may be summarized below:

➢ Small group tutorials and Assignments, Laboratories.

➢ Project based learning through mini, minor and major Projects.

➢ Curricula based presentations / talks by a student or group of students on topics of current interest.

➢ Presentation on findings of certain research papers on a specific problem. Case studies/ business games for discussions in the classrooms.

➢ Technical competitions, Regular organization of various technical events related to programming, robotics, multimedia, game design, web design, etc.,

➢ Encouraging participation by students in Conference, Guest lectures, and industry conducted workshops.

2.3.5 What is the university's policy on inviting experts/people of eminence to deliver lectures and/or organize seminars for students?

Experts from Industry and academia are invited for specialized inputs on regular basis. University bears the cost for such visits. The technical societies running at University also organize lectures / seminars and interactions from people of eminence. The eminent people visiting campus for evaluation of M.Tech./ Ph.D. thesis, attending BOS/Academic Council and Detail of few such expert talks organized in last 3 years are given below:

SI. No	Year	Title of the special lectures/ workshops / seminar	Resource person
1	2015	Workshop on "Mobile Controlled and autonomous Robotics" from April18-19, 2015	Mr. Saurav Bharadwaj (Techinest)
		Workshop on Tall Buildings from May 01-03, 2015	Mr. Ankur Jain (Civil Simplified)
		Workshop on Vehicle Overhauling from May 02-03, 2015	Mr. Anish Garg (Prigma Edutech)
2	2014	Expert lecture on "Genetic Algorithm", on April 26, 2014.	Prof. G. N. Panda (IIT Bhubaneshwar)
		Workshop on "Automobile Mechanics & IC Engine Design" by MBS Group during April 26-27, 2014	Experts from MBS Group
		Workshop on "Industrial Automation (PLC/SCADA System)" by SOFCON Bhopal on April 26-27, 2014.	Experts from SOFCON
3	2013	Workshop on "Cyber security – Ethical Hacking" April 21, 2013.	Mr. Ankit Fadia
		Workshop on "Eye-Botics", April 19-20, 2013.	Mr. Sudesh Morey

2.3.6 Does the university formally encourage blended learning by using e-learning resources?

Yes, University formally encourages blended learning by using e-learning resources. State-of the-art teaching learning facilities are created to formally blend the e-resources with conventional methods of teaching and learning.

2.3.7 What are the technologies and facilities such as virtual laboratories, e-learning, pen educational resources and mobile education used by the faculty for effective teaching?

An excellent infrastructure which facilitates use of e-learning and open educational resource is created by the University. Every lecture theatre and classroom is equipped with a projector attached to a computer having LAN connection. Entire campus (academic area, student hostels and faculty residences) is connected through LAN equipped with 1Gbps lease line internet connectivity. The Learning Resource Centre (Library) of the University has rich collection of e-resources like e-books and e-journals; open and subscribed along with print resources. In addition, the University has the big CD-ROM databases facilitating quick e-survey of the literature/books by giving only keywords.

Use of projectors with internet facility brings animations, videos, power point presentations in the class room making understanding of a subject easier and interesting. Student resource folder on LAN server allows faculty members to interact with the students outside the classroom. Faculty members can provide useful study material such as class-notes, assignments, etc. to students through LAN. Faculty

member also utilizes courses from NPTL, National Mission on Education through Information and Communication Technology (NME-ICT) and other Universities like MIT, Stanford, CMU, Harvard etc. and open source facilities for enrichment of learning exercise of students. Prof. R C Chakraborty, one of the visiting professor, is maintaining a website *www.myreaders.info* which provides updated learning material. Use of software providing a virtual laboratory experience is encouraged for meaningful analysis of the experimental data collected/acquired by them. List of such resource used by the faculty members is given below:

Name of Software providing Virtual Lab experience	Department
CSE- Packet Tracer 6.2, Network Simulator (NS-2) 2.34 , Qualnet 5.2 , Opnet IT Guru Academic Edition, LAN Trainers (Hardware Based Virtualization Tool).	Computer Science & Engineering
Pro/ENGINEER CAD software, Abaqus FEA software, Worldwide Guide to Rapid Prototyping	Mechanical Engineering
STAAD:PRO, Primavera	Civil Engineering
CFD, ANYSIS, CHEMCAD	Chemical Engineering

2.3.8 **Is there any designated group among the faculty to monitor the trends and issues regarding developments in Open Source Community and integrate its benefits in the university's educational processes?**

The University has a LRC committee which monitors overall functioning of LRC. The committee is composed of; Dean as Chairman, Registrar and all HODs as its Member and Librarian as Member Secretary
Librarian continuously monitors all open source educational materials and disseminates the same to faculty and students.

2.3.9 **What steps has the university taken to orient traditional classrooms into 24x7 learning places?**

The use of modern multimedia teaching aids like LCD projector, E-Display Board and computer systems have changed the traditional classroom teaching. Students on the campus have 24x7 accessibility of e-resources (e-books, e-journals, case studies, etc.), study materials on the resource for students, NPTEL, virtual labs of NMEICT, etc., through internet/LAN facility. Faculty members can also evaluate tutorials/assignments etc. with access rights to N-drive of students.

2.3.10 **Is there a provision for the services of counsellors / mentors/ advisors for each class or group of students for academic, personal and psycho- social guidance ? If yes, give details of the process and the number of students who have benefitted.**

Yes. The University has a process of student mentoring in which a faculty member serves as a mentor for about 15-20 students of first year of B. Tech. programme. In the beginning of a semester, details of mentors (batchwise) are notified, put up on the notice boards and intranet for the information of students. Faculty member as mentors holds

informal meetings with the students and advice them on academic and personal matters. Students are free to contact the mentor for any academic or personal problems.

A. Academic Guidance:

For academic guidance by the Mentors/Advisors, following guidelines are followed.

- A mentor would have access of academic record (attendance and marks obtained in tests) of students of their group through web kiosk which at any point of time can be viewed for assessment of performance of a student.
- Advisors would meet with underperforming students after formal tests and discuss their problems, assess their requirements and advise them accordingly for better academic performance.
- Seek the intervention from the HODs and other authorities to resolve the problems of the students, if necessary.

B. Psycho-Social and Personal Guidance:

Other than the faculty Mentors/Advisors, University has one professional psychologist on its role. Students can approach her for any psycho-social problem.

2.3.11 Were any innovative teaching approaches/methods/practices adopted/ put to use by the faculty during the last four years? If yes, did they improve learning? What were the methods used to evaluate the impact of such practices? What are the efforts made by the institution in giving the faculty due recognition for innovation in teaching?

University follows student centric and innovative practices for teaching. The significant teaching innovations made in the last four years are mentioned below:
- Interactive lectures using various audio-visual aids like LCD Projectors, Visualizer, etc., in addition to Black /White board.
- Innovative teaching methods such as group discussions, seminars/ student presentation for better understanding of concepts/ technologies**.**
- Tutorial classes for one to one interaction. Opportunity for application of concepts learned in lecture classes.
- Due emphases on learning by doing. Lab courses are separated from theory courses. Continuous evaluation during lab classes enhances hands on learning.
- Presentations and Seminars.
- Project based learning through mini, minor and major Projects
- Industrial internship.
- Use of online educational resources as supplements. Accessibility of e-resources (e-books, e-journals, case studies, etc.), study materials on the resource for students, NPTEL, virtual labs of NMEICT, etc., through internet/LAN facility
- Faculty and students are connected even outside the classroom through social media and LAN.
- Feedback from students for continuous improvement in content and delivery.

The effectiveness of use of innovative methods is reflected in student's feedback and acceptance with enthusiasm. A faculty member applying successful innovations in teaching earn due respect and professional recognition by the University.

2.3.12 How does the university create a culture of instilling and nurturing creativity and scientific temper among the learners?

Following efforts are made to nurture critical thinking, creativity and scientific temper among students:

- Technical societies organize technical activities, workshops, seminar, etc. Technical Fests like '**Dextra**' organized by the University provide a platform for technical innovations.
- Various activities like debate, extempore speaking, essay competition, seminars, group discussions, symposia, poster presentations, field survey, etc. are organized throughout the year under the banner of JYC (a student forum).
- JYC bring out student's hidden talent and creativity by organizing various activities.
- Minor and major projects instill scientific temper among the learners.
- Students are encouraged to participate in technical fests and other creative events organized by reputed institutions. List of students participation in University / State /Zonal / National / International level technical / co-curricular activities, during previous four years is given below:

Name of Students	Detail of achievement
Chitresh Kumar Bhargva (B.Tech student)	• Selected for the first prize for best under graduate research paper in India. Prize and citation will be given to him in 68 IICHE meeting at IIT Guwahati in Dec 27-30, 2015.
Utkarsh pandey (B.Tech student)	• Selected for Microsoft Student Partner for 2014-16
Vishabh Chauhan, Kushwant Singh Chouhan, Yamini Gupta, and Vishal Mishra (B.Tech students)	• Selected for Microsoft Student Associates 2014-16
Priyam Srivastava (B.Tech student)	• Selected for the Firefox Student Ambassadors 2014-16
Pulkit Sharma (B.Tech student)	• Selected for the Hackerearth Student Ambassador, 2014-16.
Prashant Agrawal (B.Tech student)	• Selected by GOOGLE as the Google Student Ambassador to represent Jaypee University of Engineering & Technology for academic year 2013-14.
Yash Raj Singh (B.Tech student)	• Won the student scholarship for GOPHERCON India 2014. • Ranked in Top 10 Apps developers in National event of Google Cloud Developer Challenge, December 2013. • Finalist in Google cloud developer's challenge 2013.
Prashant Agrarwal (B.Tech student)	• Selected for the Google for Education: Student Ambassador Program, 2013-14.
Keshav Goel (B.Tech student)	• Selected for Microsoft Student Partner for 2013-14

Harshit Sharma	• Selected for the Firefox Student Ambassadors 2012-14
Shivam Rana, Anmol Arora and Shivam Singh (B. Tech students)	• Cleared the 1st round in onsite event of ACM ICPC held at IIT Kanpur, during December 12-13, 2012.
AKhil Garg (B.Tech student)	• Selected for the Microsoft Student Partner Program for 2010-10.
Anshul Sharma (B.Tech student)	• Secured 2nd position in war of bands held at Maffick (Annual Cultural fest of NIT Bhopal). • Won 2nd position in Footsal event held at Dequinox 2014 (Annual Cultural fest of JUET Guna).
Bhoomik Sharma (B.Tech student)	• Received Model United Nations Awards at Amity University (Noida), 2015. • Received Model United Nations Awards at Ansal University (Gurgaon), 2015. • Received Model United Nations Awards at LNMIIT (Jaipur), 2015. • Received Model United Nations Awards at JUIT Wakhnaghat, 2014.
Rajat Garg (B.Tech student)	• Won the first prize in the event Maglev at IIT Kharagpur, 2014-15.
Siddhant Mukherji, Vikram Jangir and Shivam Chawla (B.Tech student)	• Secured first position in aero dynamic event "Impulse" in Techkriti at IIT Kanpur, Feb, 2012.
Pulkit Verma (B.Tech student)	• Secured first position in "Vaigyaniki" National Level Paper Presentation at IIT Bombay. March 3-4, 2012. • Awarded 1st prize for 'Ergonomic rotary Joint' in RADIANCE 2012, national level project-paper presentation at the annual technical festival of Mechanical Engineering, IIT Bombay. • Awarded 2nd prize in the event 'GREEN MEDIA' in Techkriti 2012 – Annual Technical Fest of IIT Kanpur for making a video promoting Environmental Conservation. • Awarded 2nd prize in 'Technical Paper Presentation' organized by Mechanical Engineering Society, at JUET Guna for 'Ergonomic rotary Joint' • Awarded 3rd prize in 'Tech Talks', a national level paper presentation at annual technical fest of JUET – 'DEXTRA 2012' for 'Ergonomic rotary Joint' • Awarded 1st prize in 'Paryavaran', an event at the annual technical fest of

	JUET – 'DEXTRA 2012' for 'To provide a non-conventional method for treatment of water" • Awarded 2nd prize in 'Blindfold Sketching' at the Annual Technical Fest of JUET 'Dextra 2011' • Awarded 2nd prize in 'Software roadies' at the Annual Technical Fest of JUET 'Dextra 2010'
Param Tripathi (B.Tech student)	• Secured 1st position in Carrus-2012 (University Annual Automobile Quiz) conducted by MES. • Secured 1st position in War of Bands Dequinox-2012 (University Annual Cultural Fest). • Secured 2nd position in Technocryptic-2010 (University Annual Technical Quiz) conducted by ISF in association with IETE.
Anuj Sharma (B.Tech student)	• Secured 3rd position in the event "Engineering Mechanics" in Dextra 2010 organized by IETE. • Secured 2nd position in the debate competition organized in Ghaziabad at the district level.
Shubham Vijay (B.Tech student)	• Awarded 2nd prize in Tech-Design during Tech-Fest • Awarded 2nd in Quiz competition in Literary-Fest
The team "Nirvana", a group of B.Tech- students	• Has passed virtual round of BAJA SAE INDIA - 2014 event held at Shri Venkateshwara College of Engineering, Bangalore on July 26, 2013.
The team "Acriolis Cruzaders"- , a group of B.Tech- students	• Has passed virtual round of EFFICYCLE SAE INDIA- 2013 event held at Amrutvahini College of Engineering, Sangamner, Maharastra on June 29, 2013.
The team of Nineteen B.Tech students	• Achieved 13th Rank in the finals of the National Go-Kart Championship held in Bhopal and Indore after a rigorous screening procedure, (AY: 2014-15).
Chaitanya R. Goyal (B.Tech. Student)	• Article on 'Eco Trends for 'Greener' homes: Insulation' published in 'The Masterbuilder' India's premier construction magazine, pp. 216 – 222. 2012 • Attended and presented the work in 4th KKU -International Engineering Conference, (KKU-IENC2012), May, 10 – 12, Thailand.

Anurag Sharma, Anant Jain, Azher Ahmed Khan, Brijbhan Lodha, Harsh Sharma, Jasveer Singh Raghuvanshi, Prateek Shukla and Pranjul Agrawal (B.Tech. Student)	• Participated in workshop on 'Testing of Soil & Highway Materials' during 21-22 October, 2012 at Jaypee University of Engineering and Technology, Guna
Sudhir Jain (B.Tech. Student)	• Participated in 4th WBPF World Championship held at Bangkok, Thailand during 04-12 Dec, 2012 and secured 6th position in Junior men under 75 kg body building.
Gaurav Gupta (B.Tech. Student)	• Selected in Build India scholarship conducted by Larsen & Turbo.
Anmol Tandon (B. Tech student)	• Won first prize in a Tech Fest Kshitij 2015 held at I. I. T. Kharagpur

2.3.13 Does the university consider student projects mandatory in the learning programme? If yes, for how many programmes have they been (percentage of total) made mandatory?

* Number of projects executed within the university
* Names of external institutions associated with the university for student project work
* Role of faculty in facilitating such projects

Projects (minor and major) and Industrial Training / Internship are essential components of all B. Tech. programmes. Generally all projects are executed in the University. However, few final year students placed in Infosys, Accenture and other companies are allowed to do their 8th semester project work in the industry site. Few students of B. Tech. (CSE) are also working on live Project in start-up companies like, Pure Cloud Technology, Mumbai; Notesgen, New Delhi; Iry Tech, New Delhi; Currently Pure Cloud Technologies is providing stipend to three students of B. Tech (CSE) for their contribution of live project problems.

Project allocation

Following are the involved steps for major project allocation:

Step-1: The process of major project allocation is initiated in the last week of April each year. Projects are allocated based on the domains/areas of faculty members and the interest of the students. Major projects are carried out in groups of 3-4 students.

Step-2: Students submit their choice form for major project giving their CGPA, and ordered list of faculty members/domain.

Step-3: Allocation of guides is made on the basis of choice Performa submitted by the students.

Role of faculty members in facilitating projects:

1. On day to day basis, faculty members help major project student(s) in formulation of problem statement, solution approach, design, implementation, testing etc. If required, two faculty members can jointly supervise the major project.
2. Depending on the additional hardware, software, and consumables required for the major project, faculty members initiate the process of procurement.
3. Evaluation is performed by the faculty. Following evaluation scheme be followed in each semester while evaluating and awarding grades:
   (i) Day to day work   -   35% awarded by the supervisors.
   (ii) One Mid-Term Seminar-   15 % awarded by a panel of faculty members.
   (i) One Viva-Voce Examination between Test-1, T-2 and Test T-3 - 15 % awarded by a panel.
   (iv) Project Report - 15% awarded by the supervisors.
   (v) Final Viva-Voce/Defense - 20 % awarded by a panel of three teachers including Supervisors. In case of M.Tech. programmes, External examiner shall be part of the panel.

2.3.14 Does the university have a well qualified pool of human resource to meet the requirements of the curriculum? If there is a shortfall, how is it supplemented?

Yes, University has well qualified human resources to meet all requirements of the Curriculum. Sharing of expertise from visiting faculty and adjunct professors further add quality to available human resource. Summary of the faculty available in the university is given in section 2.4.2.

2.3.15 How are the faculty enabled to prepare computer-aided teaching/learning materials? What are the facilities available in the university for such efforts?

Yes, Each Faculty member is provided with a dedicated networked computer with broadband internet connection and required software. Twenty four hour Internet facility is made available in the office and campus residence through a dedicated 1Gbps lease-line. Other required support like printer and scanner are also available for preparing computer-aided teaching/learning materials. All class rooms are equipped with networked computer, multimedia projector, internet facility, and PA system. Faculty members are individually provided a password protected network drive (named N:) accessible from all class rooms / University network.

2.3.16 Does the university have a mechanism for the evaluation of teachers by the student/alumni? If yes, how is the evaluation feedback used to improve the quality of the teaching-learning process?

Yes, At the end of each semester, feedback is obtained from students for each and every course (theory and practical). Apart from the teacher performance, feedback about course content, its adequacy and usefulness is also obtained. This feedback is consolidated and an index is calculated. Other than this index, any extraordinary comment or suggestion is also conveyed to the teacher for necessary implementation for improvement of the quality of the teaching-learning process. This helps in reviewing/redesigning the courses and improving the teaching learning outcome. A sample of feedback form is attached in Annexure – 2.3.16.

2.4.   TEACHER QUALITY

2.4.1   How does the university plan and manage its human resources to meet the changing requirements of the curriculum?

JUET being a private unaided institution, the Board of Management (Governing Body) has approved that the faculty be decided and enrolled based on the assessed requirements. Flexibility has been allowed to cater for additional recruitment whenever needed without any restraint on the numbers. This ensures smooth conduct of programmes, and enables the University to meet the requirement due to changes in curriculum and additional courses. While doing so, the norms and parameters laid down by the UGC/AICTE for faculty are observed for compliance.

The University has a well defined system of recruitment in place to ensure that the best faculty with desired capability and qualification is inducted. For engineering and humanities and social sciences departments, the qualification for faculty position in the University is Ph.D. / M. Tech. / MBA from a reputed institution preferably with some teaching/industrial experience. For the departments like, Physics, Mathematics and Chemistry, the candidates with Ph.D. are recruited. The recruitments for JUET are done either at the University level or centrally along with other Institutions sponsored by Jaypee Group. The steps involved in the recruitment process are as follows:

Step-1: The faculty requirement of various departments is identified keeping in view the specialization of areas and courses to be taught, changes in curricula, availability of resources, additional requirement keeping the loads in the forthcoming time and likely attrition. The process helps in identifying the required numbers and areas of specialization.

Step-2: Faculty positions are advertised in the National Dailies, besides uploading the requirement on the University website under career openings.

Step 3: The candidates are shortlisted for the interview based on specific requirements by screening committee constituted by the Vice Chancellor.

Step 4: Faculty members are selected on the basis of their merit, research experience and their performance in personal interviews by a panel comprising of experts both from the University and reputed external institutes.

University also has provision for employing visiting faculty. Such faculty is invited based on their experience, high degree of research knowledge or industrial experience to conduct the courses as part of curriculum. These visiting faculties conduct various specialized courses in engineering programme. Further, the University has been empowered to enroll adjunct faculty on its rolls. Such services were frequently used in the past. The list of visiting faculties who have rendered their services to the University is given in section 2.4.5.

In addition, guest lectures by eminent people from industry / academia greatly assist in enriching the contents in the advanced courses. The University continuously strives to improve the faculty ratio, keeping the quality and experience as a prime requirement in view. The rich quality and strength of faculty enables the University to launch the best of the courses in its curricula as necessitated by the changing trends. Further, the University

ensures the up-gradation of knowledge base of faculty through faculty development/ recharge programmes.

2.4.2 Furnish details of the faculty

Highest Qualification	Professors		Associate Professors		Assistant Professors		Total
	Male	Female	Male	Female	Male	Female	
Permanent Teachers							
D.Sc./D. Litt.	-	-	-	-	-	-	-
Ph.D.	07	00	04	01	34	03	49
M. Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	40	08	48
Temporary Teachers:- NA							
Ph.D.	-	-	-	-	-	-	-
M. Phil.	-	-	-	-	-	-	-
PG	-	-	-	-	-	-	-

2.4.3 Does the University encourage diversity in its faculty recruitment? Provide the following details (department/school-wise)

To attract the best human resource, the University strongly supports diversity in its faculty recruitment. All the recruitments of faculty are pan-India, details available in below mentioned Table.

Department		Percentage* of faculty from			
		The same university	Other universities within the State	Universities outside the state	Other country
CSE	Ph.D.	50	0	50	0
	PG	0	45	55	0
ECE	Ph.D.	42	29	29	0
	PG	0	58	42	0
CHE	Ph.D.	33	0	67	0
	PG	0	0	100	0
CE	Ph.D.	40	0	60	0
	PG	0	38	62	0
MEC	Ph.D.	28	0	72	0
	PG	0	23	77	0
Physics	Ph.D.	0	0	84	16
	PG	0	33	67	0
Mathematics	Ph.D.	40	0	60	0
	PG	0	40	60	0
Chemistry	Ph.D.	0	0	100	0
	PG	0	0	100	0
HSS	Ph.D.	33	33	34	0
	PG	0	40	60	0

* For Ph.D., percentage is calculated out of total Ph.D. degree holders and Percentage of PG is calculated out of total strength of the Department.

2.4.4 How does the university ensure that qualified faculty are appointed for new programmes / emerging areas of study (Bio-technology, Bio informatics, Material Science, Nanotechnology, Comparative Media Studies, Diaspora Studies, Forensic Computing, Educational Leadership, etc.)? How many faculty members were appointed to teach new programmes during the last four years?

For starting new programmes / emerging areas of study, concerned Department carries out gap analysis in terms of required expertise. The requirement is communicated to university level for initiating recruitment. Thereafter, it is considered at the University level and further steps are taken for the recruitment of new faculty as elaborated in 2.4.1. This process is carried out at least once in a year. Department-wise faculty recruited to address the needs including those of new programmes and emerging areas of study in the last four years is given in table below:

Department	Session of recruitment			
	2012-13	**2013-14**	**2014-15**	**2015-16**
Computer Science & Engineering	03	01	01	0
Electronics & Communication Engineering	05	03	01	0
Chemical Engineering	02	02	00	0
Civil Engineering	02	01	01	02
Mechanical Engineering.	05	05	03	02
Physics	00	01	01	00
Mathematics	01	02	00	00
Chemistry	00	00	00	00
Humanities & Social Sciences	02	01	00	00
Total	**20**	**16**	**07**	**04**

2.4.5 How many Emeritus/Adjunct Faculty / Visiting Professors are on the rolls of the university?

In the past, the University has invited number of distinguished academia as Emeritus/ Adjunct Faculty / Visiting Professors for providing input for enhancement of quality and for conducting various advanced courses. At present two Adjunct faculty are providing their services to the university.

Name	Address	Period of Association	Emeritus/Adjunct Faculty / Visiting Professors	Services Provided to JUET, departments
Prof. K L Chopra	Former Director, IIT, Kharagpur	24.12.2007 to 30.04.2011	Emeritus	Advisor to JUET
Prof. K K Tiwari	U I C T, Mumbai	15.04.2003 to 30.06.2014	Visiting Professor	Chemical Engineering
Dr. A K Mullick	Formerly Director General, National Council for Cement & Building Materials, Govt. of India, New	29.12.2005 to 31.12.2013	Visiting Professor	Civil Engineering, Chemical Engineering

	Delhi.			
Dr. R C Chakraborty	Formerly Director of DTRL and ISSA, DRDO	01.02.2006 to 31.12.2013	Visiting Professor	CSE
Dr. Carsten Mueller	Faculty of Informatics and Statistics, University of Economics in Prague, Czech Republic	08.05.2015 till date.	Adjunct Faculty	CSE
Dr. Aniket Mahanty	University of Auckland, New Zealand	24.02.2015 till date.	Adjunct Faculty	CSE

2.4.6 **What policies/systems are in place to academically recharge and rejuvenate teachers (*e.g.* providing research grants, study leave, nomination to national/international conferences/ seminars, in-service training, organizing national/ international conferences etc.)?**

The University has a well defined policy to academically recharge / rejuvenate faculty members. Following are the details of such policies of the University:

i. **Continuous financial support for research** to the faculty members for consumables, like glassware, chemicals, etc., minor and major equipment, software, etc. The requirements from the individuals /department are discussed and budgetary approvals are made on the case to case basis.

ii. To enhance research, research scholars are associated with the faculty. Most of the Full time research scholars are provided **Research fellowship of ₹ 18,000 per month** by the University.

iii. University encourages faculty/departments **for organizing national and international conferences / workshops/ seminars etc.** For this full / partial financial support is provided by the University.

iv. **Financial support for organizing expert talks by distinguished visitors** from academia and industries to speak on key/emerging areas is provided by the University. These visits broaden the knowledge and exposure of the faculty to key/emerging areas.

v. Partial **financial support for travel and registration** for attending conferences / workshops etc. is provided by the University on case to case basis.

vi. **Study leave is provided to the faculty** for research collaboration.

vii. Faculty is encouraged to attend General Orientation Courses, Refresher Courses, Training Programmes and Workshops.

Details of such supports provided by the University in the last five years are presented in section 3.1.7.

2.4.7 **How many faculty received awards / recognitions for excellence in teaching at the state, national and international level during the last four years?**

Nil

2.4.8 How many faculty underwent staff development programmes during the last four years (add any other programme if necessary)?

Faculty members are encouraged and supported to undergo faculty development programmes. The table below presents number of the faculty who underwent different faculty development programmes during last four years.

Academic staff development programmes	Number of faculty members
Refresher Courses	2
HRD Programmes	0
Orientation Programmes	10
Staff Training Conducted by the university	34
Staff Training Conducted by other institution	4
Summer /Winter schools, workshops etc.	41

2.4.9 What percentage of the faculty have
   * been 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?
   * teaching experience in other universities / national institutions and other institutions?
   * Industrial engagement?
   * International experience in teaching?

Summary of faculty participation in workshops/ conferences/ seminars and their teaching / industrial / research experience is given in table below:

Particulars	Faculty Number (total visits)/ (%)
Resource persons in workshops/ seminars/ conferences organized by external professional agencies	18(43)/ 19 %
Participation in workshops/ seminars/ conferences recognized by external professional bodies	57(78)/ 59%
Presented paper in workshops/ seminars/ conferences conducted or recognized by professional agencies	54(113)/56%
Teaching experience in other universities/ national institutions and other institutions	16(25)/17%
Industrial Engagement	6(6)/7%
International experience in teaching	0(0)/ 0%

2.4.10 How often does the university organize academic development programmes
   ***e.g.*: curriculum development, teaching-learning methods, examination**
   reforms, content / knowledge management, etc.) for
   its faculty aimed at enriching the teaching learning process?

The curriculum development, teaching-learning methods, examination reforms, content / knowledge management, etc. are taken up through departmental board of studies and subsequently by Academic Council. Board of studies and Academics Council meets twice in an academic year.

2.4.11 Does the university have a mechanism to encourage
*Mobility of faculty between universities for teaching?
* Faculty exchange programmes with national and international bodies?

The University has made provisions for movement of faculty to foreign universities for teaching and research under faculty exchange programmes and fellowships. For this, MOUs with several foreign universities and Jaypee Education System have been signed. Jaypee Education System is combined initiative of all Universities sponsored by Jaypee Group and JUET is part of it. University has established formal linkages through MOUs signed with several institutions for exchange of faculty, researchers and students for teaching, research and training. These universities/ organizations are:

1.   The Alliance of 4 Universities (A-4U) of Spain

2.   University of California, Berkeley, USA

3.   University of Florida, Gainesville, USA

4.   University of Nebraska, Omaha, USA

5.   Centre of Artificial Intelligence and Robotics (CAIR), DRDO, India

The University is also a part of the Fulbright programme run by the United States-India Educational Foundation (USIEF), under which there are helpful provisions for faculty exchange with US universities.

If yes, how have these schemes helped in enriching the quality of the faculty?

The University is very young. Any such faculty exchange under this scheme is yet to come.

2.5   Evaluation Process and Reforms

2.5.1   How does the university ensure that all the stakeholders are aware of the evaluation processes that are in place?

The evaluation process followed at the University is widely publicised to all its stakeholders (students, parents and faculty) and it is ensured that they have complete knowledge of the process at all stages. Various measures taken for this are as follows:

a. Issue of hard copy of handbook ─The Academic System and Standing Orders on Regulations of various programmes to all students at the time of joining the University.

b. The soft copies of the same are placed on the website, which can be accessed by all.

c. The soft copy is also available to all the students and faculty on intranet /study material folder.

d. Important extracts and procedures are also displayed on the notice boards.

e. Changes in the rules and regulations are regularly informed to all concerned through e-mails, notice boards and website.

f. All students are put through the orientation programme at the time of joining, where evaluation methods are explained.

g. All subject teachers are required to explain the evaluation methodology to the students in the first period of each course at the beginning of semester.

h. Results of various examinations are made available to the students and their parents through web kiosk (ERP software) maintained on University website.

2.5.2 What are the important examination reforms initiated by the university and to what extent have they been implemented in the university departments and affiliated colleges? Cite a few examples which have positively impacted the examination Management system. About affiliated colleges

The University has always been open to reforms in evaluation / examination process to achieve transparency, timeliness, objectivity and fairness in evaluation, student satisfaction etc. Some progressive examination related practices being followed are:

a. An academic calendar is issued every year in March /April before commencement of the academic year in July. The calendar is strictly followed and no changes in it are permitted unless some unforeseen/unavoidable circumstances develop. The results of all programmes are announced on schedule as per the academic calendar. In addition, the grade sheets/transcripts are issued to the students at the end of each semester and programme respectively.

b. The students are invited to see their answer books of a written examination after the teacher has evaluated them. They are free to put forward their arguments to the teacher wherever there is a disagreement. The teacher takes appropriate action as per merit of the case. Final result is prepared only after this exercise.

c. The results and grades are discussed and moderated at the level of department as well as institution for commonality and uniformity. Before finalizing the result, the provisional grades are displayed on the University notice boards and students are provided an opportunity to point out discrepancy, if any. The student is given every chance to seek redressal for any examination related grievances.

d. Whenever a course is taught by more than one faculty member, course coordinator takes the lead and involve all the members in question paper setting, evaluation and grade calculation to maintain uniformity across batches.

e. There is a system of question paper moderation so that the quality of question papers can be monitored and corrected if necessary. Moderation committee is comprised of course coordinator, HOD and some other members nominated by Head. Dean (A&R) has issued well documented guidelines for question paper setting for examinations. These guidelines give distribution of questions and type of questions to be set to emphasize higher level of learning.

f. Randomly generated seating plan for students using webkiosk for each shift reduces cases of peer copying.

About affiliated colleges- Not applicable.

2.5.3 What is the average time taken by the university for declaration of examination results? In case of delay, what measures have been taken to address them? Indicate   the mode / media adopted by the University for the Publication of examination results (*e.g.* website, SMS, email, etc.).

Continuous evaluation and display of marks of various components time to time during the entire semester gives an approximate idea to student about his performance even before he/she appears in final exam. However, Final Grades are invariably declared within 15 days of the conclusion of the examinations. Results are uploaded on the University's web kiosk (IRP software) which is accessible to all concerned through University Website.

2.5.4 How does the university ensure transparency in the evaluation process? What are the rigorous features introduced by the university to ensure confidentiality?

Each student is shown the evaluated answer scripts of every examination for which he/she appears, with a full explanation of the marking scheme and the solutions. This ensures complete transparency of the evaluation process. The details on procedure are already elaborated in section 2.5.2.

To maintain confidentiality of the examination process, all question papers are prepared in specially allocated room, commonly known as EMI (Examination Management Information) room. Computers in this room are not on the University network or internet. Thereafter, moderated question papers are submitted to the Controller of Examinations (COE) himself / herself by course coordinators, covered in a sealed envelope, along with a moderation certificate from the HOD. The Examination Cell takes care of all confidentiality and security during and after the conduct of examination.

2.5.5 Does the university have an integrated examination platform for the following processes?
* Pre-examination processes. Time table generation, OMR, student list generation, invigilators, squads, attendance sheet, online payment gateway, etc.

* Examination process. Examination material management, logistics, etc.

*Post-examination process. Attendance capture, OMR- based exam result, auto processing, generic result processing, certification, etc.

An examination cell under the supervision of Controller of Examination provides an integrated examination platform.

Pre-Examination Processes

The University has a well established automated examination process for preparing schedules, invigilation charts, flying squads, lists of students eligible for appearing at the examinations, detention lists, recording of attendance at the examinations, communicating about examination rules and guidelines to all concerned.

Examination Process

During the examination room-wise pre-packaged examination material (like answer books, attendance sheets, question papers etc.) are collected by the invigilators from the EMI room, 20 minutes before the commencement of examination. Before commencement of examination, the students are verbally apprised of the Do's and Don'ts to avoid unfair means. The invigilators are required to check the identity of each student against the identity card and also confirm that the student is sitting as per the seating plan. The invigilators are required to ensure that the number of copies collected back after the examination tally with the attendance sheet. The answer books and attendance sheets are submitted back to EMI room by the invigilators.

Post examination processes

The post-examination process is also fully automated (except checking of answer books), and is time bound. The post examination processes are as follows:

a. Course coordinators collect the answer books along with the absentee list from the EMI room.

b. Course coordinators discuss detailed marking scheme with evaluators and distribute answer scripts to evaluators.

c. After completion of evaluation, on or before the designated date, evaluated answer books are shown to students to maintain fairness, transparency.

d. Marks are entered and locked in the web-kiosk by evaluators. Tentative grades are allotted by the coordinator maintaining the parameters specified by the University.

e. Departmental result committee similar to that of moderation committee discusses the results of various subjects of the department. These grades are displayed by respective coordinators as provisional grades on the departmental notice boards for students to make observations, to the coordinator, if any.

f. On the following day, grades are locked and a duly signed copy of the result is submitted in the Examination cell through HOD

g. The University Result Committee finalizes and approves the grades of each subject.

h. Registrar declares the results and the same are made available on web kiosk to all concerned.

i. The system of collation of marks, SGPA/CGPA calculation, printing of grade sheets, transcripts, provisional degree and related documents are system controlled and managed by Examination Cell.

2.5.6 Has the university introduced any reforms in its Ph.D. evaluation process?

For the Ph.D. programmes, the University follows the evaluation process which is in compliance with the UGC Guidelines-2009.

Each Ph.D. Scholar is assigned a doctoral programme monitoring committee (DPMC). The scholars are required to interact regularly with the DPMC during all phases of the research. All scholars are required to present their work in a seminar at the end of each semester to qualify for continuation in the Programme.

The doctoral programme is monitored through the following well defined steps:

1. At the end of each semester, a Ph.D. scholar presents the work done during the semester before the DPMC. Based on which DPMC makes suggestions and recommends registration of the scholar for the next semester.

2. Before submission of the thesis, scholar puts a request to Dean through DPMC for assessment of the fulfillment of the submission requirements (completion of course work; minimum two publications in SCI /SCOPUS indexed journals) and request for comprehensive presentation of the work before the DPMC.

3. On the basis of this comprehensive presentation, DPMC makes suggestions for improvements and recommendation for submission of synopsis.

4. On submission of the synopsis, Vice Chancellor constitutes a committee to review the same through a seminar by the scholar and upon recommendation by this committee the candidate is allowed to submit the thesis within the stipulated time period.

5. The University has included in its policy that each Ph.D. thesis should undergo plagiarism check using Turnitin software before submission.

6. The examiners for Ph.D. theses comprise two experts: one from India and the other from abroad. These examiners are selected from two panels each consisting of five experts suggested by the supervisors. The final selection of examiners is done by the Vice Chancellor. The recommendations of the examiners are reviewed by the Dean and extracts from the same are communicated to the concerned scholar through supervisor(s).

7. The open defence of the Ph.D. thesis is made before Evaluation Committee (constituted by the Vice Chancellor) including Indian external examiner, faculty and Ph.D. scholars. The report of the open defence along with the examiners'reports is considered by the Chairman, Academic Council for award of the Ph.D. degree.

Following reforms are introduced in recent past in an attempt to further improve the quality of research work:

(i)The inclusion of one member from other department in DPMC to initiate interdisciplinary input.

(ii) Minimum two publications in SCI/SCOPUS indexed journals.

(iii) Plagiarism checks using Turnitin software before submission.

2.5.7 Has the university created any provision for including the name of the college in the degree certificate?

Not applicable.

2.5.8 What is the mechanism for redressal of grievances with reference to examinations?

Evaluation of an examination answer script is carried out by the subject teacher concerned. The evaluated answer sheets are shown to the students. The students are entitled to seek clarification on the marks awarded and the evaluation scheme. Thus, a student is fully aware of the written performance. In case of any query or grievance the student may first take his/her appeal to individual faculty and further appeal to the HOD. The appeal may further be taken up with the Dean or finally the Vice Chancellor, whose decision is final.

2.5.9 What efforts have been made by the university to streamline the operations at the Office of the Controller of Examinations? Mention any significant efforts which have improved the process and functioning of the examination division/section.

The University has streamlined the examination system by implementing computerized system (ERP system) which takes care of all examination activities in a time bound manner while maintaining security and confidentiality. The system has greatly helped in strictly adhering to the academic schedule and timely declaration of results.

2.6. Student Performance and Learning Outcomes

2.6.1 Has the university articulated its Graduate Attributes? If so, how does it facilitate and monitor its implementation and outcome?

University has adopted the graduate attributes across all its academic programmes after in-depth study in the light of engineering and management competencies, emerging job requirement, emerging societal challenges, and feedback from industry. The emphasis on higher level cognitive skills like apply, formulate, analyze, design, evaluate, create, select, identify, interpret, experiment, etc. as well as considerations for environment, health, and ethics are the hallmarks of these attributes.

Skills	Knowledge	Attitudes
Problem solving	Awareness and understanding of concepts	Self confidence
Design & development of solutions	Latest developments in the field of knowledge	Initiative taking
Technology usage	Technology and society	Lifelong learning
Project management	Environment & sustainability	Values & ethics
Business management	Business plans & start ups	Entrepreneurial ability

Individual & team work	Ideas from different people & perspectives	Team leadership ability
Communication	Greater assimilation of knowledge	Good listener & communicator
Self management	Meeting deadlines,time management	Punctuality, sincerity about work

2.6.2 Does the university have clearly stated learning outcomes for its academic programmes? If yes, give details on how the students and staff are made aware of these?

Yes, the university has clearly stated learning outcomes in all of its academic programmes. All the programmes and courses are developed with clearly defined learning objectives and outcomes. All faculty members across departments are sensitized and encouraged to design, develop and conduct their courses in the context of specific learning outcomes. The students are made aware of these outcomes during conduction of course.

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

All the programmes have clearly defined learning outcome and courses are designed to match these objectives. The learning outcomes of each course are discussed among the faculty members within the department and other University bodies such as BOS, Academic Council, etc., so that they are in-line with the programme outcomes.

In order to make students aware of the learning outcomes of each course, mention of these outcomes is made mandatory in each course outline (section 2.3.2). The course outcomes are linked with the graduate attributes and the programme outcomes. These attributes are adequately reflected in the programme output, i.e., job placement, global acceptance for higher studies, student performance in various competitions and feedback from stakeholders.

The University conducts a set of weekly lectures and tutorials for every course that the students undertake. In addition, the students also undertake quizzes and are required to submit assignments. Through a process of continuous evaluation the students are monitored for the performance and grasp of the stated learning outcomes. For students who are slow learners, special classes are also organized to provide them with a more intensive exposure to the subject. The University also strives to maintain an overall support system of multiple learning resources to facilitate the achievement of the learning outcomes.

2.6.4   How does the university collect and analyse data on student learning outcomes and use it to overcome the barriers to learning?

Student's progress and learning outcomes are monitored through continuous evaluations, tutorials and laboratory exercises, and projects/assignments. The University conducts three tests in all courses and reviews the performance of students in the faculty meeting at departmental level and in the meeting of result committee under the chairmanship of the Vice Chancellor. At the end of each semester, student feedback is taken; course wise performance of students is discussed, analyzed and recorded in terms of grades. Based on discussion, feedback of student and faculty, course contents are improved. Slow learners are encouraged for special classes and interaction with the faculty to identify their problems and means to solve them. With the inputs received by the exercise quoted above, a continuous upgradation in the content and its delivery methods are being done to effectively overcome the barriers against learning.

2.6.5   What are the new technologies deployed by the university in enhancing student learning and evaluation and how does it seek to meet fresh/ future challenges?

University pays special attention to be at the fore-front of integrating latest technology in its teaching-learning process. Thus, most of the new technologies such as power point presentation, microphones for greater audibility, and visualizers on which hand-written notes can be projected to a large class are employed in teaching and learning. All class rooms are equipped with multimedia projection and internet facilities.

The University facilitates the use of online educational resources (e-books, e-journals, case studies, etc.), NPTEL, virtual labs of NMEICT, etc., as supplements through internet/LAN facility. All course material is available on University network which are accessible from anywhere within the University campus. Dedicated IT staff is available for the maintenance of hardware, software and audio-visual aids. A transparent and fair evaluation is ensured by use of IRP tools. Thus JUET is well equipped and updated to meet emerging challenges in learning and evaluation.

STUDENT FEEDBACK FORM
For Lecture Classes
(Odd Semester (July - Dec 2015) Academic Year 2015-2016)

Subject Name _____Subject

Code_____

Semester_____Year_____Name of Faculty_____

Respond against each item using the following parameters wherever applicable.
Excellent [E]; Very Good [V];   Good [G];   Satisfactory [S];   Unsatisfactory [U];

S.No	ITEM	E	V	G	S	U
1.	Teaching for the subject was					
2.	Delivery of Lectures/Tutorials					
3.	Coverage of the subject matter was					
4.	Opportunity provided for asking questions in the class was					
5.	Emphasis on concepts and fundamentals was					
6.	Standard of the assignments was					
7.	Tutorial evaluation was					
8.	Your learning of the subject has been					
9.	Usefulness of the subject to your career is					

10.   Coverage of subject matter in MSE & ESE was: Adequate / Not adequate
NOTE : Students are requested to write specific comments overleaf.

……………………………………………………………………………………………………

STUDENT FEEDBACK FORM
For Laboratory Classes
(Odd Semester (July - Dec 2015) Academic Year 2015-2016)

Lab Subject Name _____Lab Subject

Code_____

Semester_____Year_____Name of

Faculty_____

Respond against each item using the following parameters wherever applicable.
Excellent [E];   Very Good [V];   Good [G];   Satisfactory [S];   Unsatisfactory [U];

S.No	ITEM	E	V	G	S	U
1.	Level & Standard of laboratory experiments/design/assignments given.					
2.	Usefulness of this laboratory towards your understanding of theory.					
3.	Working condition of equipments in the lab.					
4.	Availability and involvement of teacher to clear doubts.					
5.	Timely evaluation of practical reports.					

NOTE : Students are requested to write specific comments overleaf.

…………………………………………………………………………………………

CRITERION III

RESEARCH CONSULTANCY AND EXTENSION

3.1 PROMOTION OF RESEARCH

3.1.1 Does the university have a research committee to monitor and address issues related to research? If yes, what is its composition?
Mention a few recommendations which have been implemented and their impact.

All the research related activities is monitored by Dean. Research related issues are periodically discussed in the heads of department meetings and communicated the issues to the academic council to frame necessary guidelines to promote research and improve research quality in the University.

Few recommendations which have been implemented and their impact:

(i)   Fellowship for Ph.D. scholars: increased from ₹ 16,000/ to ₹ 18,000/ p.m.
(ii) Credit and residential requirement for scholars registering in engineering and science/humanity stream.
(iii) Guideline to check plagiarism and unfair practices in research.

Besides this, University constitute a doctoral program monitoring committee (DPMC) to monitor the research work of every registered Ph.D. Research Scholar. The composition of DPMC as under:

Dean	:	Chairman
Supervisor(s)	:	Member
HOD	:	Member
One department faculty member	:	Member
One faculty member*	:	Member

(*from an allied discipline) nominated by the Vice-Chancellor.

The functions of DPMC are as follows:

(i)   To review the progress of Ph.D. Scholar through semester presentation and advise suitably.
(ii) To review the entire work done by the Ph.D. scholar when the scholar is prepared to submit synopsis and make suitable recommendation regarding submission of synopsis by the scholar.
(iii) To assess and advise for improvement of the synopsis after the synopsis presentation is given by the Ph.D. Scholar.
(iv) To be part of the committee to evaluate the final viva of the scholar and to suitably recommend for the award of degree.

(v)   To consider request of scholar for conversion from full time to part time, if any, and recommend the same suitably, considering suitability of the workplace of the scholar for required research facilities.

Recommendations of DPMC and their impact

The following have been implemented:

- Complete work is presented by the research scholar to DPMC before prepare for synopsis.
- Assessment of quality of papers published in the journals prior to the synopsis seminar.
- A system of midterm comprehensive review of progress of Ph.D. scholar's work.

Due to periodic monitoring implementation of DPMC recommendation, research scholars are motivated and intensely involved in their research work. Faculty members and research scholars continuously put efforts to publish their research work in quality journals and attend seminars/conferences/symposium/workshops at national/international level as resource person/delegate. Many international/ national conferences, seminars, workshops have been organized in the University by different departments to promote research.

3.1.2 What is the policy of the university to promote research in its affiliated / constituent colleges?

Not Applicable

3.1.3 What are the proactive mechanisms adopted by the university to facilitate the smooth implementation of research schemes/projects?

(a) Advancing funds for sanctioned projects
(b) Providing seed money
(c) Simplification of procedures related to sanctions/purchases to be made by the investigators
(d) Autonomy to the principal investigator/coordinator for utilizing overhead charges
(e) Timely release of grants
(f) Timely auditing
(g) Submission of utilization certificate to the funding authorities

To create conducive environment and develop interest among faculty and students towards research projects, the University has procured latest equipments and software in laboratories, updated the learning resource centre facility and subscribed the high quality research journals and study materials. The University encourages faculty members to write proposal to various funding agencies to raise fund for research projects. University provides all necessary supports to the principal investigator (PI) for smooth implementation of research schemes and projects.

(a) **Advancing funds for sanctioned projects**: The basic research facility including the space is provided to the PI on the request for the sanctioned project.

(b) **Providing seed money**: University provides financial support in terms of seed money to each department to create research facility to undertake sponsored projects. Besides, financial support is also provided to the department to create the basic research facility if not available and that can be used by the PI to carry preliminary investigation related to the sponsored project. IT support and learning resource center facility are provided to the PI.

(c) **Simplification of procedures related to sanctions/purchases to be made by the investigators**: Sponsored projects are maintained as per the guideline issues by the funding agency.

(d) **Autonomy to the principal investigator/coordinator for utilizing overhead charges**: With the recommendation of the project management committee where the PI is a member, the fund utilization is sanctioned by the Vice-Chancellor with the overall approval of the sanctioning organization.

(e) **Timely release of grants**: Funds are released as and when required subject to release by sanctioning authority.

(f) **Timely auditing**: Timely auditing is done by qualified CA as and when required.

(g) **Submission of utilization certificate to the funding authorities**: Utilization certificate submitted as and when required by the sanctioning authority.

3.1.4 How is interdisciplinary research promoted?
(a) Between/among different departments/schools of the university and
(b) Collaboration with national/international institutes/industries.

The University promotes and strengthens interdisciplinary research and teaching. All the departments initiated interdisciplinary research with collaboration with other departments of the University. Faculties are encouraged to undertake inter disciplinary research with various National and International Universities, and Industries.

(a) **Between/among different departments/schools of the university:**

Teaching: Faculty members of each department offer courses for under graduate and post-graduate programs of other departments. Inter-disciplinary courses are floated by each department as outside elective.

Research: As mentioned earlier in Section 3.1.1, one member from other/allied departments is included in the DPMC. Faculty members are encouraged to take up inter-disciplinary research and collaborate with other department faculties for supervising research work. Research scholars are allowed to register under the supervision of multiple faculty members across the departments.

Interdisciplinary Ph.Ds.

S.No	Thesis Title	Supervisor (Dept)	Supervisor (Dept)
1	Effect of Mineral Admixtures on Properties of Concrete with Ternary Cement Blends	Prof K.K.Jain (CE) Prof.P.K.Singh (CRDC)	Dr. A.K.Mullick
2	Properties of High Strength Concrete utilizing Processed Recycled Aggregates	Prof K.K.Jain (CE) Prof.P.K.Singh (CRDC)	Dr. A.K.Mullick
3	Image Compression Using Optimum Color Space With Sub band Decomposition	Prof. Shishir Kumar (CSE)	Dr. Satish Singh Scholor, Faculty member of ECE
4	Soybean disease administration using image processing techniques	Prof. D. S. Hooda (Mathematics)	Dr. Sourabh Srivastava , Scholor (CSE)
5	Forecasting in Data Pauperism	Prof. Shishir Kumar (CSE)	Dr. Sandeep Srivastava (HSS)
6	On Generalized Fuzzy Information Measures and Fuzzy Clustering Techniques	Prof. D. S. Hooda (Mathematics)	Dr. Vipin Tyagi (CSE)
7	Material Optimization for Selective Laser Sintering Process	Dr. S. M. Bobade (Physics)	Dr. Sanat Agrawal (MEC)

(b) Collaboration with National/International Institutes/Industries

University provides the infrastructure facility to prepare proposals; provides financial support and leave to faculty members for attending national and international conferences to develop networking with researchers of other Universities and Industry professionals.Special leave provision is available for faculties and research scholars to make short visit to various institutes in India and abroad for undertaking collaborative research. University gives special permission to faculty members and research scholars from premier institutes and universities such as IITs and NITs to visit the campus for undertaking collaborative research.

3.1.5 Give details of workshops/training programs/sensitization programs conducted by the university to promote a research culture on campus.

In order to sensitize faculty and research scholars towards the need for individual, group, interdisciplinary and sponsored research, national and international workshops/ seminars, visits of experts from premier institutions of India and abroad are organized from time to time. Each department plans the activities according to their research interest. University provides infrastructure facility and

financial support fully or partially for organizing these activities throughout the academic year. University invite faculties and research scholars from other institutes to take part in the event, and provide local hospitality to all outside participants for attending the event and makes their stay comfortable. The list of workshops/conferences organized by each department during the assessment period is given below.

1. Workshop on "Intelligent Approaches for Object Oriented Modeling (IOOM-2015) in Component Based Software Engineering" by Department of Computer Science & Engineering during May 07-09, 2015

   Resource persons: Dr. Carsten Mueller (Ph.D.) of ITG, Nuremberg, Germany

2. Workshop on Advancements in "Network Communication and Security (ANCS-2014)" supported by MPCST, Technically supported by CSI organized by Department of Computer Science & Engineering during December 29-31, 2014.

   Resource persons: Dr. Nikhil Kothari (Dharmsinh Desai University, Nadiad, Gujarat), Dr. Deepak Singh Tomar (MANIT, Bhopal), Dr. Shishir Kumar, Dr. Mahesh Kumar, Mr. Ravindra Kumar Singh, Mr. Nilesh R Patel, Mr. Amit Kumar Srivastava

3. Workshop on "Intelligent Approaches for Object Oriented Modeling in Component Based Software Engineering (IWCBSE-2014)" by Department of Computer Science & Engineering during, April 18-20,2014

   Resource persons: Dr. Carsten Mueller (Ph.D.) of ITG, Nuremberg, Germany

4. Workshop on "Advancements in Network Communication and Security (ANCS-2013)" by Department of Computer Science & Engineering during December 19-21, 2013.

   Resource persons: Dr. Deepak Singh Tomar (MANIT, Bhopal), Dr. Shishir Kumar (JUET), Dr. Mahesh Kumar (JUET), Mr. Prashant Pandey (STMicroelectronics , Gr. Noida), Mr. Ravindra Kumar Singh (JUET), Mr. Nilesh R Patel (JUET), Mr. Arpit Jain (TCS, Pune).

5. Workshop on "Advanced Manufacturing Technologies (NWAMT)" by Department of Mechanical Engineering during Sept. 27-29, 2013.

   Resource persons: Prof R K Pande (IIT Delhi,) Prof. A. D. Bhatt (MNNIT, Allahabad).

6. Workshop on "Energy Storage/Conversion Devices Using Ion Conducting Polymer Electrolytes (NWESD-2012)" was organized by Department of Physics during 10-12 December 2012.

   Resource persons: Prof. S.A. Hashmi (University of Delhi), Prof Awalendra Thakur (IIT Kharagpur), Mr. Amit Raje(Aartech Solonics), Prof. N.J. Rao (JUET), Dr. S.K. Tripathi (JUET) and Dr. S.M. Bobade (JUET).

7. Workshop on "Testing of Soil & Highway Materials" was organized by Department of Civil Engineering during October 21-22, 2012.

   Resource persons: Col. (Retd) A. K. Bhasin (Sr. Joint President, Jaypee Group), Shri. S. H. Mankad (Sr. Vice-President, Jaypee Group), Shri. I. M. Siddiqui (NHAI Project Director, Guna), Prof. K. K. Jain (Dean) Academics and Head, CE), Prof. P. K. Singh (CRDC, JUET), Dr. A. Srivastava (Assistant Professor, JUET), Mr. D. K. Shukla (JUET) and Mr. V. S. Babu (JUET).

8. IUCEE Workshop on "Application Oriented Networking has been organized in coordination with IUCEE (Indo US Collaboration for Engineering Education)" by Department of Computer Science and Engineering during July 9-13, 2012.

   Resource persons: Prof. Laxmi Narayan Bhuyan, (Distinguished Professor and Chair), Department of Computer Science and Engineering, Winston Chung Hall University of California, Riverside.

9. IUCEE Workshop on "Renewable Energy" by Department of Mechanical Engineering during June 04 - 08, 2012.

   Resource persons: Dr. T. Agami Reddy, (SRP Professor of Energy and Environment), School of Sustainable Engineering in the Built Environment and The Design School, Arizona State University, Tempe, AZ, U.S.A, Professor N. J. Rao, Vice Chancellor, JUET.

10. Workshop on "Manufacturing Automation" was organized by the Department of Mechanical Engineering and co-sponsored by DST New Delhi, CSIR New Delhi, and MPCST Bhopal during December 16-17, 2011.

    Resource persons: Vice Chancellors from Technical Universities and Professors from IITs and IIITDM. Faculty members and students from various reputed institutions like BITS Pillani, IIT BHU, MNIT Allahabad and SGSITS, Indore.

11. Workshop on "Numerical Methods" was organized by the Department of Chemical Engineering during July 04-08, 2011.

    Resource persons: Dr. Srinivas Palanki, (Professor and Head), Department of Chemical & Biomolecular Engineering, University of South Alabama, USA.

12. IUCEE workshop on "Image Processing and Digital Communications" organized by Department of Electronics and Communication Engineering during June 06-10, 2011.

    Resource persons: Dr. Gaurav Sharma, (Associate Professor), University of Rochester, USA.

13. IUCEE workshop on "Course Selected Topics on Distributed Systems and Computer Security was organized by Department of Computer Science and Engineering during May 29 – June 3 June, 2011.

    Resource persons: Prof. Partha Dasgupta of Arizona State University, USA.

14. Workshop on "Optimization and information theory with their applications" by Department of Mathematics March 24-26, 2011.

    Resource persons: Prof. B.K.Das (Delhi University), Prof.S.C.Malik (M.D.University, Rohtak) and Prof.V.P.Singh (IIT, Roorkee).

15. Workshop on "Advances in Separation Process" was organized by Department of Chemical Engineering, during December 13-18, 2010.

    Resource persons: Prof. V.V. Mahajani (ICT-DAE Professor), ICT Mumbai, Prof. V.G. Pangarkar (Consultant) and Prof. K.K. Tiwari (Visiting Professor, JUET) Former Professors, ICT Mumbai.

16. Workshop on "Java Androids & Web Technologies was organized by Department of Computer Science and Engineering" in collaboration with Computer Society of India and Sun Microsystem during December 17-19, 2010.

    Resource persons: Mr. Timaniya Naresh (Phonix Lab , Ahmedabad), Mr. Pankaj Pandey (SDO, BSNL Guna)

17. Workshop on "Testing of Concrete" by Department of Civil Engineering, August 22, 2010.

    Resource persons: Dr. A. K. Mullick (former DG, NCBM), Dr. A. K. Jain (Joint Director, Technical Education, MP), Dr. S. K. Singh (Sr. GM, WSP Consultant Ind. Ltd, New Delhi), Mr. K. Murari (JUET).

18. IUCEE workshop on "Computer System Performance Analysis by Department of Computer Science and Engineering July 05-09, 2010.

    Resource persons: Prof. Raj Jain, Washington University, St Louis, USA

19. Workshop on Environmental Sustainability and Society: The growing paradigm shift (ESS-2013), 30-31 March, 2013

    Resource persons: Dr. N.P. Shukla (Chairman), MPPCB

3.1.6 How does the university facilitate researchers of eminence to visit the campus as adjunct professor? What is the impact of such efforts on the research activities of the university?

University invites subject experts and researchers of eminence to visit the campus as adjunct professor to take part in the teaching and evaluation process; as resource person for conducting faculty development programs and workshops. University provides travel support and local hospitality to adjunct professors; and pays an honorarium for their service. Regular faculty and student interaction sessions are being organized with adjunct professors to improve teaching, evaluation and encourage faculties to undertake research on emerging areas. Visits of adjunct professors help the department to float new courses and encourage students to take projects on emerging areas. Also motivates faculty to take research on emerging areas. List of researchers visited the campus as adjunct professor during the assessment period and the outcome of the visit is summarized here.

1. **Prof. R. C. Chakraborty**, (Formerly Director of DTRL and ISSA, DRDO)
    Outcome: Offered the courses on Artificial Intelligence and Soft Computing for B.Tech students. He has helped one faculty for Ph.D. work, many B. Tech. and M. Tech. students to complete projects in the area of Artificial Intelligence, Soft Computing and Image Processing. Also the visit has helped the department to develop courses on the area of Cognitive Science.

2. **Prof. Raj Jain** (Washington University , St. Louis)
    Outcome: He has visited the University to conduct one week faculty development workshop. The delivered knowledge on the area of Computer System Performance and Analysis, which is being used by many Ph.D. scholars registered in the University. Many B.Tech and M.Tech students use the formulation of mathematical model (s) discussed in the workshop in their B. Tech. and M. Tech. project. Also the visit has helped the department to develop courses and pursue research on the area of Computer System Performance Analysis.

3. **Prof. Partha Das Gupta**, (Arizona State University, USA)
    Outcome: He has visited the University to conduct one week faculty development workshop. The visit was resourceful for many faculty members, B. Tech. and M. Tech. students to complete projects in the area of Distributed Systems. Also the visit has helped the department to develop courses and pursue research on the area of Grid Computing.

4. **Prof. Laxmi N. Bhuyan** (University of California, Riverside, USA)
    Outcome: He has visited the University to conduct one week faculty development workshop on Application Oriented Networking. The visit was useful on developing courses on Network Security.

5. **Dr. Carsten Mueller**, (Nuremberg, Germany)
    Outcome: The visit helped to complete the course Component Based Software Engineering and motivated faculty to pursue research on the emerging areas of Software Engineering.

6. **Prof. Nikhil Kothari** (Dharmsingh Desai University, Nadiad)
    Outcome: The visit helped faulty to familiarize customization and simulation of networking simulation tool used for debugging real time networking problems.

7. **Dr. Deepak Singh Tomar** (MANIT, Bhopal)
    Outcome: The visit helped faculty to understand various information security related issues and their possible solutions. Also the visit helped to design few lab experiments on Network Security.

8. **Prof.Gaurav Saxena** (University of Rochester, USA)
    Outcome: He has visited the University to conduct one week faculty development workshop on Image processing and digital communication. The visit was useful for faculties to familiarize various issues related to noise processes for digital communication. The visit was helpful for developing courses for M.Tech students on digital communication.

9. **Prof.Ganapati Panda** (IIT, Bhubaneswar)
    Outcome: The visit helped the teaching community to understand evolutionary computing and its application to many real life problems of engineering field. The visit immensely helped faculty working on grid computing, sensor network and distributed learning, and motivated them to pursue research on those areas.

10. **Prof.K.K.Tiwari** (UICT, Mumbai)
    Outcome: The contribution of Prof. K.K. Tiwari has been immense in the all round development of the Chemical Engineering Department. He taught various courses related to petroleum refining, thermodynamics and Process Engineering both in B.Tech and M.Tech level. In addition to the regular teaching load he actively participated in various departmental activities like: helping B.Tech. and M.Tech. students in their final year projects, helping in the evaluation of B.Tech final year projects and M.Tech thesis, development of laboratories, students in placement, provide useful guidance to Ph.D. scholars, helped BOS on developing syllabi and developing new courses.

11. **Prof.A.K.Mullick** (Formerly Director General, National Council for Cement & Building Materials, Govt. of India, New Delhi.)
    Outcome: During his visits, he undertook some elective courses such as Concrete Technology, Cement Technology and Hydropower Engineering for the B. Tech IVth Year students. He supervised two Ph.D scholars in the area of Concrete Technology and acted as external member of BOS of Civil Engineering. He helped UG students of Civil Engineering in projects on the area of structural engineering as well as concrete technology.

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

An adequate amount of the University budget is earmarked to promote research. This includes non-plan expenditure on the Research/Teaching assistance of Ph.D. and PG scholar, purchase and maintenance of equipments/software for teaching and research departments and infrastructure development. It is hard to disentangle the total budget amount into teaching and research activities of the university. The budget amount under the plan grant for research for the last five years is given below

Heads of Expenditure	Budgetary Allocation (BA)/ Actual Utilization (AU) (₹ in Lac)					
	2010-11	2011-12	2012-13	2013-14	2014-15	Total
	BA/AU	BA/AU	BA/AU	BA/AU	BA/AU	BA/AU
Research Equipment and software	30/27.7	55/54	200/197	5/1.23	7/5.76	297/ 285.69
Subscription of Research Journals	30/29	30/26	32/31	30/25	35/31	157/ 142
Ph. D. Fellowships	25 /24	60/ 60	59/57.5	67/ 67	67 / 66.4	278/ 274.9
Support for Conferences/ Seminars/ Workshops to students and Faculty	5/4.8	8/6.4	12 /11.9	1.5/0.57	1/0.4	27.5/ 24.07
Organization of Conferences/ Seminars/ Workshops	7/6.3	8.5/8.2	4 /2.3	6/5	0.0/0.0	25/ 21.8
Expenses on Expert visits	26/25.2	30/ 8.2	30/29	25/21.5	5.0/2.5	116/ 86.4
Total	**123/116**	**191.5/ 162.8**	**335/ 328.7**	**134.5/ 120.3**	**115/ 106.06**	**900.5/ 834.86**
Percentage	3.01/4.4	5.1/ 4.88	7.34/ 7.31	2.11/ 2.25	2.58/ 2.98	3.88/ 4.32
Total Budget	4081/ 2614	3734/ 3333	4564/ 4496	6370/ 5325	4446/ 3551	23195/ 19319

3.1.8 In its budget, does the university earmark fund for promoting research in its affiliated colleges? If yes, provide details.

Not Applicable

3.1.9 Does the university encourage research by awarding Post Doctoral Fellowship/Research Associateships? If yes, provide details like number of students registered, funding by the university and other sources.

The University welcomes Post-doctoral Fellows / Research Associates to carry out research. At present one Post-doctoral Fellow named Dr. Sonali Saxena, earned Post Doctorate Fellowship sponsored by National Board of Higher Mathematics, Department of Atomic Energy, Govt. of India in 2014.

3.1.10 What percentages of faculty have utilized the sabbatical leave for pursuit of higher research in premier institutions within the country and abroad? How does the university monitor the output of these scholars?

University does not have any formal scheme on sabbatical leave for faculty. However, special leave has been provided to faculties completed six years of service for pursuit of higher research in premier institutions within the country and abroad. The faculty member has to submit a report on the research output produced during the visit. Besides, study leave provided to Associate Professor and Assistant Professors with not less than two years of continuous service are eligible for study leave to pursue research directly related to the work. Study leave is granted for a period of not more than two years. The study leave period is counted for service benefits. Details of the faculties availed by faculties during the assessment period is given below.

Sl.No	Name & Department	Place of visit
1	Dr. B. K.Mohanty, ECE	School of Computer Engineering, Nanyang Technological University, Singapore
2	Dr. B.K.Mohanty, ECE	Department of Computer Engineering, Qatar University, Doha, Qatar
3	Dr. Balwinder Raj, ECE	University of Rome, Tor Vergata, Italy
4	Dr. Rajiv Tripathi, ECE	IIT Kanpur

3.1.11 Provide details of national and international conferences organized by the university highlighting the names of eminent scientists/scholars who participated in these events.

The University organizes national and international workshops and conferences in which eminent Scientists and Scholars from India and abroad participates. The details of such eminent participants and the organized conferences are given below:

1. **National conference on Environmental Sustainability and Society: The growing paradigm shift (ESS-2013),** March 30-31, 2013.

   Eminent Participants
   Dr. N.P. Shukla, Chairman, MPPCB and Prof. I.M. Mishra, IIT, Roorkee.

2. **5th International Conference on Technology and Business Intelligence** , December 13-14, 2013

   Eminent Participants: Mr. Dilip Pithadia, Chairman, Pithadia Foundation, USA , Prof Vijay Paul Sharma, Indian Institute of Management Ahmedabad, Dr. Carsten Mueller , Fraunhofer Institute for Telecommunications, Germany and Prof. N.J.Rao, Vice Chnacellor , JUET , Guna.

3. **17th Annual Conference of GAMS and National Symposium on Computational Mathematics and IT,** December 07-09, 2012.

   Eminent Participants
   Prof. Karmeshu, Dean of System Sciences, JNU, New Delhi.

4. **National Conference on Recent advancement in Civil Engineering: Infrastructure and developments (RACE – InD)** December 21-22, 2011.

   Eminent Participants
   Dr. M. Bidasaria, MD, Ferro Concrete Const. (I) Pvt. Ltd. Indore; **Dr. D. G. Kadkade**, Chief Advisor, JP Associates; **Dr. A. K. Tiwari**, Head-Technical Services, ABG Cement Limited; **Prof. S. K. Jain**, Dean R & D, MITS Gwalior, MP; **Er. M. K. Acharya**, S.E., WRD, Guna Circle; **Er. Narendra Kumar**, GM, GAIL Vijaipur, Guna, MP.

5. **National Conference on Recent Advances in Materials Science & Engineering: A Multidisciplinary Approach [RAMSE-2010],** October 23-24, 2010

   Eminent Participants
   (Padma Shree) Prof. K L Chopra, Former Director, IIT, Kharagpur, **Dr. Anil K Gupta**, Director (AMPRI), Bhopal; **Prof. B R Mehta**, IIT Delhi; Dr. **M. Nasim** DMSRDE, Kanpur

6. **Annual Conference of Vijanana Parishad of India and National Symposium on "Recent Developments in Applicable mathematics and Information Technology",** December 04-09, 2009

   Eminent Participants
   Prof. R.K Datta, Former Advisor to DST, New Delhi

7. **National Conference on** Communication System and Networking, 15-16 March, 2008

   Eminent Participants
   (Padma Shree) **Prof. K.L.Chopra**, Former Director, IIT, Kharagpur; Prof. **P. K. Meher**, Nanyang Technological University, Singapore; **Prof. S. K. Kak**, IT-BHU; **Prof. S. L. Maskara**, Former Professor, IIT KGP, Dean, JIIT, Noida, Sector 62; **Prof. T.S Lamba**, Former Professor, IIT KGP, Dean JUIT, Waknaghat; **Sri. R. C. Chakraborti**, Former Director DTRL and ISSA, DRDO.

3.2   Resource Mobilization for Research

3.2.1 What are the financial provisions made in the university budget for supporting students' research projects?

University makes adequate financial provisions to support student research projects. The budget provisions are made in following heads:

a) Research equipment and software

b) Consumables and maintenance

c) Subscription to research journals

d) Teaching assistance and Ph.D. Fellowships

e) Sponsorship for conference/seminars/workshops to Ph.D., M. Tech., and B. Tech. Students

f) Organization of conferences/ workshops/ seminars

The budget and actual expenditure made on the above provision are given in the table in section 3.1.7. The Institute also keeps budgetary provision of ₹ 20-25 Lacs every year specifically towards lab expenses and lab equipments for research. In addition, infrastructure such as dedicated lab space, workstations and storage space, air conditioning in labs, electricity and backup provision, UPS & 24×7 IT support and housekeeping, etc., are provided for smooth running of projects. Besides, research scholars and PG students who have receiving fellowship and Teaching Assistance will get duty leave for attending workshop and conferences for paper presentation.

3.2.2 Has the university taken any special efforts to encourage its faculty to file for patents? If so, how many have been registered and accepted?

University is exploring options to setup a cell to provide relevant information for filing patents

3.2.3 Provide the following details of ongoing research projects of faculty.

Sr. No.	Year	Name of Project	Funding Agency	Total grant sanctioned (₹ in Lac)
11	2015	Computational Methods For Solving Boundary Value Problems via He-Laplace Perturbation Method With Engineering Applications **PI: Dr. H.K. Mishra (Ongoing)**	MPCST	3.28
1	2013	Socio-economic and environmental impact assessment of family type biogas plants in Guna district of Madhya Pradesh	ICSSR	7.0

		PI: **Dr. Rajeev Srivastava**, (**Completed**)		
2	2012	Synthesis and characterization of nano-gel polymer electrolyte for its application in energy storing super capacitor devices **PI: Dr.S.K.Tripathi**, (**Ongoing**)	MPCST	4.93
3	2012	Studies on Bis Sulfosuccinate Gemini Surfactants and Evaluation of their Surface Active properties in Mixed Surfactants Systems," Scheme No. 01(2565)/12/EMR-II**.** **PI: Dr. Rashmi Tyagi**, (**Ongoing**)	CSIR	18.00
4	2012	Author Identification of a Handwritten Document **PI: Dr. Vipin Tyagi** (**Completed**)	MPCST	6.52
5	2012	Synthesis of nano-materials using chemical approaches and their possible application in water purification **PI: Dr. Anuj Kumar,** (**Completed**)	MPCST	3.1
6	2011	Development of novel carboxylate anionic gemini surfactants and evaluation of aqueous properties of their binary mixtures with conventional surfactants. **PI: Dr. Rashmi Tyagi**, (**Completed**)	DST	14.15
7	2010	Security Enhancement of File Systems **PI: Dr. Shishir Kumar**, (**Completed**)	DRDO	3.45
8	2009	A new approach for handwriting recognition using simple algorithms **PI: Dr. Vipin Tyagi**, (**Completed**)	CSI	0.1
9	2009	Forgery Detection in Digital Images **PI: Dr. Vipin Tyagi**, (**Completed**)	DRDO	3.68
10	2008	Fabrication and characterization of solid state super capacitors using polymeric gel electrolytes; **PI: Dr.S.K.Tripathi,** (**Completed**)	DST	8.64

3.2.4 Does the university have any projects sponsored by the industry/corporate houses? If yes, give details such as the name of the project, funding agency and grants received.

JSS is the sponsoring body of the University. Jaypee Group, with supports JSS, has business interest in cement production and power generation. Cement Research Development Centre (CRDC) was setup in the University campus with an objective to provide research and training facility on cement production. Currently, CRDC offers consultancy services to Jaypee group cement plants. It receives research projects from Jaypee Cement Plants for overall improvement of cements plants. Details of sponsored projects received from Jaypee Cement Plants during last five years are:

1. Utilization of industrial wastes like Ashapura gypsum, Waste gypsum moulds, Lignite fly ash, Granulated slag at **Jaypee Gujarat Cement Plant, Sewagram, Kutch (Gujarat)** 2011-12.
2. Remedial measures were suggested to add other varieties of Gypsum for set regulation of cement, after studies were conducted at CRDC, JUET, Guna for the gypsum(Imported from Pakistan) being used at **Jaypee Himachal Cement Plant, (H.P.)** 2014.
3. Studies are being conducted to identify the chemical solution being added at **Jaypee Dalla Cement Plant, (U.P.)** for the purpose of reducing fuel consumption 2015.

3.2.5 How many departments of the university have been recognized for their research activities by national/international agencies (UGC-SAP, CAS; Department with Potential for Excellence; DST-FIST; DBT, ICSSR, ICHR, ICPR, etc.) and what is the quantum of assistance received? Mention any two significant outcomes or breakthroughs achieved by this recognition.

Indian Council of Social Sciences & Research (ICSSR), Ministry of Human Resource Development, Govt. of India has funded a social survey/research project study entitled "Socio-economic and environmental impact assessment of family type biogas plants in Guna district of Madhya Pradesh in March 2013. The project was carried out by the Department of Humanities and Social Sciences (HSS) of the University under the supervision of Dr. Rajeev Srivastava (Principal Investigator). The amount sanctioned for this project was seven lakh rupees and duration was 2 years.

3.2.6 List details of
(a) Research projects completed and grants received during the last years (funded by National/International agencies).
(b) Inter-institutional collaborative projects and grants received
   i)   All India collaboration
   ii)   International

(a) University has received sponsored projects funded by national funding agencies like DST, DRDO, AICTE, ICSSR, CSIR, CSI etc. The tables below present details of ongoing and completed major research projects.

Sr. No.	Year	Name of Project	Funding Agency	Total grant sanctioned (₹ in Lac)
11	2015	Computational Methods For Solving Boundary Value Problems via He-Laplace Perturbation Method With Engineering Applications PI: Dr. H.K. Mishra (Ongoing)	MPCST	3.28
1	2013	Socio-economic and environmental impact assessment of family type biogas plants in Guna district of Madhya Pradesh PI: Dr. Rajeev Srivastava, (Completed)	ICSSR	7.0
2	2012	Synthesis and characterization of nano-gel polymer electrolyte for its application in energy storing super capacitor devices PI: Dr.S.K.Tripathi, (Ongoing)	MPCST	4.93
3	2012	Studies on Bis Sulfosuccinate Gemini Surfactants and Evaluation of their Surface Active properties in Mixed Surfactants Systems," Scheme No. 01(2565)/12/EMR-II. PI: Dr. Rashmi Tyagi, (Ongoing)	CSIR	18.00
4	2012	Author Identification of a Handwritten Document PI: Dr. Vipin Tyagi (Completed)	MPCST	6.52
5	2012	Synthesis of nano-materials using chemical approaches and their possible application in water purification PI: Dr. Anuj Kumar, (Completed)	MPCST	3.1
6	2011	Development of novel carboxylate anionic gemini surfactants and evaluation of aqueous properties of their binary mixtures with conventional surfactants. PI: Dr. Rashmi Tyagi, (Completed)	DST	14.15
7	2010	Security Enhancement of File Systems PI: Dr. Shishir Kumar, (Completed)	DRDO	3.45
8	2009	A new approach for handwriting recognition using simple algorithms PI: Dr. Vipin Tyagi, (Completed)	CSI	0.1
9	2009	Forgery Detection in Digital Images PI: Dr. Vipin Tyagi, (Completed)	DRDO	3.68
10	2008	Fabrication and characterization of solid state super capacitors using polymeric gel electrolytes; PI: Dr.S.K.Tripathi, (Completed)	DST	8.64

(b) Inter-institutional collaborative projects and grants received
   i) **All India collaboration**
   ii) **International collaboration:**

Currently University has not received any inter-institutional funded projects from national and international collaboration. However, a large number of University faculty currently working in collaboration with researchers of other national and international institutes with no formal funding. These research collaborations have also produced significant academic outputs. Summary of such collaborations is given below, and details are given in **Annexure 3.7.3**

No. of collaborating institutions/ organizations	: 70
No. of JUET faculty involved in the collaborations	: 40
No of researchers involved in the collaborations from outside	: 65
Output of collaborations (Publications)	: 206
Ph.D. theses (completed/ ongoing)	: 3/7

3.3   RESEARCH FACILITES

3.3.1 What efforts have been made by the university to improve its infrastructure requirements to facilitate research?
What strategies have been evolved to meet the needs of researchers in emerging disciplines?

Since its inception, JUET puts continuous efforts towards achieving excellence in teaching and research. Creating an environment to undertake research on emerging areas of science and technology is the guiding principle of the University. The University is continuously making efforts to improve the facilities for research and innovative activities including IT infrastructure. In annual faculty meeting, each department accesses their future needs for undertaking research in the emerging area and communicates to the University Academic Management Committee through the office of Dean. The requirements of all departments are discussed and appropriate provision is made in the University budget. For long term requirement of infrastructure, the concerned department prepares the proposal for the Board of Management (BOM). On approval of BOM, year wise financial break up is included in the budget of the Institute.

To meet the needs of researchers and promote research on emerging areas, the University formulates the following strategies:
- Human resource development
- Addition of new research facilities
- Creation of new research space

The table below summarizes the efforts of the University during last four years on the strategies outlined above.

Infrastructure	2011-12	2012-13	2013-14	2014-15
Eligible supervisors for PhD (total faculty)	43 (116)	47 (140)	53 (130)	49 (102)
PhD Scholars registered	31	30	38	46
Indo US consortorium on Enginnering Education (IUCEE) Workshop	3	2	--	--
Research expanses (Rupees in Lacs)	162.8	328.7	120.3	106.06
Research space developed	Space provided to all departments to setup their research labs. LRC is upgraded to meet the research needs			
Research centers established	CRDC	OTS*	JP-WINCENTRE**	

* Operator Training Simulator
** Jaypee Wind Engineering Application Centre

Cement Research and Development Centre (CRDC) is established in the University to address the issues related to Cement production such as process techniques, environmental considerations, production methods, newer materials, broadening of raw material base, waste utilization etc.

A super critical 660MW (550 ^{0}C, 260 bar) Operator Training Simulator (OTS) is established in the University to study the operations of thermal power plant for productivity optimization with risk mitigation.

Jaypee Wind Engineering Application Centre (JP-WINCENTRE) is being planned in 2012 to construct a wind tunnel facility with state-of-the-art equipment for undertaking industrial consultancy on wind tunnel testing of wind-sensitive structures such as high-rise buildings, tall chimneys and cooling towers etc. The JP-WINCENTRE is first of its kind among the private sectors in India. The vision of JP-WINCENTRE is to become Centre of Excellence of International repute in the field of Wind Engineering. The JP-WINCENTRE is currently under construction and to be operational within one year.

The CRDC and OTS are used for skill development program for industry personnel and consultancy work. Besides, both these facility are extensively used by research scholars to undertake high quality research and develop work in the respective fields.

List of research laboratories/centers setup during the assessment period in various Departments are:

S. No	Name of Laboratory	Department	Research Areas
1	Energy storage resource Lab	Physics	Carbon nano particles and super capacitor
2	Operator Training Simulator (OTS) Lab	Mechanical Engineering	To study super critical Power Plant for productivity optimization
3	Selective Laser Sintering Lab	Mechanical Engineering	Characterization and testing of composite material properties and material optimization
4	Computer Integrated Manufacturing (CIM) Lab	Mechanical Engineering	Computer controlled automated manufacturing system
5	Cement research and development centre (CRDC)	Civil Engineering	Cement production, quality testing waste utilization in cement industries
6	JAYPEE Wind Engineering Application Centre (JP-WINCENTRE)	Civil Engineering	Wind tunnel testing on models of wind-sensitive structures.
7	Application Specific Integrated Circuit (ASIC) design flow	Electronics and Communication Engineering	High-performance and low-power accelerator design, device modeling
8	Environmental Lab	Chemical Engineering	Research work based on UV Spectrometer, Gas Chromatograph, Weather station.

The University has state-of-the-art IT infrastructure. For the maintenance of instruments, hardware and software, adequate facilities are available in the departments and IT unit of the University. The following table summarizes the IT infrastructure which is also shared by other academic activites of the University.

IT infrastructure	Summary
Desktop	134*
Servers	5
Internet facility	1 Gbps Lease line
Software	24

*Used by faculty members and in the research

Proprietary software

S.No	Software name	S.No	Software name
1	Synopsis Asia pacific front end / back end University bundle	13	Gaussion 09
2	Matlab (ECE)	14	Goss View 05
3	Xilinx ISE Logic Edition11.1i ISE Foundation,	15	Autocad (Student Version 2015)
4	Ansys CFX 11.0	16	ABAQUS SIMULIA
5	Metlog Weather monitoring	17	Pro Engineer
6	Matlab (CHE)	18	PLAXIS 2D SUITE STANDALONE
7	Intel Visual Fortran	19	Gas Chromotographer
8	E-TAB 9.5 AND SAP 2000 V 14.2	20	Qualnet 5.1
9	STAAD PRO	21	IBM SPSS Modeler with 1 Server and 10 user clients
10	AUTOCAD (Civil Dept.)	22	Qualnet 5.1 Research License Perpetual
11	CHI608C ELECTROCHEMICAL ANALYZER	23	RHEL (Red Hat Enterprise Linux)
12	HIOKI LCR SAMPLE PROGRAMME	24	Microsoft Dream Spark Online

3.3.2 Does the university have an Information Resource centre to cater to the needs of researchers? If yes, provide details of the facility.

Yes, JUET has a fully computerized information center called LRC (Learning Resource Center). It provides almost 14.5 hrs physical service and apart from that 24X7 virtual service to cater the need of research scholars, faculty members and students. These services are:

- **SDI Service** (Selective Dissemination of Information): Under this service LRC has created the profile of an area of interest and specialization of research scholars & faculty members and document profile of all the subscribed e- resources. Every day LRC matches the profile of users and all the subscribed e- resources. Thereafter, latest full text research papers and articles are sent to research scholars and faculty members by internal mailing system.
- **CAS** (Current Awareness Service): LRC notify the latest development of LRC and their respective fields to all research scholars and users every day by the internal mailing system.
- **Reference Service**: LRC has reference desk, which provides all the necessary assistance to research scholars and users in the retrieval of LRC collection and services and understand their information needs.

- **OPAC Service** (Online Public Access Catalogue): research scholars can access all LRC resources through OPAC at their desired location within the campus.
- **SMS Alert Service**: LRC provides the SMS alert service to research scholars for collection of their reserved books and other LRC material.
- **Orientation Programs:** LRC organized regular orientation programs on the use of LRC services and e-resources for research scholars.
- **Inter Library Loan Service**: LRC offers inter-library loan service to research scholars and other users through DELNET, under this service if any books and articles are not available in LRC, we procured that desired document from 5300 member libraries of DELNET.
- **Reprographic Service**: LRC also provides photocopy service of printed resources to research scholars and other user on demands at nominal charges.
- Encourage research scholars to make optimal use of *ShodhGanga* and *ShodhGangotri* research repository (established by INFLIBNET, UGC) for their research work.
- LRC had made a website http:// 192.168.4.2 to provide the access to information about printed and e- resource, through it. Such as;- access of all e-journals, e-books, Ph.D thesis, online video lectures of NPTAL and other institutions, e-standards, e-conference proceedings, e-reference sources, current contents of journals, news arrival of books.
- LRC also provides the need based support to research scholars like visit to the other institutional library

3.3.3 Does the university have a University Science Instrumentation Centre (USIC)? If yes, have the facilities been made available to research scholars? What is the funding allotted to USIC?

Although the University is yet to establish a self-contained facility that can formally be designated as a University Science Instrumentation Centre (USIC), technical devices and apparatus for research are in fact maintained by various departments of the University, and all of these are made available to all the researchers of the University for their studies. For instance, the Cement Research Development Centre maintains few equipments such as optical microscope, muffle furnace, humidity chamber, vibrating machine, Le Chatelier apparatus, Vicat apparatus, Blaines apparatus, autoclave apparatus, flow table, etc. These are used for the physical and chemical testing of cement, fuels and pozzolanic materials. These equipments more often used by research scholars of core engineering areas like chemical and civil. Civil Engineering Department maintains few universal testing machines, which is essential for concrete and steel testing, needed for the research work of civil and mechanical engineers. Likewise, the Chemical Engineering Department runs a research laboratory sponsored by DST and CSIR, and its salient research appliances like a fluorescent spectro-photometer and a double distillation unit can be accessed by any interested researcher of the University. Similarly, the Environmental Laboratory also opens its spectro-photometers, aerobic and

anaerobic digesters, and muffle furnaces for common use. In addition, research scholars of the University also make use of a spectrum analyzer of the Department of Electronics and Communications Engineering.

Since there is no official USIC, no specific funding is allocated under this category.
The expenses of operating all the aforementioned laboratories are borne by their respective departments, for the common benefit of promoting an overall research culture in the University.

3.3.4 Does the university provide residential facilities (with computer an internet facilities) for research scholars, post-doctoral fellows, research associates, summer fellows of various academies and visiting scientist (national/international)?

Yes, as mentioned earlier, JUET is a fully residential campus. Adequate hostel accommodation and guest house facility is available in the campus for research scholars, post-doctoral fellows, research associates, summer fellows for various academic institutions and visiting scientists. All hostels and guest houses have 24x7 internet connectivity with air-cooling/air-conditioning facility**.**

3.3.5 Does the university have a specialized research centre/workstation on campus and off-campus to address the special challenges of research programmes?

Following research centers are established in the campus to address special challenges of research programs.
(i) Cement Research and Development Center (CRDC)
(i) Operator Training Simulator (OTS)
(ii) Jaypee Wind Engineering Application Centre (JP-WINCENTRE)

(i) Cement Research and Development Center (CRDC)
This centre provides a platform to researchers to address the issues related to Cement production such as process techniques, environmental considerations, production methods, newer materials, broadening of raw material base, waste utilization etc. The center studies various problems of Cement plant on production and energy conservation. Develop short term training modules for industry professional. Core and elective courses are also developed for B.Tech and M.Tech programs on cement and building materials. PhD programs also offered on the above topics. CRDC had conducted various traing programs for inhouse and outside cement specialist (details mentioned in the table).

Training and Academic Achievement:
Ongoing: Ph.D=2, M. Tech.=1, B. Tech./Diploma: 120 students (appox);
Degree Awarded: Ph.D =2, M. Tech =1 and B. Tech=200, Diploma=120.

Well trained Diploma and UG students from centre have joined various cement plants across the country. Various short term training programs are organized on the campus site and on the industry site for cement industry professionals working on production, testing, quality control and marketing. The list of short term courses organized during last five years is given in the table below.

Training program organized for Jaypee Cement Plan Employees

S.No	Training module	Date	Participants	Resource persons
1	**Cement & Concrete Technology** (Technical Support Assistants /Supervisors Cement Marketing)	7 Weeks (08.11.10 to 25.12.10)	28	Prof. N.J.Rao Prof. K.K.Jain Prof P.K.Singh Dr A.K.Mullick Dr K.Mohan Dr Hari Mahalingam Dr G.K.Agrawal Dr K.N.Gupta Dr Sunil Srivastava Dr Rashmi Tyagi Dr. S.R.Pandey Dr Nitin Samaiya Dr Kanchan Mala Dr. Sarath Babu Dr. Sumit Gandhi Mr. Krishna Murari Mr. D.K.Shukla Mr Rahul Srivastava
2		7 Weeks (08.11.10 to 25.12.10)	16	
3		7 Weeks (01.06.11 to 19.07.11)	27	
4	**Cement and Concrete** (Practicing civil engineers from construction sites of the group)	2- Days (22.11.12 to 23.11.12)	20	
5		4- Days (26.11.12 to 29.11.12)	10	
6		2- Days (28.11.12 to 29.11.12)	8	
7	**Cement Production & Quality Control** (Cement Plant Personnel engaged in Production and Quality Control)	10-Days (02.08.10 to 12.08.10)	11	
8	**Cement Manufacture** (Cement plant Key Accounts Officers)	3-Days/ 15.11.10 to 17.11.10	12	
9		3-Days 15.11.10 to 17.11.10	10	
10	**Cement and Additives** (RAMCO Industries Ltd. Asbestos sheet manufacturing units)	3- Days (15.02.13 to 17.02.13)	28	

(ii) **Operator Training Simulator (OTS)**: Running a thermal power plant on a simulator makes it possible to understand various processes of the plant and familiarize operators with unpredictable situations such as sudden load variations, and helps to find the most appropriate operation environment to optimize productivity while avoiding risk of damage. With these learning curves, operators of thermal power plants confronting with stiff market competition give themselves additional opportunities to improve their competitiveness and make their investments profitable. To study the operations of thermal power plant and investigate issues related to

productivity optimization and risk mitigation, a super critical 660MW (550 ^{0}C, 260 bar) Operator Training Simulator (OTS) is procured from Haneywell, Pune India and established in the University. Currently the facility is used by both Mechanical Engineering and Chemical Engineering research scholars and faculty for their research and develop training programs for professionals working in thermal power plant and chemical industries.

(iii) Jaypee Wind Engineering Application Centre (JP-WINCENTRE)

Recognizing the importance of wind engineering and its application particular in the field of infrastructure and building construction, the Jaypee Wind Engineering Application Centre (JP-WINCENTRE) is being established at this University, JUET. As part of this project, a state-of-the-art boundary layer wind tunnel facility is also being facilitated. This facility will be primarily used for undertaking industrial consultancy through wind tunnel testing on models of wind-sensitive structures, such as high-rise buildings, tall chimneys and cooling towers etc. The Centre is first of its kind among the private sectors in our country. The vision of (JP-WINCENTRE) is to become centre of excellence in the field of Wind Engineering at national and international level, and to provide innovative solutions to problems of industry and society, and to pursue high quality research in this field. The construction of the Centre is in its advanced stage.

3.3.6 Does the university have centers of national and international recognition/repute? Give a brief description of how these facilities are made use of by researchers from other laboratories.

No

3.4 Research Publications and Awards

3.4.1 Does the university publish any research journal(s)? If yes, indicate the composition of the editorial board, editorial policies and state whether it /they /is/ are listed in any international database.

The University publishes its research journal entitled `JUET Research Journal of Science and Technology` biannually in collaboration with Narosa Publishing House, New Delhi. The first edition of this journal was published in January 2014 and its new subscription Volume 3 is going to publish in the month of July 2016.

Journal managing committee and editorial advisory board:

Journal Managing Committee:

Patron :	Prof. N.J. Rao, Vice Chancellor
Chief Editor :	Prof. Shishir Kumar
Editorial Board Members :	Dr. Anuj Kumar
	Dr. Rashmi Tyagi
	Dr. Narendra Singh

Editorial policy:

JUET Journals of Engineering & Research (JRJST) is an Institutional publication of Jaypee University of Engineering & Technology. It is bi-annual publication and subscribed by many academic libraries. Authors are invited to submit their original and unpublished work. While making a submission for this journal authors are solely responsible for clearance of their submissions from all plagiarism and IPR issues. All the submissions for this journal may also be checked by Editorial Board using suitable anti-plagiarism Web tool.

All manuscripts submitted to this journal are critically assessed by external and/or in-house experts in that area, in accordance with the principles of peer review, which is fundamental to the scientific publication. Each paper is first assigned by the Editors to an appropriate team of reviewers, who has knowledge of the field/work discussed in the manuscript. The first step of manuscript selection takes place entirely in-house and has two major objectives:

1. To establish the article's appropriateness for journal's readership;
2. To define the manuscript's priority ranking relative to other manuscripts under consideration, since the number of papers that the journal receives is much greater than it can publish.

All scholarly submissions (articles) first receive a preliminary assessment to determine their suitability for the focus, target audience, and style of journals format. If a manuscript does not receive a sufficiently high priority score to warrant publication, the editors will proceed to a quick rejection. The remaining articles are reviewed by at least two different external referees (second step or classical peer review). These are experts in the field who have agreed to provide a rapid assessment of the article. Every effort will be made to provide an editorial decision as to acceptance for publication within 4-6 weeks of submission. Referees may request a revision of the article to be made. In this case, it is generally understood that only one revised version can be considered for a further appraisal under the peer-review system. The Editors of this journal are responsible for the final selection of referees to conduct the peer-review process for that journal.

The names of referees will not be made available to the authors. All members of the Editorial Board and referees are asked to declare any competing interests they may have in reviewing a manuscript. If on receiving the editorial decision concerning their manuscript, authors are not satisfied they are invited to appeal to the Chief Editor. In such cases a second opinion on the manuscript may be requested.

Peer Review Process:
In selecting articles for publication, the editor gives preference to those of general significance that are well written, well organized, and intelligible. JRJST aims to publish articles on top-quality work with important impact, and to introduce readers from one area of science & technology to the state of the art in other important areas. Articles will usually take a broad view or provide an example shedding light on a broad area, and may summarize research that has been previously published in more technical publications. The results of the review process are normally available within 4 to 6 weeks of submission. Outcomes of the review process include acceptance, acceptance with major/minor revisions, and/or rejection. Articles that are consistently rejected include those that are overly commercial in tone, poorly written or organized, too specialized or esoteric, too elementary, or too long or that cover material already dealt with in JRJST. If authors are encouraged to revise and resubmit a submission, there is no guarantee that the resubmission will be reviewed by the same reviewers or that the revised submission will be accepted. Rejected articles will not be re-reviewed by the board.

Disclosures:
When authors submit a manuscript, they are responsible for disclosing facts and personal relationships that might bias their work. To prevent ambiguity, authors must state explicitly whether potential conflicts do or do not exist. Authors should do so in the manuscript on a conflict-of-interest notification page, providing additional details, if necessary, in a cover letter that accompanies the manuscript.

Publication Frequency:
JRJST published bi-annually, first issue of any volume usually comes in the month of January and the second issue is scheduled in the month of July of every year.

Publication Ethics:
Authors have an ethical obligation to submit creditable research results for publication. Moreover, as the persons directly responsible for their work, researchers should not enter into agreements that interfere with their access to the data and their ability to analyze them independently, and to prepare and publish manuscripts. Authors should describe the role of the study sponsor, if any, in study design; collection, analysis, and interpretation of data; writing the report; and the decision to submit the report for publication. If the supporting source had no such involvement, the authors should so state. Biases potentially introduced when sponsors are directly involved in research are analogous to methodological biases.

Editors may request that authors of a study funded by an agency with a proprietary or financial interest in the outcome sign a statement, such as "I had full access to all of the data in this study and I take complete responsibility for the integrity of the data and the accuracy of the data analysis." Before making any submission to this journal Authors must review the copies of the protocol and/or contracts associated with project-specific studies before considering such studies for submission/publication.

Reviewers must disclose to editors any conflicts of interest that could bias their opinions of the manuscript, and they should refrain themselves from reviewing specific manuscripts if the potential for bias exists. As in the case of authors, silence on the part of reviewers concerning potential conflicts may mean either those conflicts exist and the reviewer has failed to disclose them or conflicts do not exist. Reviewers must therefore also be asked to state explicitly whether conflicts do or do not exist. Reviewers must not use knowledge of the work, before its publication, to further their own interests.

Editors who make final decisions about manuscripts must have no personal, professional, or financial involvement in any of the issues they might judge. Other members of the editorial staff, if they participate in editorial decisions, must provide editors with a current description (as they might relate to editorial judgments) and refrain themselves from any decisions in which a conflict of interest exists.

Before submission authors must ensure the originality of unpublished work, which they are planning for submission. While making a submission for this journal authors are solely responsible for clearance of their submissions from all plagiarism and IPR issues. All the submissions for this journal may also be checked by Editorial Board at any stage using suitable anti-plagiarism Web tool.

Reprints:

After publication of papers in JRJST, a copy of reprints will be provided to the corresponding author. For other aspects related to publications in this journal, all the concerns are advised to visit the Websites:

http://www.juet.ac.in/JRJ/ResearchJournal.php

http://www.narosa.com/juet.htm

Mail can also be dropped to editorial office at editorialoffice.jrjst@juet.ac.in.

Journal listing in international database:

Currently JUET Research journal is not listed in any of the international data base. However, efforts are going on in this direction to include the journal in a few international databases. Journal ISSN is 23216026.

Besides Research Journal, University publish a bi-annually news letter named "JUET Chronicle" highlighting faculty achievements with respect to research, projects, foreign visits etc. It also highlights student achivents on academic, research, curricular, co-curricular activites and placements.

3.4.2 Give details of publication by the faculty:

The University emphasizes on publications in reputed international/national journals and conferences, books, edited books, book chapters etc. The faculty is actively engaged in these activities. The details of these publications from January 2010 upto November 2015 are given in **Annexure-3.4.2**. Summary of these publications is given the table below.

Category	2010	2011	2012	2013	2014	2015
International Journals	53	57	83	137	127	84
National Journals	05	04	05	03	09	04
International Conferences	32	40	29	35	32	21
National Conferences	21	25	15	16	14	08
Total	**111**	**126**	**131**	**191**	**182**	**117**
Publication Ratio*	1.028	1.167	1.36	1.540	1.517	1.206

* Publication Ratio is calculated using the formula total publication /number of faculty of the corresponding year.

Other Publications:

Category	Number
Monographs	00
Books in Chapters	20
Edited Books	03
Books with ISBN	18
Total	**41**

Journals Indexed in International Database:

Category	International Database	2010	2011	2012	2013	2014	2015
International Journal	**SCI**	05	09	14	27	23	23
	SCOPUS	21	20	30	58	44	42
	Others	27	28	39	52	70	19
National Journal	**SCI**	00	00	00	00	00	00
	SCOPUS	00	00	00	02	03	01
	Others	05	04	05	01	06	03

Indexing details of publications:

Indexing Parameter	Details
Google Citations	Total citations: 1394 Range : 0 - 123 Average : 4.725
SNIP (Average SNIP for journals is computed among the SCOPUS indexed papers published in International/national journals only)	Range : 0 - 3.878 Average : 0.769
SJR (Average SJR for journals is computed among the SCOPUS indexed papers published in International/national journals only)	Range : 0 - 3.286 Average : 0.728
Impact Factor	Range : 0 - 4.58 Average : 1.283
h-index	Range : 0 - 162 Average : 20.211

Formula used for calculation of average values:
Average Citation index = total citation / total number of SCOPUS listed journal papers
Average SJR = total SJR score / total number of SCOPUS listed journal papers
Average SNIP=total SNIP score / total number of SCOPUS listed journal papers
Average Impact factor= total impact factor / total number of SCOPUS listed journal papers
Average h-index = total h-index/total number of SCOPUS listed journal papers

3.4.3 Give details of
(a) Faculty serving on the editorial boards of national and international journals

(b) Faculty serving as members of steering committees of international conferences recognized by reputed organizations/societies.

Name of the faculty and Journal details:

N.N. Dutta

- Editorial Board Member: Applied Membrane Science & Technology
- Editorial Board Member: Assam Science Society

Raj Kumar Arya

- Editorial Board Member: International Journal of Chemical Engineering and Applications (ISSN 2010-0221)

S. Arunachalam

- One of the Editors: Journal of Wind and Engineering (ISWE)

Nitin Kumar Samaiya

- Editorial Board Member: JUET Research Journal of Science and Technology (2321-6026) during 2014-15.

Sumit Gandhi

- Editorial Board Member: JUET Research Journal of Science and Technology (2321-6026), 2015 onwards.

Revanuru Subramanyam

- Editorial Board Member: JUET Research Journal of Science and Technology (2321-6026).

Shishir Kumar

- Chief Editor: JUET Journal of Science & Technology. ISSN No. 23216026 (June 2015 onwards)
- Guest Editor: GAMS Journal of Mathematics. 2010
- Editorial Board Member: Pragyan: Journal of Information Technology. (Continued)
- Editorial Board Member: International Journal of Information Technology and Knowledge Management. ISSN No. 09734414. (Continued)
- Editorial Board Member: International Journal of Computational Intelligence and Information Security. ISSN No. 18377823. (Continued)
- Editorial Board Member: International Journal of System & Software Engineering. ISSN No. 2321-6017. (Continued)
- Editorial Board Member: International Journal of Computer and Communication System Engineering. ISSN No. 23127694. (Continued)
- Editorial Board Member: Journal of Computing. ISSN No. 21519617. (Continued)

- Editorial Board Member: International Journal of Computer Applications. ISSN No. 0975 – 8887. (Continued)
- Editorial Board Member: International Journal of Computer Science Issues. ISSN No. 0975-9646. (Continued)

Vipin Tyagi
- Guest Editor: CSI Communications, ISSN 0970-647X, since May-2015.

Amit Kumar
- Editorial Board Member: International Journal of Computer Application (IJCA), ISSN 0975-8887, for 2010 to June 2015
- Editorial Board Member: Journal of Computer Science, ISSN: 1549-3636, 2010 to Dec 2014

Mahesh Kuamr
- Editorial Board Member: JUET Research Journal of Science & Technology, ISSN No. 23216026 since Jan 2014.

Prateek Pandey
- Editorial Board Member: International Journal of Knowledge Engineering & Technology, ISSN No. 0976-5487.

B. K. Mohanty
- Associate Editor: Circuit, Systems and Signal Processing, Springer, since 2012.

Ravi Kumar
- Member Editorial Board: Journal of Engineering, Computers and Applied Sciences, BORJ. (2319-5606).
- Member Editorial Board: Wireless Personal Communication, Springer. 0929-6212.

D.S.Hooda
- Member of editorial board: American Journal of Theoretical and Applied Statistics , ISSN: 2326-8999

I. Husain
- Member of editorial board: European Journal of Pure and Applied Mathematics, ISSN 1307-5543

H.K.Mishra
- Member of editorial board: ISST Journal of Mathematics & Computer Sciences (India), ISSN 0976 – 9048

D.K. Sharma
- JUET Research Journal of Science and Technology (2321-6026).

Anuj Kumar
- Editorial Board Member: International Journal of Materials and Chemistry
- Editor: JUET Research Journal of Science & Technology

Sanat Agrawal
- Editor: Indian Journal of Orthopadix (ISSN: 0972-978X)
- Editor: Institution of Engineers (ISO: 9001:2008)
- Editor: International Journal of Applied Mechanics (USA), (ISSN: 1758-8251).

Bhagat Singh
- Editor Board member: JUET Research Journal of Science and Technology. India (ISSN: 2321-6026) since 2015.

Amit Sharma
- Editor: ISST Journal of Mechanical Engineering (IJME)(ISSN: 0976-7371)
- Editor: Int. J. of Ambient Energy (*ISSN*: 0143-0750)
- Editor: Int. J. of Sustainable Energy (ISSN: 1478-6451).

Faculty serving as members of steering committees of international conferences recognized by reputed organizations/societies

Name of faculty	Conference/ workshop/societies details
N. J. Rao	- Independent Director on the Board: M/S Shreyans Industries Ltd, Ludhiana since 2001 (Continuing) - Member Execuitive Board, Centre for Science and Envirement, New Delhi, 2015 - Memebr: Governing Body of Avanta (Thaper) Corporate Research Centre, New Delhi - Member: Excutive Committee, Indian Pulp and Paper Technical Association - Life Member: Indian Institution of Chemical Engineers - Life Member: Indian Pulp and Paper Technical Association
N.N. Dutta	- Life Member: IIChE - Life Member: Indian Membrane
Sunil Kumar Srivastava	Member: American Chemical Society (ACS)
S. Arunachalam	- Fellow: Indian National Academy of Engineering - Fellow: Institution of Engineers India - Life Member / Member, EC /Vice- President: Indian Society for Wind Engineering - Life Member: Indian Meteorological Society - Life Member: Indian Concrete Institute - Life Member: Indian Association of Structural Engineers - Member: National Steering Committee (for National Cyclone Risk Mitigation Project, Government of India), Ministry of Home Affairs. - Member: National Disaster Management Authority, Government of India - Nodal Principal Coordinator: Formation of India Disaster Knowledge Network (IDKN) National Institute of Disaster Management - Alternate Member: Panel for Wind Loads, CED 37/P:4/A-1, BIS.

	• Convenor and Principal Member: Special Structure Sectional Committee, CED 38/BIS.
	• Principal Member: Panel for Industrial Buildings, CED 46(Sub)/BIS.
	• Expert Member: Monitoring Committee for Progress of DST project, M.I.T. Anna University.
	• Member: Board of Studies, Annamalai University, Chidambaram
	• Member: Research Council – CRRI, New Delhi.
	• Member: National Advisory/ Technical Committees on National Conferences on Wind engineering,
	• Member: Scientific Committee, 7th International Symposium on Environmental Effects on Buildings and People, Poland.
Sumit Gandhi	• Life Member: Indian Society for Hydraulics
Nitin Kumar Samaiya	• Life Member: Indian Society for Hydraulics
	• Life Member: Indian Water Resources Society
	• Life Member: Indian Society for Wind Engineering
Krishna Murari	• Life Member: Indian Concrete Institute
	• Life Member: Indian Society for Wind Engineering
R. K. Goliya	• Life Member: Indian Concrete Institute
	• Life Member: Indian Society for Wind Engineering
	• Life Member: Indian Geotechnical Society
Ajay Kumar	• Technical Programme Committee Member: IEEE International Conference on Computing Communication and Automation (ICCCA2015), Galgotias University Uttar Pradesh, India,
Prateek Pandey	• Technical Programme Committee Member: IEEE International Conference on Computing Communication and Automation (ICCCA2015), Galgotias University Uttar Pradesh, India,
Ratnesh Litoriya	• Technical Programme Committee Member IEEE International Conference on Computing Communication and Automation (ICCCA2015), Galgotias University Uttar Pradesh, India,
Dinesh Verma	• Technical Programme Committee Member: IEEE International Conference on Computing Communication and Automation (ICCCA2015), Galgotias University Uttar Pradesh, India,
Nilesh R. Patel	• Technical Programme Committee Member: IEEE International Conference on Computing Communication and Automation (ICCCA2015), Galgotias University Uttar Pradesh, India,
Ashish Gupta	• Member: Wireless Mobile Network and Applications, Chennai, India,
	• Member: Information Technology, Control and Automation, Zurich, Switzerland.
	• Member: Computation Science, Engineering and InformationTech-nology,Vienna, Austria
	• Member: International Conference on Advance in Computing, Communications and Infomatics in Sep 2014.
	• Member: International Association of Engineers
Neelesh Kumar Jain	• Member: IAENG (International Association of engineers)
	• Member: IACSIT (International Association of Computer Science & Information Technology)

	• Member: CSTA (Computer Science Teachers Association)
Neeraj Rathore	• Member: International Association of Engineers (IAENG) Member: Machine Intelligence Research LABS Committee
B. K. Mohanty	• Technical Program Committee Member: International Symposium on Consumer Electronics (ISCE2011) Sponsored by IEEE Consumer Electronics Society • Technical Program Committee Member: International Symposium of Electronics System Design (ISED2011), Kochin, India • Technical Program Committee Member: IEEE International Conference on Signal Processing and Communication organized by JIIT Noida and IEEE Delhi Section. • Technical Program Committee Member: 2nd International Conference on Signal Processing and Integrated Networks, Amity University, Noida, Jan 19-20 Feb, 2015. • Technical Program Committee Member: 3nd International Conference on Signal Processing and Integrated Networks, Amity University, Noida, Feb 11-12, 2016. • Senior Member: IEEE, Circuits and Systems Society • Life Member: IETE, New Delhi
Ravi Kumar	• Member: IEEE, IETE, IAENG, IACSIT
R. K Vishwakarma	• Member: District Coordinator of Vigian Jagriti Manch Ambikapur • Life Member: Chhattisgarh Vigyan Bharati Sansthan Raipur
Manish K. Patidar	• Associate member: IETE , New Delhi
H.K.Mishra	• Member: American Journal of Mathematical Analysis • Member: American Journal of Applied Mathematics and Statistics • Member: International Journal of Advances in Engineering & Technology (IJAET), ISSN: 2231-1963 • Member: World Academy of Science, Engineering and Technology • Member: American Journal of Numerical Analysis • Life Member: Indian Society of Industrial and Applied Mathematics • Life Member: Forum for Interdisciplinary Mathematics • Life Member: Gwalior Academy of Mathematical sciences • Life Member: The Indian Science Congress Association
D.K. Sharma	• Life Member: Forum for Interdisciplinary Mathematics (FIM) • Life Member: Indian Science Congress Association
Bali Ram Gupta	• Life Member: Indian Science Congress Association • Life Member: Indian Society for Technical Education. • Life Member: Indian Mathematical Society. • Life Member: Indian Society of Biomechanics. • Life Member: International Academy of Physical Sciences. • Life Member: Indian Society of Theoretical and Applied Mechanics
Sanat Agrawal	• Life Member: Indian Society For Technical Education • Member: American Society of Mechanical Engineers

	• Life Member: Society of Manufacturing Engineers • Member: Rapid Product Development Association of South Africa (RAPDASA)
Amit Sharma	• Senior Life Member: International Association of Computer Science and Information Technology (IACSIT) • Member: International Association of Engineers (IAENG)
Bhagat Singh	• Senior Life Member: International Association of Engineers (IAENG) • Senior Life Member: International Association of Computer Science and Information Technology (IACSIT)
Arun Kumar Pandey	• Senior Life Member: International Association of Computer Science and Information Technology (IACSIT) • Member: ISTE New Delhi
Manoj Dubey	• Life Member: Institution of Engineers
Anuj Kumar	• Life Member: Indian Science Congress Association, Kolkata • Life Member: Material Research Society, India
S.K. Tripathi	• Life Member: Indian Society for Solid State Ionics
Rajneesh Atre	• Life Member: Indian Society for Atomic and Molecular Physics
Rajeev Srivastava	• Life Member: All India Management Association • Life Member: Indian Economic Association

3.4.4 Give details of
- **Research awards received by the faculty and students**
- **National and international recognition received by the faculty and students from reputed professional bodies and agencies.**

Research awards received by the faculty and students

Name of faculty/student	Detail of research award
S. Arunachalam	• FINAE awarded by Indian National Academy of Engineering for Contributions in the field of civil engineering and wind engineering w.e.f. January 01, 2014.
Krishna Murari	• Best Paper award by 3rd International Conference on Recent Trends in Science and Technology IC-RTST 2015 held at SVNU Sagar during February 27-28, 2015.
Revanuru Subramanyam	• Empanelled as guide/faculty in EPCO (Environmental Planning and Coordination Organization) Institute for PGDEM (Post Graduate Diploma in Environmental Management) course and other academic programmes
Ravi Kumar	• Best Paper Award : IEEE International Conference, Bangalore, 2012
Dr. Hari Mahalingam	• Best Paper Award at ICBEE 2013, New Delhi, India

S. K. Tripathi	• ISCA Young Scientist Award: Indian Science Congress Association • Young Scientist Award by "Prof. Suresh Chandra Medal", 6th National Conference on Solid State Ionics
Harikesh Singh	• Fellowship for Training of Young Scientists of M. P. Council of Science and Technology in Computer Science Engineering and Information Technology discipline at the 28th M. P. Young Scientist Congress held at Vigyan Bhawan, Bhopal, M. P. during Feburary 28- March 01, 2013.
Dinesh Kumar Verma	• Fellowship for Training of Young Scientists of M. P. Council of Science and Technology in Computer Science Engineering and Information Technology discipline at the 28th M. P. Young Scientist Congress held at Vigyan Bhawan, Bhopal, M. P. during Feburary 28- March 01, 2013.
Vikram Singh Chouhan and Sandeep Srivastava	• Best Paper Award: Awarded by International academy of science, Engineering and Technology, 2015.
Sonali Saxena (Research Scholar)	• Young scientist awards: Madhya Pradesh Council of Science and Technology, 2012.
Amrita Jain (Research Scholar)	• Young scientist awards (Physics): Madhya Pradesh Council of Science and Technology, 2012.
Vikas Tiwari (Research Scholar)	• Young scientist awards (Electrical and Electronics): M. P. Council of Science and Technology in Computer Science Engineering and Information Technology discipline at the 27th M. P. Young Scientist Congress held at Vigyan Bhawan, Bhopal, M. P. during Feburary 28- March 01, 2012.
Saurabh Shrivastava (Research Scholar)	• Fellowship awarded by M.P. Council of Science & technology at 29th M.P. Young Scientist Congress held during Feburary 28- March 01, 2014 for Training of Young Scientist".
Siddhant Mukharji, Vikram Jangir, Shivam Chawla (B.Tech student)	• Secured first position in Aerodynamic event "Impulse" in Techkriti at IIT Kanpur, February, 2012
Gaurav Srivastava, Tushar Sahjwani and Keshav Goel (B. Tech student)	• Participated in onsite event of ACM ICPC held during December 19-20, 2012 at Amrita Vishwa Vidyapeetham, Amritapuri Campus Bangalore.

Shivam Rana, Anmol Arora and Shivam Singh (B. Tech student)	• Participated in onsite event of ACM ICPC held during December 12-13, 2012 at IIT Kanpur.
Prashant Agrawal (B.Tech student)	• Selected by GOOGLE as the Google Student Ambassador to represent Jaypee University of Engineering & Technology for academic year 2013-14.
Pulkit Verma B.Tech student)	• Secured first position in "Vaigyaniki" National level Paper presentation at IIT Bombay, March 03-04, 2012.
Yash Raj Singh (B.Tech student)	• Ranked in Top 10 Apps developers in National event of Google Cloud Developer Challenge, December, 2013.
AKhil Garg (B.Tech. student)	• Selected for the Microsoft Student Partner Program (2011-12)
Prashant Agrarwal (B.Tech. student)	• Selected for the Google for Education: Student Ambassador Program (2013-14)
Keshav Goel and Priyam Srivastava (B.Tech. students)	• Selected for the Firefox Student Ambassadors (2014-16)
Utkarsh pandey, (B.Tech. students)	• Selected for the Microsoft Student Partner Program (2014-15)
Vishabh Chauhan, Kushwant Singh Chouhan, Yamini Gupta, and Vishal Mishra (B.Tech. students)	• Selected for Microsoft Student Associates(2014-15)
Chaitanya R. Goyal (B.Tech. student)	• Attended and presented the work in 4th KKU – International Engineering Conference, (KKU-IENC 2012), May, 10 – 12, 2012 Thailand.
Chitresh Kumar Bhargava (B.Tech, CHE)	• IIChE Award for the Year 2015: The Chemical Weekly Prize for Best Research Paper Published in a High Impact Factor International Journal by an Undergraduate Chemical Engineering Student. The award given in the 68th Annual Session-cum-Indian Chemical Engineering Congress (CHEMCON 2015) to be held from 27-30 December, 2015 at Guwahati

National and international recognition received by the faculty and students from reputed professional bodies and agencies

Name of Faculty	National and international recognition
D.S.Hooda	• Distinguished Service Award for Research, Vijanana Parishad of India • International Plato Award-2010 for educational Achievement, International Biographic Centre, Cambridge, St Thomas' Place, Great Britain in 2010
H.K.Mishra	• IASc-INSA-NASI summer fellowship Scheme (SRF) 2011
Neelesh Kumar Jain	• International certification by "DALE CARNEGIE" on "High Impact Teaching Skills", Wipro Technologies.
S.Arunachalam	• Fellow : Institution of Engineers (India) • Fellow : Indian National Academy of Engineers
Vipin Tygi	• Elected vice-president (M.P, Rajasthan, Gujarat) of Computer Society of India. • President - Engg Sciences- Indian Science Congress Association 2010-11. • Recorder - Engg Sciences- Indian Science Congress Association 2008-10. • Indian National Science Academy nominated to Visit Czech Republic in the area of Digital Image Procg. in 2010.
B.K.Mohanty	• Elevated to Senior Member, IEEE in 2011.

3.4.5 Indicate the average number of successful M.Phil. and PhD. Scholars guided per faculty during the last four years. Does the university participate in Shodhganga by depositing the Ph.D. thesis with INFLIBNET for electronic dissemination through open access?

There are total **145 Ph. D. and 230 M. Tech**. scholars guided in the last four years. The table below presents average number of Ph. D. and M. Tech. projects guided till May 2015.

Ph.D. /M.Tech. Thesis	Average per faculty
Average number of Ph.D. Thesis Guided[1]	0.71 (35/49)
Average number of Ph.D. Theses in Progress[2]	1.36 (67/49)
Average number of M. Tech. Thesis Guided[3]	0.315(156/494)
Average number of M. Tech. Thesis in Progress[4]	0.725(74/102)

[1] [1]number of PhD thesis guided to number of eligible PhD supervisor during 2014-2015
[2]number of PhD thesis in progress to number of eligible PhD supervisor 2014-2015

The University participates in ShodhGanga and ShodhGangotri by depositing Ph.D. thesis with INFLIBNET.

3.4.6 What is the official policy of the university to check malpractices and plagiarism in research? Mention the number of plagiarism cases reported and action taken.

The University has a well defined official policy to check malpractices and plagiarism in research which has been elaborated in its policy draft. University has Doctoral Program Monitoring Committee (DPMC) chaired by Dean (Research) which deals and verifies the issues related to malpractices and plagiarism in research work. The DPMC members also validate every research paper of scholar/faculty members for copyright contents through web-based tools and other resources before publishing it in any referred journal. To check the plagiarism in research, University has adopted a policy as pointed below:

- Right from very beginning Ph.D. scholars should be instilled with a strong ethical value to avoid malpractices and plagiarism.
- As a routine matter, the DPMC will monitor the progress of the Ph.D. work through end semester presentations.
- At the time of submission of request for notification of Synopsys Seminar every PhD Scholar should also submit a certificate/undertaking to the effect that "the work reported in the thesis is essentially free from all kinds of plagiarism and violation of IPR Rules ".
- Every Ph.D. scholar should submit a soft copy of the thesis before formal Synopsis submission.
- The soft copy of the thesis should be checked by suitable Anti Plagiarism Web Tool by the person/committee nominated by the University. Report generated by this tool should be submitted to DPMC.
- After clearance of Anti Plagiarism report from DPMC and further approval of the Vice Chancellor, the candidate should be permitted to submit the Synopsis.
- In case of cognizance / report of malpractice or plagiarism an enquiry committee will be formed by the Vice-Chancellor. This committee will probe and recommend the actions to be taken for malpractices and plagiarism in research. Strict disciplinary action as per established procedures will/may be undertaken.

No case of plagiarism is reported till date.

3.4.7 Does the university promote interdisciplinary research? If yes, how many interdepartmental/interdisciplinary research projects have been undertaken and mention the number of departments involved in such endeavors?

S.No	Title of the research/project	Departments Involved
1	Usage of ternary cement blends in making high strength concrete	Civil and Chemical Engineering
2	Usage of demolition waste in making high strength concrete	Civil and Chemical Engineering
3	Material Optimization for Selective Laser Sintering (SLS)	Mechanical Engineering and Physics department
4	Development of Composite Materials	Chemical Engineering and Physics
5	Effect of Mineral Admixtures on Properties of Concrete with Ternary Cement Blends	Civil Engineering and CRDC
6	Properties of High Strength Concrete utilizing Processed Recycled Aggregates	Civil Engineering and CRDC

3.4.8 Has the university instituted any research awards? If yes, list the awards.

Not yet.

3.4.9 What are the incentives given to the faculty for receiving state, national and international recognition for research contribution?

The faculties who have received state/national/international recognition for their research contribution are encouraged (i) to submit scientific collaborative research project proposals through the University to DST, CSIR, ISRO, DRDO, IGSTC etc., (ii) to serve as expert committee members/organizing committee members of National conferences such as Indian Science Congress/ Accreditation Committees for engineering colleges/Wind engineering conference etc. They are also given official permissions for delivering invited lectures or keynote speeches, whenever required, representing the University.

The University also encourages and motivates active researchers to participate and present research papers in National and International Conferences both in India and abroad, to meet and interact with peers in respective fields of research, thereby updating their technical knowledge and enhancing their professional status and recognitions. On few occasions while the University has earlier supported through partial and/or full financial travel support, it still continues encouraging researchers for their participation through partial financial support through DST, CSIR and other scientific funding agencies.

The university also considers their recognition and scientific contributions at the time of their career promotions.

3.5 Consultancy

3.5.1 What is the official policy of the University for Structured Consultancy? List a few important consultancies undertaken by the university during the last four years.

- The faculty members of the University may undertake consultancy or provide technical advice to industry and other organizations using, if necessary, the facilities of the University. The services/consultancy provided may be of the following types:

  (i)   Individual consultancy

  (ii) Service Consultancy

- Individual consultancy relates to work undertaken by a faculty member in his/her individual capacity without using University's Laboratory facilities.

- Service Consultancy includes works undertaken by an individual or a group of faculty member in which, the University equipments consumables and labour and other facility are used.

- A request for service consultancy shall be received by the VC/Director/Head of Civil Engineering Department. It may, however, be received directly by a faculty member and forwarded to VC/Director for consideration.

- Consultancy works/Projects shall be undertaken only upon the approval of the VC/Director based on the recommendations by the Head of the Department.

- Individual consultancy assignment shall be taken up directly by an individual faculty member with approval of VC/Director on the recommendation of Head of Department.

- The consultancy charges shall be based on the extent and nature of work involved and shall be decided by the concerned faculty member who is appointed as the consultant for the work, under intimation to VC/Director.

- The amount of consultancy charges shall be paid by the customer/client in advance through D.D. drawn in favour of JUET payable at GUNA.

- The share of university from money earned out of service consultancy has been decided as under

  (i)   25% towards university's consumables/use of equipment labour etc.
  (ii) Balance 75% shall be distributed towards Faculty & staff 70% and remaining 30% towards University overhead. The internal distribution for faculty and staff shall be decided by Head of the Department.

- Similarly the earning from individual consultancy shall be decided as 30% toward University overhead and 70% to the concerned faculty.

- The University will spend its share after deduction of overhead charges on the development of research facilities in Civil Engineering Department.

- The annual income of an individual (*both the faculty member and laboratory staff*) from consultancy shall not exceed the total emoluments received from the University.

The schedule of rates for material testing is enclosed in **Annexure-3.5.1.**

List of consultancies undertaken by the university during the last four years

- **Cement Testing and Energy Auditing by CRDC:**

S.No	Type of Consultancy work	Department	Earning
1	Utilization of industrial wastes like Ashapura gypsum, Waste gypsum moulds, Lignite fly ash, Granulated slag at J.P. Gujarat cement plant, Sewagram, Kutch (Gujarat) 2011-12.	CRDC	Nil
2	Remedial measures were suggested to add other varieties of Gypsum for set regulation of cement, after studies were conducted at CRDC,JUET, Guna for the gypsum(Imported from Pakistan) being used at J.P.Himachal cement plant (H.P.) 2014.	CRDC	Nil
3	Energy audit at Shivam Cement, NEPAL, during the month of June 2013	CRDC	USD 3500*
4	Energy audit at Agrakhachi Cement and Siddhartha Cement, NEPAL, during the month of February,2014	CRDC	USD 3500*
5	Energy audit at Dalla Cement Factory and Chunar Cement Factory(J.P.group Cement Plants in U.P.), during the month of August 2014	CRDC	Nil

*Funding agency for conducting energy audits at Nepal Cement plants is Integration Environmental and Energy, Germany.

- **Conducting Training program Cement Plant Employees**

S.No	Training module	Date	Participants	Earning (₹ in Lacs)
1	**Cement & Concrete Technology** (Technical Support Assistants /Supervisors Cement Marketing)	7 Weeks (08.11.10 to 25.12.10)	28	3.5
2		7 Weeks (08.11.10 to 25.12.10)	16	
3		7 Weeks (01.06.11 to 19.07.11)	27	10.23

4	**Cement and Concrete** (Practicing civil engineers from construction sites of the group)	2- Days (22.11.12 to 23.11.12)	20	1.39
5		4- Days (26.11.12 to 29.11.12)	10	
6		2- Days (28.11.12 to 29.11.12)	8	
7	**Cement Production & Quality Control** (Cement Plant Personnel engaged in Production and Quality Control)	10-Days (02.08.10 to 12.08.10)	11	1.5
8	**Cement Manufacture** (Cement plant Key Accounts Officers)	3-Days/ 15.11.10 to 17.11.10	12	1.9
9		3-Days 15.11.10 to 17.11.10	10	
10	**Cement and Additives** (RAMCO Industries Ltd. Asbestos sheet manufacturing units)	3- Days (15.02.13 to 17.02.13)	28	2.82
11	BINA Thermal power plant	5-Days 26.12.11 to 31.12.12	21	1.25
	Total			22.59

To facilitate industrial consultancies and interaction with the industrial community, the University has set up a University Industry Community Interaction Centre (UICIC). The university has initiated major steps in this direction. The Jaypee Wind Engineering Application Centre (JWAC) is being established at this University in 2012 and currently work is under progress to setup the wind tunnel workshop. A major focus of industrial consultancy will be on the model testing through wind tunnel for the development of infrastructure such as high-rise buildings, power plant structures, bridges etc. The super critical 660MW ($550\ ^0C$, 260 bar) Operator Training Simulator (OTS) is established in university to provide consultancy to nearby thermal power plants.

- **List of Consultancy services provided by Civil Engineering Department**

S. No.	Name of the Funding Agency	Amount (₹ in Lacs)
1	Water Resource Department, Raghogarh	1.54246
2	Water Resource Department, Guna	1.03823
3	Water Resource Department, Rajgarh	0.15586
4	Water Resource Department, Ashoknagar	0.05515
5	GAIL India Limited, Vijaipur	0.02023
6	Nagar Panchayat, Isagarh	00.5625
7	RKS Construction Pvt. Ltd	1.16395
8	GVR Infra Projects Limited, Isagarh, Ashoknagar	0.04964
9	TECHNIMONT ICB Pvt Ltd, NFL Vijaypur	0.02482

10	Aravali GAI Tollway Pvt. Ltd. Site: Guna	0.22060
11	KNR Constructions Limited, Site: Guna	0.04632
12	Engineer Dileep Thakur, Site: Guna	0.06573
13	Anurag Enterprise, FDDI Guna	0.11236
14	THERMAX LIMITED MIDC Vijaipur Guna	0.02529
15	D.N. Rathi Const. Co., Udasi Ahram, Guna	0.02529
16	Vindhya Infrastructure (Engineer & Contractor), Bhopal	0.04045
17	M/s Anil Nayak-GAIL (I) Ltd. Vijaipur	0.42854
18	Bishan Infrastructure Pvt Ltd,Ashok Nagar	0.45843
19	Prakash Asphalting & Toll Highway (I) Ltd	0.07191
20	Shree Yamuna Bricks-Ruthiyai	0.00899
21	SSC Projects Ltd.-Indore	0.11236
22	Sai Pipes, Guna	0.13483
23	Municipal Office, Ashoknagar	0.47880
24	Jitendra Singh Group,Guna	0.05700
25	B.L. Mehra Const Co.,NFL Vijaypur	0.02052
26	P.N. Rathi, Engineers & Contractor NFL Vijaypur	0.28500
	Grand Total Amount	**6.69901**

3.5.2 Does the university have a university-industry cell? If yes, what is its scope and range of activities?

There is no separate University-Industry cell. However the Training and Placement Cell and academic departments interact with industry on regular basis within following scope and range of activities:
- Expert talks
- Collaborative M. Tech. dissertation
- Training and workshops
- Showcasing student projects

3.5.3 What is the mode of publicizing the expertise of the University for Consultancy Services? Which are the departments from whom consultancy has been sought?

Expertise of the faculty is available on the Institute website. Encourage departments to organize workshops in collaboration with industry on regular basis. Organize visits for industry professionals and expert lectures for showcasing the state-of-the-art laboratory facility and faculty expertise for possible consultancy work. Departments and Centers which received the type of consultancy work are given in the table below.

S.No	Department/Center	Type of Constancy work received
1	Civil Engineering	• Soil Testing • Concrete Testing
2	Mechanical Engineering	• Additive manufacturing
3	Cement Research and Development Center	• Cement testing • Training programs for Industry

3.5.4 How does the university utilize the expertise of its faculty with regard to consultancy services?

University utilizes the expertise of its faculty with regard to consultancy service for solving industry problems and creating funding opportunity for research projects. Besides, the faculty expertise is used to float industry specific courses in UG and PG programs to address various industry issues. Organize short term training programs for industry professionals on industry specific topics either on the University campus or on the Industry site as suitable for the Industry. Industries are encouraged to hold training programs on the campus for newly recruited UG and PG students through campus selections. Both university faculties and few industry professions of specific industry participate in the training program. Such type of training programs was organized in the University for graduate engineers and diploma students recruited by Jaypee Group Cement Companies, Jaypee thermal power plant and Jaypee fertilizer plant.

Short-term training program was organized by Electronics and Communication Engineering Department in association with Jaypee Cement Plant Professionals

3.5.5 List the broad areas of consultancy services provided by the university and the revenue generated during the last four years.

The broad areas of consultancy services provided by the university are given in the table below.

Summary of the revinue

S.No	Department/Center	Type of Constancy work received	Earnings
1	Civil Engineering	• Soil Testing • Concrete Testing	₹ 6.69901 lacs
2	Mechanical Engineering	• Additive manufacturing	Nil
3	Cement Research and Development Center	• Cement testing • Training programs for Industry	USD 7500 ₹ 22.59 lacs

3.6 Extension Activities and Institutional Social Responsibilities (ISR)

3.6.1 How does the university sensitize its faculty and students on its Institutional Social Responsibilities? List the social outreach programmes which have created an impact on students' campus experience during the last four years.

University student body (JUET Youth Club) and technical societies of different departments plan various social outreach programs for students and faculty to sensitize them about their social responsibilities. Few of these programs organized during last four years are listed below.

(a) **Ditsa** is a non government organization founded by few UG students of JUET Guna, and setup in New Delhi with an aim to help and serve the underprivileged. Ditsa's work is concentrated in the field of community development, health care for underprivileged and creates awareness among people on environmental issues. Faculty and staff members of JUET participate in the activities planned by **Ditsa** by providing monetary support and materials.

Activities undertaken by Ditsa are:

- **Parivartan 2015** : An environmental awareness tour along with cleanliness drive held in the City of Varanasi in collaboration with Technex, the technical fest of IIT-BHU was held from February 28 2015 to March 01,2015.
- **Paryavaran 2014** : A cycle tour and a cleanliness drive held in New Delhi in 2 November 2014 from Huaz Khas to Humayun's Tomb.
- **Umeed** : A donation camp organized in Guna to collect clothes, utensils and newspapers for distributing among the underprivileged was organized on October 02, 2014.
- **Eco Ditsa** : A paper collection drive organized in Guna city and New Delhi to create awareness about the use of papers in-place of plastic bags.
- **Pehel** : A donation camp organized in the JUET Guna campus in association with Dextra, the technical fest of the university, from April 25-27, 2014 for the underprivileged.

(b) Faculty and staff members of JUET staff club have donated few carpets to the students of "Aacharya Vachaspati Shukla Sanskrit Ved Vidyalaya", Awan, on February 09, 2014. These carpets are used by students for their studies.

(c) A "Blood donation camp" was organized during D'Equinox-15, on February19-21, 2015 in collaboration with Lions Club, Guna. The students and faculty members of the University voluntarily donated their blood. This activity is organized by JUET Youth Club.

(d) IETE Student Forum (ISF) the technical society of Electronics and Communication Enginnering Department organize various technical activities in terms of exhibition, poster presentation and paper presentation during the "DEXTRA" the annual technical festival to sensitize student and faculty on social responsibilities. For example every year DEXTRA organizes an event named "Wealth out of Waste" where students of various enginnering departments construct useful products using the waste material to sensitize the students on envirement.

There is an increase in student and faculty participation was observed in recent years in various social outreach programs. The successful outcome of the programs listed above shows the sensitization of faculty and student about the social responsibilities.

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

A group of self-motivated JUET students constituted a small working group named '**Shiksha Setu**' with an objective to bring changes in the society through imparting education. The team '**Shiksha Setu**' offers services to impart education through conducting classes for local school dropout students and elders in the surrounding community at large. The team '**Shiksha Setu**' is working closely with the local people, Govt. bodies and other education based nongovernment organizations (including community based organizations) around the Raghogarh tahsil, Guna, Madhya Pradesh.

Major activities are undertaken during last four years:

- An awareness program was organized by Shiksha Setu in association with Shri Shri Gyan Mandir School on April 5 2014, to enroll the students in school. With the help and awareness campaign of team '**Shiksha Setu**', parents encouraged to allow their words to join the Shri Shri Gyan Mandir School for studies. With the efforts of team '**Shiksha Setu**', the admission** strength for academic session 2014-15 was improved from 130 to 330.
- An awareness campaign was organized by '**Shiksha Setu**' on 16 November 2014 for the people of Ruthiyai village on hygienic conditions and cleanliness. People were told about the health care benefits of cleanliness aspects their importance for healthy life.
- In November 2014, **Shiksha Setu** took an initiative to teach spoken English to the school children of Raghogarh city using fun games like Globe Trotter, English Charades etc. to make the teaching enjoyable and resourceful such that students can overcome their fear of failure and participate in large number. Students of class 9th to class 12th had taken keen interest in this program and attended the classes with full enthusiasm.
- On February 5, 2014, '**Shiksha Setu**' launched the '*Donate a Pencil*' campaign to draw the attention of parents towards their children education and emphasize them the importance of education in the life of their children.

3.6.3 How does the university promote the participation of the students and faculty in extension activities including participation in NSS, NCC, YRC and other National/ International programmes?

Presently NSS, NCC and YRC are not available in the University.

3.6.4 Give details of social surveys, research or extension work, if any, undertaken by the university to ensure social justice and empower the underprivileged and the most vulnerable sections of society?

Department of Humanities and Social Sciences (HSS) of the University conducted a social survey/research project study entitled "Socio-economic and environmental impact assessment of biogas plants setup in family homes in the villages of Guna district, Madhya Pradesh, under the supervision of Dr. Rajeev Srivastava. Indian Council of Social Sciences & Research (ICSSR), Ministry of Human Resource Development, Govt. of India was funded this project in March 2013. The amount sanctioned for this project was seven lakh rupees.

Specific objectives of this study were;
- To collect information on family type biogas plants installed in Guna district of Madhya Pradesh and perform analysis thereof.
- To find out users' satisfaction and perception regarding workability and usefulness of family type biogas plants in Guna District of Madhya Pradesh.
- To evaluate the impact on socio-economic conditions of the rural economy of Guna district of Madhya Pradesh based on collected data.
- To collect energy, emission reduction and environment related issues and analyse the impact thereof.
- Finally study is designed to identify the factors contributing to success and failure, to examine the efficacy & ground reality of family type biogas plants as an instrument to realize the biogas potential.
- To reflect on alternate strategies for biogas development in rural set ups.

Based on the population demographics of the villages, the universe of the study was concentration of family type bio-gas plants across the district and the approachability to the villages based on Villages & Respondents category wise were surveyed in order to appropriately comprehend the socio-economic and environmental impact of installation of family type biogas plants in the Guna district of Madhya Pradesh. The summary of the survey work is given in the table below:

S. No.	Block	Village Surveyed	Operational Beneficiaries	Closed Beneficiaries	Non-Beneficiaries	Total
1	Guna	29	102	25	21	148
2	Raghogarh	45	177	52	68	297
3	Chachoda	32	48	34	19	101
4	Aaron	48	84	37	50	171
5	Bamori	45	99	33	39	171
		199	510	181	197	888

3.6.5 Does the university have a mechanism to track the students' involvement in various social movements / activities which promote citizenship roles?

As such university does not have any formal mechanism to track the students' involvement in various social movements / activities which promote citizenship roles. However, Involvement of the students in various social movements is closely monitored by the office bearers of the JUET Youth club & Student Technical Societies.

3.6.6 Bearing in mind the objectives and expected outcomes of the extension activities organized by the university, how did they complement students' academic learning experience? Specify the values inculcated and skills learnt.

Most of the extension activities are done by groups of students; it adds value to their personality development. This complements their academic excellence. The students learn to get along with others, plan and execute the activities, develop a sense of collective thinking and understanding of hierarchical methodology's, imbibe leadership qualities, instill self-confidence, and get tuned with the society around them. Moreover such activities also inculcate values like concern for society and for the poor, respect for the poor and so on.

3.6.7 How does the university ensure the involvement of the community in its outreach activities and contribute to community development? Give details of the initiatives of the university which have encouraged community participation in its activities.

The surrounding areas of University is spread over 03 districts of Madhya Pradesh i.e. Guna, Ashok Nagar and Rajgarh. All the 03 districts are known for their major population under rural and tribal categories. University has ensured that the majority of the labour / work force employed at lower level in the University belong to the aforementioned adjoining areas. Thereby, University has integrated its social responsibility along with community development by undertaking the following activities;

- Subsidized education for the children of labours on campus at Jay Jyoti School.
- Health care facilities to the laborers on campus at the health care center.
- Providing services of Ambulance and Fire Fighter Van to the nearby village in emergency situations.

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

Nil

3.7 Collaboration

3.7.1.1 How has the university's collaboration with other agencies impacted the visibility, identity and diversity of activities on campus? To what extent has the university benefitted academically and financially because of collaborations?

The University has established collaboration with several educational institutions, industries and research organizations. These collaborations have on one hand promoted visibility of University activities while on the other hand impacted positively on all other academic activities and outcomes. It has helped in bringing new ideas in research, improving the quality of research by sharing information/data/reagents, improving quality of publications, training and internship, placement, sharing of facilities, generation of extra mural grants and curriculum development.

3.7.2 Mention specific examples of how these linkages promote
- **Curriculum development**
- **Internship**
- **On-the-job training**
- **Faculty exchange and development**
- **Research**
- **Publication**
- **Consultancy**
- **Extension**
- **Student placement**
- **Any other (please specify)**

Curriculum development

The university, through its linkages and interactions with academia, industry and research institutions, has brought about many changes in already existing courses or by introduction of new courses. ECE department has designed one course entitles "Instrumentation and Process Control" for the under graduate student in collaboration with Jaypee Cement Industries. In order to facilitate students to carry out courses at University of Florida or carrying out project in industry, curriculum has been made flexible.

Internship and on-the-job training

JUET has collaborated with some of the Industry leaders such as Infosys and Accenture, wherein the final year students are taken as interns and assigned relevant projects under the mentorship of Industry experts. Besides, JUET has collaboration with Jaypee Group companies where pre-final year and final year under graduate students from Civil and Chemical engineering students are taken as interns for 2/3 months. These internships to select-students have not only helped the students in up-skilling their technical skills in industry relevant domains, but also given them the opportunity to showcase their talent. The internship not only provides students an opportunity to interact with experienced professionals, it also brings great learning opportunity in real life environment. Besides, JUET students are given priority during on-boarding. Although no financial gains have been achieved as yet by JUET, the collaborations have greatly helped in building industry-university relation.

Faculty exchange and development

JUET has already started to execute the MOUs with the Institutions of National/International importance. Under the exchange programme with University of Florida, Gainesville, nearly 30 JUET students over the years have benefited by spending final semester of their B. Tech. programme for completing course work with credit transfer.

Research and Publication

A large number of University faculties currently working in collaboration with researchers of other national and international institutes. These research collaborations have produced academic outputs in terms of high quality publications and Ph.D. degrees. Summary of such collaborations is given below, and collaboration details are given in **Annexure 3.7.2.**

Dept	Collaborative institution	No of publications	PhD Thesis (completed /ongoing)
CHE	1	0	0/1
CE	6	6	0/0
CHY	0	0	0/0
CSE	18	43	2/3
ECE	18	54	0/3
MEC	16	93	1/0
MATHS	2	2	0/0
PHY	16	16	0/0
HSS	0	0	0/0
Total	77	212	3/7

Consultancy and Extension

The Jaypee Wind Engineering Application Centre (JP-WINCENTRE) is being established in the University campus in collaboration with national, international institutions and industry. The main objective of creating such huge facility in the campus is to provide industrial consultancy on wind thrust analysis of high-rise structures, power plant structures and bridges through model testing in wind tunnel. List of national and international institution and industries involved in the collaboration with the JWAC is given in the table below:

National Institution	International Institution	Industries
Prem Krishna, P.K.Pandey Vinod Kumar Department of Civil Engineering, IIT, Roorkee	1. Yukio Tamura Tokyo Polytechnic University, Japan 2. R.G.J Flay University of Auckland, New Zealand 3. A. Flaga Cracow University, Poland 4 Partha Sarkar Lowa State university , USA	1. Alpa Sheth VSM Consultant Pvt Ltd, Mumbai 2. Abhay Gupta ESCOM Consultant Pvt. Ltd, Noida

Student placement

As a result of linkages with industries, the placement of students has been consistently good. The placement data of the last five years is given in the table below:

Graduating year	2011	2012	2013	2014	2015
No. of companies	16	26	26	28	34
No. of eligible students	294	344	324	377	333
No. of offers	504	375	234	336	452

3.7.3 **Has the university signed any MoUs with institutions of national/international importance/other universities/industries/corporate houses etc.? If yes, how have they enhanced the research and development activities of the university?**

University has established formal linkages through MOUs signed with several institutions for exchange of faculty, researchers and students for teaching, research and training. These universities/ organizations are:

1. The Alliance of 4 Universities (A-4U) of Spain
2. University of Florida, Gainesville, USA
3. University of Nebraska, Omaha, USA
4. Centre of Artificial Intelligence and Robotics (CAIR), DRDO, India

Details of the institutions and the scope of MOUs are given in **Annexure 3.7.3.**

i. **Have the university-industry interactions resulted in the establishment / creation of highly specialized laboratories/facilities?**

Not yet

Research Publication list

International Journal Publications

(Scopus Indexed)

2015

1. K.N. Gupta, N.J. Rao and G. K Agarwal, "Gaseous phase adsorption of volatile organic compounds on granular activated carbon", Chemical Engineering Communications, Volume 202, Issue 3, pp. 384-401, March 2015. [Citation Index:NA, SNIP: NA., SJR: NA, Impact Factor: 0.6, H-Index: NA]

2. S. Singh, P.K. Singh and H. Mahalingam, "A novel and effective strewn polymer-supported titanium dioxide photocatalyst for environmental remediation", Journal of Materials and Enviromental Science, Volume 6, Issue 2, pp. 349-358, February 2015. [Citation Index: N.A., SNIP: N.A., SJR: 0.28, Impact Factor: 1.21, H-Index: 10]

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1. Hridesh Kumar, Harikesh Singh and Shishir Kumar, "Resource Allocation Mechanism in Grid Computing: A Review", Proceedings of National Conference on Contemporary Computing & Informatics (NCCI-2015) Madan Mohan Malviya University of Technology, Gorakhpur, pp.137-143, May 08-09, 2015, ISBN: 978-93-84224-25-7

2. Neeraj Kumar Rathore, "Load Balancing Algorithm for Grid" in 30th M.P. Young Scientist congress, Bhopal, M.P., pp-56, February 28, 2015.

3. Rajesh K. Vishwakarma and Vinay Sharma," Multiband microstrip antenna with defected ground structure (DGS), "National conference on recent advances in microwave Engineering during 28 Feb-01March 2015 Organized department of Electronics Engineering, Madhav Institute of Technology & Science, Gwalior India PP Paper Presented [Paper ID RAMWE126]

4. Sanjeev Kumar, Rajesh K. Vishwakarma and Ravi Kumar, "Fractal O-shape UWB Antenna, "National conference on recent advances in microwave Engineering during 28 Feb-01March 2015 Organized department of Electronics Engineering , Madhav Institute of Technology & Science, Gwalior India PP Paper Presented [Paper ID RAMWE125]

5. Akshansh Kumar, Rajesh K. Vishwakarma, Neha Kumariand and Poonam, "Comparison of impedance bandwidth for different size of equilateral triangular slot in square patch, "National conference on recent advances in microwave Engineering during 28 Feb-01March 2015 Organized by department of Electronics Engineering , Madhav Institute of Technology & Science, Gwalior India PP Paper Presented [Paper ID RAMWE124]

6. Akshay Jain, Y. K. Modi, "Effects of layer thickness and build orientation on tensile strength of part produced by 3D printing", National Seminar on Emerging Trends in Manufacturing and Automation Engineering, NSMAE-2015, Amity university, Gwalior, October 9-10, 2015.

7. Krishna Murari, Dhananjay R Mishra, Birendra Jha , Jatin Talwar, "Experimental Analysis of Polypropylene and Recron Fiber in Concrete", in proceeding of Recent Trends in Science & Technology [IC-RTST 2015], Swami Vivekananda University, at Sagar, MP, India. P. 93, February 27- 28, 2015.

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3. T. Singh, A. Awasthi, P. Tripathi, S. Gautam, A. Gautam, Response surface methodology for Indian coal grinding, 67th Annual Session of IIChE (CHEMCON-2014) and Indo-Japanese Symposium, jointly organized by Chandigarh Regional Center, IIChE and Dr, SSB University Institute of Chemical Engineering & Technology, Chandigarh, 396-397, 27-30 December 2014.

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GENERAL TERMS AND CONDITION FOR TESTING AND CONSULTANCY WORKS

- Testing Material shall be brought to our laboratory in sealed condition bearing the signatures of the client and at their cost.

- Charges will include for

a)   Testing
b)   Analysis of results of testing and recommendation as   consultancy.
c)   Sites visit requiring transport, stay and other local hospitality will be arranged by the Client party. Extra charges for the visit will be levied as consultancy.

Service tax will be charged extra at the rate as applicable.

- Facilities for transport of equipment to the site and back, local hospitality, labor required for field visits/works will be provided by the party concerned.

- Payment will be required to be made in advance through the bank draft drawn on OBC in favor of ' JUET Payable at GUNA' or in cash (if below ₹ 10,000/- in Finance office).

- The Civil Engineering Department shall not be responsible for giving any legal defense/opinion for appearing in a court of law in connection with the test results and the consultancy report submitted.

- The Civil Engineering Department has the right to publish the results under intimation to client.

MATERIAL TESTING CHARGES

S. NO.	DESCRIPTION OF TEST	CHARGES (IN ₹)
Soil Testing		
1.	Natural moisture content	200
2.	Specific gravity	500
3.	Compaction test (MDD & OMC)	
	(a). Light Compaction	1500
	(b). Heavy Compaction	2000

4.	Atterberg's Limits	
	(a). Liquid Limit	400
	(b). Plastic Limit	300
	(c). Shrinkage Limit	500
5.	Grain size analysis	
	(a). Sieve analysis	600
	(b). Hydrometer analysis	800
6.	Field density test	
	(a). Core cutter	500
	(b). Sand replacement method	800
7.	Laboratory permeability test	
	(a). Fine grained soil	2000
	(b). Coarse grained soil	1500
8.	Laboratory C.B.R. Test (Average of 3 sample)	
	(a). Light compaction i). Soaked	1500
	ii). Unsoaked	1500
	(b). Heavy Compaction i). Soaked	2000
	ii). Unsoaked	2000
9.	Unconfined compressive strength test	500
10.	Tri-axial test (3 samples)	
	(a). Unconfined Un-drained (UU)	2000
	(b). Confined Un-drained (CU)	3000
	(c). Confined Drained (CD)	3000
11.	Direct shear test	1500
12.	Consolidation test	2000
13.	Free swell index	300

14.	Swelling pressure test	1000
15.	Differential swell test	600

Fine and Coarse Aggregate Testing

1.	Gradation test (size analysis) and fineness modulus	1000
2.	Specific Gravity	300
3.	Water absorption	300
4.	Bulk Density & Voids	300
5.	Crushing Value Test	1500
6.	Los Angeles Abrasion Test	1500
7.	Impact Test	1500
8.	Flakiness index	750
9.	Elongation index	750
10.	Percentage (%) silt and clay content	750

Physical Test of Cement

1.	Normal Consistency test	
2.	Initial Setting time	
3.	Final Setting time	
4.	Fineness by sieve	3000
5.	Soundness Le-Chatelier expansion	
6.	Tensile strength test (3 & 7 days)	
7.	Compressive Strength 3, 7 & 28 days	
8.	Fineness by specific surface area method	1200
9.	Specific Gravity/density test	500

Concrete Testing

1.	Compressive Strength Test (minimum 3 sample)	

	(a). Concrete cube (ready made)	750
	(b). Concrete block (ready made)	1000
2.	Flexure Strength Test (minimum 3 sample)	1000
3.	Mix Design for the required Grade of Concrete including physical properties of material used	
	(a). Upto M-30 Grade	10000
	(b). Above M-30 Grade	12000
4.	Non Destructive Test (NDT)	To be charged depending upon the condition in which the tests are to be conducted. Subject to a minimum of ₹ 10,000/-
	1.Rebound Hammer	
	2.Ultrasonic Pulse Velocity (UPV) Test	

Steel Testing

1.	Tensile Strength (Elongation) test of Tor & M.S. (3 sample)	
	(a). Bars upto 16 mm φ	1500
	(b). Bars more than 16 mm φ	2500
2.	Angle section and flats (3 sample)	1500
3.	Bend and rebend test	1000

Brick Testing

1.	Crushing Strength Test (min 5 Bricks)	500
2.	Water absorption test	300
3.	Physical/visual test (colour, soundness, hardness, size, shape & strength)	1500

Bitumen Testing

1.	Penetration Test	800
2.	Softening point	800

3.	Ductility test	800
4.	Solubility test	800
5.	Flash and fire point	800
Test of Bituminous Mixes		
1.	Determination of bitumen content	2000
2.	Determination of gradation of aggregate from bituminous sample	3000
3.	Benkelman Beam Test	8000
4.	Marshall Stability Test	6000

Research Collaboration

S.No	Faculty name	(Dept)	Research Collaborator affiliation	Research Area
1	B.K.Mohanty	ECE	Pramod Kumar Meher, T.Srikanthan, Nanyang Technological University, Singapore	DWT, FFT, Filters and Compressive sensing, Multicore in 3-D IC
2	B.K.Mohanty	ECE	Ganapati Panda IIT, Bhubaneswar	ANC, Hearing Aid and Distributed computing
3	B.K.Mohanty	ECE	Tokunbo Ogunfunmi Santa Clara University, USA	Adaptive filtering
4	B.K.Mohanty	ECE	S. Y. Park, Myongji University, South Korea	HEVC
5	B.K.Mohanty	ECE	Abbes Amira, Somaya Maadeed Qatar University	Biometric
6	B.K.Mohanty	ECE	K. Shridharan, IIT, Chennai	Discrete Hadamad Transform
7	B.K.Mohanty		M.N.S.Swamy, Concordia University, Canada	Reconfigurable computing
8	Jitendra Kanungo	ECE	Dr. Sudeb Dasgupta, IIT Roorkee, India	Low power VLSI
9	Jitendra Kanungo	ECE	Dr. Gaurav Kaushal, NIT Patna, India	Device Modeling
10	Jitendra Kanungo	ECE	Dr. Santosh Kumar Vishwakarma, IIT Indore, India	MOS Devices
11	Narendra Singh	ECE	Rajiv Saxena Jaypee University, Anoop Shahar	Signal Processing
12	Narendra Singh	ECE	Sanjeen Narayan Sharma, Alok Jain Samrat Ashok Technological Institute, Vidisha, Madhya Pradesh	Multi-rate and Biomedical Signal Processing
13	Narendra Singh	ECE	Ashutosh Kumar Singh, Amit Mishra and Hemdutt Joshi, Thapar University, Patiala,Panjub	Speech Processing, Neural Network, OFDM
14	Naffish uddin Khan	ECE	Dr. Rajiv Tripathi, NIT Delhi	Wireless sensor network
15	Rahul Pachauri	ECE	Sanjeev Narayan Sharma, Samrat Ashok Technological Institute Vidisha,MP	Signal processing
16	Manish K. Patidar	ECE	Rajiv Saxena Jaypee University, Anoop Shahar	OFDM

17	Manish K. Patidar	ECE	Dr. Amit Mishra Thapar University, Patiala, Punjab	Artificial Neural Network
18	Shefali Sharma	ECE	Satish K. Singh, Indian Institute of Information Technology Allahabad	Image processing
19	Shefali Sharma	ECE	Rajiv Saxena Jaypee University, Anoopshahar	Image processing
20	Deepak Sharma	ECE	Rajiv Saxena Jaypee University, Anoopshahar	Signal processing
21	Jitendra Raghuwanshi	ECE	Dr. Amit Mishra Thapar University, Patiala, Punjab,	Artificial Intelligence, Speech Processing
22	Gaurav saxena	ECE	Dr. Akhilesh R. Upadhyay, SIRT Bhopal	Image processing
23	Gaurav saxena	ECE	Rinku Bhatia ,Amit Geowl andVineet Shrivatava ITM gwalior	Image processing
24	Ranu Gupta	ECE	Dr. Ashutosh K. singh Thapar University, Patiala, Punjab	Image Processing
25	Susheel Kumar	Math.	Dr. Girja Shanker Srivastava JIIT, Noida, Uttar Pradesh, INDIA	Spaces and Approximation of Functions
26.	Dr. H.K.Mishra	Maths	Atulya Nagar , Liverpool Hope University, Hope Park, Liverpool , UK.	Intelligent Systems and Applied Informatics (ISAI), Operations Research, Bioinformatics,
27	S.Arunachalam	CE	Yukio Tamura Tokyo Polytechnic University, Japan R.G.J Flay University of Auckland, New Zealand A. Flaga Cracow University, Poland Partha Sarkar Lowa State university , USA Prem Krishna, Formerly Prof. & Head of Civil Engg., IIT, Roorkee Vinod Kumar IIT, Roorkee	Wind tunnel
28	N. K. Samaiya	CE	N. K. Khullar, PAU Ludhiyana	Sediment transport
29	Anuj Kumar	Physics	Prof. Poonam Tandon, Department of Physics,	Computational Solid State Physics.

			University of Lucknow, Lucknow, India	
30	Anuj Kumar	Physics	Prof. Yusuf Yagci, Istanbul Technical University, Department of Chemistry, Maslak, Istanbul 34469, Turkey	Polymer synthesis and characterization.
31	Anuj Kumar	Physics	Prof. Navin Chandra, Former Director,AMPRI, Bhopal	Nanoparticle synthesis and characterization.
32	Anuj Kumar	Physics	Dr. Anurag Srivastava, ABV-Indian Institute of Information Technology and Management, Gwalior, India	Computational Nano-science.
33	Anuj Kumar	Physics	Prof. ,A. Jayaram, Department of Physics, Sahyadri College of Engineering & Management, Mangalore, India.	Nonlinear Crystals Synthesis and characterization.
34	Arnab Kumar Ray	Physics	Prof. Jayanta Kumar Bhattacharjee, Harish–Chandra Research Institute, Allahabad, India (An Aided Institute of the Department of Atomic Energy, Government of India)	Astrophysical Accretion, Nuclear Physics, Fluid Mechanics
35	Arnab Kumar Ray	Physics	Dr. Tapas Kumar Das,Harish–Chandra Research Institute, Allahabad, India (An Aided Institute of the Department of Atomic Energy, Government of India)	Astrophysical Accretion
36	Arnab Kumar Ray	Physics	Dr. G. Nagarjuna,Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research, Mumbai, India (National Centre of the Government of India for Nuclear Science and Mathematics)	Complex Systems
37	Arnab Kumar Ray	Physics	Prof. Abhik Basu, Condensed Matter Physics Division, Saha Institute of Nuclear Physics, Kolkata, India (under the Department of Atomic Energy, Government of India)	Nuclear Physics, Fluid Mechanics

38	Arnab Kumar Ray	Physics	Prof. Jayanta Kumar Bhattacharjee, Harish–Chandra Research Institute, Allahabad, India (An Aided Institute of the Department of Atomic Energy, Government of India)	Astrophysical Accretion, Nuclear Physics, Fluid Mechanics
39	Arnab Kumar Ray	Physics	Dr. Tapas Kumar Das,Harish–Chandra Research Institute, Allahabad, India (An Aided Institute of the Department of Atomic Energy, Government of India)	Astrophysical Accretion
40	Arnab Kumar Ray	Physics	Dr. G. Nagarjuna,Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research, Mumbai, India (National Centre of the Government of India for Nuclear Science and Mathematics)	Complex Systems
41	Arnab Kumar Ray	Physics	Prof. Abhik Basu, Condensed Matter Physics Division, Saha Institute of Nuclear Physics, Kolkata, India (under the Department of Atomic Energy, Government of India)	Nuclear Physics, Fluid Mechanics
42	Salil Modak	Physics	Shashank N. Kane, School of Physics, Devi Ahilya Vishwavidyalaya, Indore, India	Soft magnetic materials, High Bs Alloys, nano-crystalline alloys
43	Salil Modak	Physics	F. Mazaleyrat, SATIE, ENS de Cachan, Cachan, France	Soft magnetic materials
44	Salil Modak	Physics	Marco Coisson, INRIM, Torino Italy	Thin Film Magnetism
45	Salil Modak	Physics	L. K. Varga, RISSOPO, Hungarian Academy of Sciences, Budapest, Hungary	Hysteresis and magnetic anisotropy
46	Salil Modak	Physics	N. Ghodke, UGC-DAE CSR, DAVV Campus, Indore, India	Quasi-static hysteresis loop tracer
47	S.M. Bobade	Physics	Duck Kyun Choi, Division of Materials Science, Hanyang University Seoul	Thin films, transparent electronics, TFT

48	S.M. Bobade	Physics	Prof. Ajit. Kulkrni, Met. Eng. And Materials Sciences, Indian Institute of Technology Powai	Polymer electrolyte, Ferroelectric thin films, relaxor materials
49	S.M. Bobade	Physics	Prof. Prakash Gopalan, Met. Eng. And Materials Sciences, Indian Institute of Technology Powai	Ferroelectric materials , thin film by PLD, solid electrolyte
50	Rajneesh Atre	Physics	Prof. P K Panigrahi, IISER, Kolkata	Fiber optics & Mathematical Physics
51	Sudip De	Chem	Dr. M Baidya, IIT Madras	Organic/ polymer chemistry
52	S. K. Agrawal	MEC	Pankaj K. Srivastava Department of Mechanical Engineering, Rewa Engineering College, Rewa (M.P.), India	Solar Still
53	Sanat Agrawal	MEC	Professor Deon J. de Beer, Director, Technology Transfer and Innovation Support Office, North West University, South Africa	Rapid Prototyping and Additive Manufacturing
54	Bhagat Singh	MEC	B. K. Nanda, Mechanical Engineering Department, NIT, Rourkela, Odisha, India	Slip Damping in Layered and Welded Structures
55	Amit Sharma	MEC	Vinod Yadava Mechanical Engineering Department, MNNIT, Allahabad, U.P., India	Laser Beam Machining
56	Amit Sharma	MEC	K. B. Judal Mechanical Engineering Department, Govt. Engg. College, Patan, Gujarat, India	Laser Beam Machining
57	Arun Kumar Pandey	MEC	A. K. Dubey Mechanical Engineering Department, MNNIT, Allahabad, U.P., India	Laser Beam Machining
58	Arun Kumar Pandey	MEC	B. N. Upadhyay Solid State Laser Division Raja Ramanna Centre for Advanced Technology P.O.:RRCAT, Indore-452013, India	Laser Beam Machining
59	Arun Kumar Pandey	MEC	Anand Pandey Mechanical Engineering Department Manipal University, Jaipur	Advanced Machining, Laser Beam Machining

60	G. Norkey	MEC	A. K. Dubey Mechanical Engineering Department, MNNIT, Allahabad, U.P., India	Laser Beam Machining
70	Y. K. Modi	MEC	Deon J. de Beer, Directore, Technology Transfer and Innovation Support Office, North West University, South Africa	Rapid Prototyping and Additive Manufacturing
71	Shishir Kumar	CSE	Aniket Mahanti , University of Auckland, New Zealand	Computer networks and distributed systems
72	Shishir Kumar	CSE	Carsten Mueller Bulmannstr. 48, 90459 Nuremberg, Germany	Component Based Software Engineering
73	Shishir Kumar	CSE	Satish Kumar Singh Indian Institute of Information Technology, Allahabad (UP) India	Security of Images
74	Shishir Kumar	CSE	Durgesh Pant , Director Uttarakhand Space Application Centre, Dehradun, India	Image Compression
75	Shishir Kumar	CSE	R. C. Chakraborty Formerly Director of DTRL and ISSA, DRDO.	Artificial Immune System
76	Vipin Tyagi	CSE	S. P. Gherera, JUIT, Waknaghat	Image Processing
77	Vipin Tyagi	CSE	Centre of AI and Robotics, DRDO Bangalore	Image Processing
78	Vipin Tyagi	CSE	Jan Flusser, Director, UTIA, Czech Republic	Image Processing
79	Neeraj Rathore	CSE	Inderveer Chana Thapar University, Patiala, Punjab	Grid Computing
80	Ratnesh Litoriya	CSE	Abhay Kothari Jagdish Prasad Jhabarmal Tiberewala University, Jhunjhunu, Rajasthan	Software Cost Estimation and Project Management
81	P. S. Banerjee	CSE	Baisakhi Chakraborty, National Institute of Technology, Durgapur, West Bengal	Artificial Intelligence and Natural Language Processing
82	P. S. Banerjee	CSE	G. Sahoo, Birla Institute of Technology, Mesra, Ranchi, Jharkhand, (India)	Soft Computing
83	P. S. Banerjee	CSE	U.K Roy Jadavpur University, Kolkata, West Bengal (India)	Voice Processing

84	Ravindra Kumar Singh	CSE	Narendra S. Chaudhari Director, Visvesvaraya National Institute of Technology (VNIT) Nagpur, Maharashtra, India	MPLS Networks
85	Ravindra Kumar Singh	CSE	Kanak Saxena, Samrat Ashok Technological Institute, Vidisha, M.P. India	MPLS Networks
86	Neelesh Kr Jain	CSE	Amit Mishra, Thapar University , Patiyala, India	Digital Image Forensics
87	Ashish Gupta	CSE	M.A. Zaveri, S V NIT, Surat – 395007, Gujarat, India	Target Tracking in WSN
88	Ashish Gupta	CSE	Shailaja C. Patil, Rajarshi Sahu College of Engineering, Pathwade, Pune - 411033,Maharashtra, India,	Target Tracking in WSN

1. **The Alliance of 4 Universities (A-4U) of Spain**

   Univeritat Autonoma De Barcelona(UAB)
   Universidad Autonoma De Madrid(UAM)
   Universidad Carlos III de Madrid(UC3M)
   Universitat Pompeu Fabra(UPF)

   Salient Features of the collaboration
   Acknowledges the importance of fostering inter-university relations, enhance relations in matters related to academic education, science and research, culture and human capital development, sharing of information and knowledge, and any other aspects which aim toward the internationalization of higher education, in accordance with the legislation of the respective countries. Areas of activity for development of the specific programmes of common interest include:

   - Student Exchange- Each University to establish the procedures to select its own students who wish to participate in the programme. The exchange student shall be exempt from paying registration fees at the host University. (Further details, as per the programme announced from time to time by respective Universities.)
   - Faculty Exchange
     - Joint research projects
     - Online student research
     - Graduate and post graduate research co-supervision
     - Dual degrees
     - Sharing of knowledge, regular dialogue, and reciprocal visit programmes; sharing of information of best practices in higher education
     - Identifying funding, internships, or any other kind of cooperation
     - Opportunities
     - Joint cultural programmes, conferences, workshops and seminar development; training programmes
     - Any other collaboration possibility

2. **University of Florida, Gainesville, USA**

   Salient Features of the collaboration

   To enhance the academic interchange between the two institutions, the parties desire to promote exchange between the faculty and students as well as the exchange of academic and research information.

   - Specific projects in an area of educational interest will be selected as a result of coordination between University of Florida and Jaypee.

   - University of Florida has launched a 8th Semester programme for students of Jaypee Group of Universities- Under this 8th semester students will be selected to

spend one semester at University of Florida to earn a Senior Certificate in Computer Science and Engineering. Successful completion of this Certificate requires students to complete a minimum of 12 credits of approved courses at University of Florida with a grade of C or better on each course.

- University of Florida is offering engineering professionals located in India, the opportunity to earn a Master of Science Degree through Electronic Delivery of Graduate Engineer programme ("EDGE Programme") at JIIT in subject areas- Civil and Coastal Engineering, Computer & Information Science Engineering, Electrical & Computer Engineering, Environmental Engineering Sciences, Materials Science & Engineering and Mechanical & Aerospace Engineering.

3. University of Nebraska, Omaha, USA

Salient Features of the collaboration

The objective is to promote contact and collaboration between faculty, staff and students, carry out joint research programmes and exchange experiences in education research. Activities include:

- Exchange of Information & Experience-Joint meetings and Joints workshops
- Faculty Exchange
- Student Exchange – Students to be officially nominated by representatives of the respective University. Specific details of courses to be taken during exchanges or projects to be undertaken shall be approved by respective faculty. Both Universities to consider student tuitions on a case-to-case basis. The host institute will arrange accommodation. Travel costs and living costs are the responsibility of the exchange student. (Further details, as per the programme announced from time to time by respective Universities.)
- Joint cooperative research projects
- Coordinated Graduate Degree programmes
- Continuing and Distance education

4. The objective is to promote contact and collaboration between the faculties of JUET and Research Scientists of Centre for Artificial Intelligence and Robotics (CAIR), DRDO, C.V. Raman Nagar, Bangaluru to carry out joint research programmes and exchange experiences in education research. Activities include:

- To identify periodically the technical areas of mutual interest to the faculty of JUET and scientists of CAIR.

- To strengthen cooperative and collaborative link between JUET and CAIRO to take the technical work being carried out on emerging technologies.

- To leverage core competency and infrastructural facilities available in the two institutions for accelerated advancement towards the shared vision identified by them.

- Frequent interaction between faculty and scientists through visitor exchange program and short-term visit programs.

- Participation of CAIR scientists in curriculum development.

- To explore possibility of contract acquisition of research services from JUET for their projects.

- Encourage faculty to write project proposal for possible funding.

- Joint cooperative on research projects funded by international funding agencies

- CAIRO to offer projects to students and provide training on its facility.

- CAIRO and JUET to jointly publish reports and patents and copyright where the research work being patented/published/copyright generated through joint contribution.

- JUET to admit scientists from CAIR in post graduate programs and doctoral programs on preferential basis subjected to satisfying eligibility conditions.

CRITERION IV

INFRASTRUCTURE AND LEARNINGRESOURCES

4.1 PHYSICAL FACILITIES

4.1.1 How does the university plan and ensure adequate availability of physical infrastructure and ensure its optimal utilization?

The University has a well thought plan regarding the optimum use of current infrastructure and projected extension in future. Further, details are as pointed below-

- The University is endowed with excellent physical infrastructural facilities to support the teaching-learning process.
- The University campus is spread over 122.5 acres of land with built up area of 1,38868.99 Sq.Mts. which includes Class Rooms (Lecture Theatre-13, CR-30), and 52 different Laboratories.
- The academic building is provided with adequate infrastructural facilities for all academic, administrative and examination-related activities.
- List of major buildings, blocks and their built up areas are given in an Annexure-4.
- All the departments are provided with adequate number of classrooms (CRs), well-equipped laboratories, departmental libraries, and well-furnished sitting places for the faculty members.
- The University library (known as Learning Resource Centre (LRC)) is located centrally and spread over three floors, easily accessible to the users.
- The University has excellent facilities like indoor and outdoor playgrounds for sports activities.
- The University has a Medical Centre to meet medical needs of students, faculty and staff.
- The University has established a fully fledged shopping centre where all the items of daily need are available.
- Laundry facility is also available inside the campus for the cleaning the clothes of students, faculty and staff.
- The University has two Banks (Oriental Bank of Commerce and Axis Bank) with ATM for banking needs of the University employees and students.
- The University has a cafeteria to serve tasty and hygienic food and refreshments to residents of campus.
- The University has an indoor auditorium with a seating capacity of 2500 named Tagore Hall which is also being used as a multi-purpose hall.
- The University has a VIP guest house with a capacity of nineteen rooms for guest of the University. In addition to that, there is one more hostel type guest house with 21 rooms. These facilities are made available for University guests, faculty and staff guests and parents of students.
- The University campus has the Jay Jyoti School affiliated to CBSE (currently up to class 10th) for the children of faculty, staff and other nearby residents.
- In order to ensure uninterrupted power supply, the campus has 33 KV 24 hours independent feeder from Bholapura. A substation of 132 KV is equipped with two

33/0.433 KV Electric Substation and Distribution System and four DG sets of 750, 500, 320, 320 KVA capacities are also available for 100% power back up.

- The University has elaborate water supply system. TheUniversity got the raw water from Gopisagar dam at Pagara and after initial storage / cleaning pumps it to the University through a 8.5 km long underground pipeline. The water supply system holds a capacity of 40 lacs liter of water.
- The campus has underground sewage disposal system with a 700 cubic meters per day capacity sewage treatment plant (STP). The reclaimed water is effectively used for horticulture through underground pipe system while solid waste is used as manure. An additional sewage disposal system with 800 cubic meters per day capacity is under construction.

Optimal Utilization:

The entire infrastructure in the university campus is put into optimum use. All the class rooms and laboratories are used optimally during working hours. Laboratories in the departments are shared with other departments. Additional programs like student seminars, project presentations are conducted in class rooms after working hours. Computer Labs and Departmental Libraries are utilized by the students and faculty to carry on their academic activities. Post Graduate students and Ph.D. Scholars utilized lab facilities after routine university duration and holidays too.

Timings of messing, laundry and gym facilities are staggered to ensure full utilization with maximum comfort to students.

4.1.2 Does the university have a policy for the creation and enhancement of infrastructure in order to promote a good teaching-learning environment? If yes, mention a few recent initiatives.

Yes, the University have a policy for creation and enhancement of infrastructure to promote good teaching-learning environment. Some of the recent initiatives are:

- An excellent infrastructure is provided to department of civil engineering by adding a modern wind tunnel laboratory, structures laboratory and highway engineering laboratory.
- The University has Rapid Prototyping Lab having an investment of rupees two crores and Advance Manufacturing Lab of rupees one crores in Mechanical Engineering department which are comparable to any of IIT, NITs of the country.
- Each LT's has LCD projector and screen. Faculty members use LCD projector to deliver their lectures by means of power point presentation and educational videos to provide good learning environment.
- Learning Management System (LMS) is introduced. The subject teacher uploads learning materials and students are able to use the resources for learning. NPTEL video lectures from IITs are available on the intranet for the use of faculty members and students.
- Students are encouraged to have Laptops and Wi-Fi connections which are given in University campus as well as in the hostels. Internet connectivity with a speed of 1Gbps is provided to faculty members and students for promoting the teaching and learning process.
- PCs are given to all teaching faculty, administrative & lab staffs for teaching, research and day to day work.
- Since inception, the University is residential in nature and provides hostel rooms to all UG, PG and Ph.D. students. Almost all the faculty members, students, research

scholars and staffs are given accommodation in the campus. The University campus is noise-free, pollution free and green helping people to lead a healthy life.

4.1.3 How does the university create a conducive physical ambience for the faculty in terms of adequate research laboratories, computing facilities and allied services?

The university provides adequate research laboratories, computing facilities and allied services to create a conducive physical ambience.

- At present, University has 52 labs. Each lab has good quality equipment in good working condition. Latest software are uploaded on lab computers and faculty member's computers. Twenty four hours Internet facility is provided in labs, departments, student hostels and residences. List of software is mentioned at point no. 4.3.2 (e).
- Faculty members have research projects from agencies like DST, MPCST, DRDO, CSIR etc. They also have successfully completed few projects in past.
- The University has one Post- Doc Research fellow funded by NBHM in the department of Mathematics.
- LRC of the University is open from 8.30.A.M. to 11.00P.M. On working days. For Sundays & holidays the time is 9.30 A.M.to 1.30 P.M. During the examinations, the timings are extended to almost 18 hours.
- Laboratories of the University are operational throughout the working hours of university. Some of the laboratories are operational beyond the working hours & holidays as & when required.
- The whole University is fully network connected with 1Gbps dedicated line. Academic blocks & accommodations are LAN connected while most of the hostels are Wi-Fi connected.
- JUET is using its own developed IRP (Institutional Resource program) solution ' Campus Connect package' for all the academic and administrative activities like Counseling and Admission, Examination, Results, Student Information System, Student Accounting & Financial Management, Purchase, Receiving and Inventory, Fixed Asset Management, Training & Placement and Alumni services.
- Medical Centre, Canteen, Cafeteria, Laundry, Transport, Gymnasium and sport facilities are available for faculty, staff & students of JUET.
- JUET provides the financial support to faculty members for attending the National, International Conferences, Seminars, Symposium and Workshops along with provision of duty leave.

4.1.4 Has the university provided all departments with facilities like office room, common room and separate rest rooms for women students and staff?
Yes, the University has provided the following facilities to faculty members, women students & staff:
- All the head of departments have independent well equipped rooms which serve as their office. The senior faculty members are also provided with individual rooms while juniors sit in independent cabins having PCs and common facilities like phone, printer.
- Adequate numbers of male and female rest rooms are there in the university.

4.1.5 How does the university ensure that the infrastructure facilities are disabled-friendly?

The University has made the provision of ramp in all buildings for wheel chair bound students to move in and out easily. Parking of three wheeled motorized vehicle is permitted close to the entrance of the building. Wheel chairs and 24X7 medical assistance is also available on request. The university arranges their classes and seating arrangement during the examination on the ground floor. The physically challenged students are given preferential treatment by the faculty & staff. Every classroom has chairs for lefthanders.

4.1.6 How does the university cater to the requirements of residential students? Give details of
* Capacity of the hostels and occupancy (to be given separately for men and women)
* Recreational facilities in hostel/s like gymnasium, yoga centre, etc.
* Broadband connectivity / wi-fi facility in hostels.

The University offers 100% residential facilities in campus for boys and girls in separate hostels. Presently, there are 21 blocks of boy's hostels having capacity to accommodate 1830 students. The girl's hostel is having capacity to accommodate around 425 inmates with its own sporting & messing facility. The rooms are equipped with beds, mattresses, study tables, almirahs, ward robes, lights, fans and Internet connectivity and centralized air cooling facility. Though each room is multi seated (two or three students), all facilities are provided on individual basis. Rooms are airy and spacious with good natural light. Each room has balcony or veranda. Each hostel has common room facilities, indoor games facilities, T.V. room and reading room.

- Separate messes (named ANNAPURNA) are established for Boys and Girls with a seating capacity of 300 students. These provide dining facilities to all students / employees. A cafeteria equipped with a modern kitchen including bakery and ice cream making machine is operational in campus to serve tasty and hygienic refreshments to students from 9.00A.M. to 11.00 P.M & one pantry which offers its services up to 2.00 A.M (Late night) .

- **Laundry**: The University has also provided the mechanised laundry facility to all students, faculty and staff.
- Shopping Complex : The University has a shopping center to cater day-to-day needs of the students which includes Tuck Shop, Stationary Shop, Book Shop, Snacks, Vegetables, Garments, Barber Shop, Grocery Shop and Multi Purpose Shop Photostat, Computer Printing, Binding, Mobile recharge and Soft drinks.

- **Power Supply**: In order to ensure uninterrupted power supply, the campus has 33 KV 24 hours independent feeder from Bholapura 132 KV substation and is equipped with two 33/0.433 KV Electric Substation each and Distribution System and four DG sets of 750,500,320,320 KVA capacities are also available. Besides this, all the servers, Lecture theatres, laboratories, printing equipments are connected with 221 KVA UPS.

- **Water Supply:** The University has ensured sustained water supply. For this water is taken from the Canal of Gopi Krishna Sagar Dam Project. A pump house with

water storage and treatment is built at Pagara. The treatment facility includes mixing, flocculation, settling, sludge removal and storage. The partly treated water is pumped through 8.2 km long 8" diameter pipe line to JUET campus water treatment facility. The partly treated raw water is pressure filtered, passed through active carbon filter, pH controlled, chlorinated and supplied to the campus. The storage facilities are adequate to meet 7 days requirements when campus has full strength of residents. The campus is provided with an extensive network of water distribution pipe lines. There are also few tube wells in the campus for emergency. ROs/Aqua guards are used for drinking water by the students, faculty & staff in academic blocks as well as in hostels.

- **Security:** The campus is provided security by 8 feet compound wall with fencing and about 63 security guards are posted at various places inside the campus such as main gate, hostel buildings, guesthouse, faculty residence, mess, administrative block & academic block.. etc. In addition to that, the JUET has designed special policies for the security of students.

- Students are not allowed to leave the campus at night or stay out at night. All students who go out of the campus during evening hours are required to return by 7.00 pm. No student is allowed to enter or exit the campus between 7.00 pm and 6.00 am expect in case of emergencies and with special approval from respective hostel warden.

- Students are prohibited from going to the roof of hostel blocks. No male student is allowed to enter the girl's hostel.

Capacity of the hostels and occupancy

Particulars	No. of Hostels	Area	Capacity (No. of Students)	Occupancy(No. of Students)
Boys	21	48490.00 Sq.Mts.	1830	1491
Girls	1	14665.00 Sq.Mts.	425	344

Recreational facilities in hostel/s like gymnasium, yoga centre, etc.

Gymnasium, Yoga Centre:- Gymnasium facility is provided for students (Separate for boys & Girls) with the latest machine/equipment which is supervised by a trained instructor (having PM.Ed. qualification) on full-time basis. Similarly, Yoga activities under the guidance of experts from Yes-plus, Art of living etc. are organised on a regular basis.

Broadband connectivity / Wi-Fi facility in hostels.

- Twenty four hours 1 Gbps broad band / Wi-Fi connectivity is available in all boys and girls hostels.

4.1.7 Does the university offer medical facilities for its students and teaching and non-teaching staff living on campus?

Yes, The University has a health centre inside the campus. It provides 24X7 medical support to students and teaching and non-teaching staff. It comprises of one experienced doctor and one lady psychologist for the counselling of students, two compounders, one pathologist, one female nurse and one lady attendant. All basic healthcare facilities like ECG machine, Nebulizer, Suction pump , and moiniter have been provided. University has an ambulance for 24 hrs for emergency & outdoor facilities. Free Medicine is given to university student and staff members along with worker.

4.1.8 What special facilities are available on campus to promote students' interest in sports and cultural events/activities?

Many sports and cultural activities are carried out throughout the year. A student's driven club i.e. JAYPEE YOUTH CLUB (JYC) is operational in university since 2004. This club is having five wings i.e. literary, cultural, sports, media arts and event wings. These wings conduct various events throughout the year to involve university students to show their inherent talents and to boost their extra curriculum persona.

The University is having extra ordinary facilities and excellent infrastructural facilities for sports like cricket, football, badminton, volley ball, tennis. Other than these, separate Gymnasium for boys and girls are also exists in premises. A swimming pool inside the girl hostel gives special aesthetic value and a caring attitude to female candidates. A multipurpose hall (Tagore hall) is utilized for various indoor events. Furthermore, professional clubs, debate clubs, music room (equipped with musical instruments)), hobbies club etc. are also there in the university.

4.2 LIBRARIES 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, LRC of University is having an advisory committee. The following are the members of advisory committee:-

Prof. S. Arunachalam	Chairman (Dean A & R)
Brig (Retd) O.P. Gurung	Registrar
Prof. B. K. Mohanty	Members -HOD ECE
Prof. Shishir Kumar	Member –HOD CSE
Prof. N.N Dutta	Member-HOD –CHE
Dr. Sanat Agarwal	Member –HOD-MEC
Dr. Anuj Kumar	Member – HOD –PHY
Dr. Vipin Tyagi	Member – HOD –MATHS
Dr. Rajeev Shrivastava	Member- HOD - HSS
Dr. Sudeep Sharma	Member Secretary (I/c, LRC)

LRC Committee meetings are held twice in a year for review of overall functioning.Following significant initiatives have been taken by the committee to render the library student/user friendly so far :-

- Extension of duration of LRC for working days, as well as Sunday

- Books transaction limit of students has increased up to six books for period of 15 days.

- Six e-resources have been added in LRC collection on the recommendation of committee.

- LRC Committee regularly reviews the recommendations of purchase and renewal of books, journals and magazines toward the better collection of LRC.

- LRC committee also keeps an eye on all LRC related activities.

4.2.2 Provide details of the following:

Total area of the library (in Sq. Mts.)	: 638 Sq. Mts.
Total seating capacity	: 250 Students at a time

Working hours (on working days, on holidays, before examination, during examination, during vacation)

LRC Timing on working days/during examination days	: 8.30 a.m. to 11.00 p.m.
Sunday & Holiday	: 9.30 a.m. to 1.30 p.m.
Before two week of exam	: 10.00 a.m. to 5.00 p.m.
Sunday just before exam	: 10.00 a.m. to 10.00 p.m.

Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources)

LRC is in Vishveshwarya Bhawan, & spread in three floors.
Reference and reading section: Ground floor
Lending and general reading section (where students can bring their personal books/ study materials and laptops): First Floor
Digital Library & IT zone (for accessing e-resources and periodical section, having 25 computers for the access of digital libraries and e- resources): Second floor
Lounge areas of LRC are provided in the wide corridors of each floor with comfortable sitting arrangement.

* Clear and prominent display of floor plan; adequate sign boards; fire alarm; access to   differently-abled users and mode of access to collection

Yes, LRC has displayed the layout at the notice boards and adequate sign board and fire fighting equipments are available in LRC.
LRC provides the open access system for the access of collection.
LRC is fully computerized therefore, differently-abled users can access all library facilities at their location and also departmental libraries are on ground floor, so they can access by their tricycles and they are also allowed to authorized to their friends for books transaction from central library.

4.2.3 Give details of the library holdings:

Print (books, back volumes and theses)

Books	28976
Back Volumes	877
Project Reports	1157
Ph. D. theses	31

Average number of books added during the last three years Average: 1145 books per annum

Non Print (Microfiche, AV) : Nil

Electronic (e-books, e-journals)

E-Books	5385
E- journals	8621
CD ROMs	1944
E-conference proceedings	14181
Online IEEE Standards	1800

Special collections (e.g. text books, reference books, standards, patents): Apart from text books LRC is having good collection of reference books, handbooks, encyclopedias, Standards, maps, data books and Ph.D. theses, projects reports.etc

Book Bank   : *N/A*

Question Bank   : Yes

4.2.4   What tools does the library deploy to provide access to the collection?

OPAC (Online Public Access Catalogue)   : Yes
Electronic Resource Management package for e-journals   : Yes
Federated searching tools to search articles in multiple databases   : No
Library website   : Yes
In-house/remote access to e-publications   : Yes

4.2.5 To what extent in ICT deployed in the library? Give details with regard to

Library automation: Yes, LRC is using commercial web based library management system Liberty v5.0 Developed by Softlink International Limited
Total number of computers for general access   : 25
Total numbers of printers for general access   : 01
Internet band width speed 2mbps ☐ 10 mbps ☐ **1Gbps**
Institutional Repository   : Yes
Content management system for e-learning   : Yes
Participation in resource sharing networks/consortia (like INFLIBNET): Yes, INDEST, SHODH GANGA, DELNET

4.2.6   Provide details (per month) with regard to

Average number of walk-ins   : 12382 (PM)
Average number of books issued/ returned   : 10008 (PM)
Ratio of library books to students enrolled   : 12/1
Average number of books added during the last four years

F/Y 2011-12	2344
F/Y 2012-13	2543
F/Y 2013-14	712
F/Y 2014-15	862
Average addition	**1615**

Average number of login to OPAC   : 500-600 (Per Day)
Average number of login to e-resources   : Approx. 5000 (Per Month)
Average number of e-resources downloaded/ printed   : Approx. 600 (Per Month)
Number of IT (Information Technology) literacy trainings organized: 08 Per Annum

4.2.7 Give details of specialized services provided by the library with regard to

Manuscripts	: *No*
Reference	: *Yes*
Reprography / Scanning	: *Yes*
Inter-library Loan Service	: *Yes*
Information Deployment and Notification	: *Yes*
OPACS	: *Yes*
Internet Access	: *Yes*
Downloads	: *Yes*
Printouts	: *Yes*
Reading list/ Bibliography compilation	: *Yes*
In-house/ remote access to e-resources	: *Yes*
User Orientation	: *Yes*
Assistance in searching Databases	: *Yes*
INFLIBNET / IUC facilities	: *Yes*

4.2.8 Provide details of the annual library budget and the amount spent for purchasing new books and journals.

2012-2013 (Amount in Lakhs)	
Books	14.07
E- Resources	30.93
Others	3.13,
Total Expenditure	**₹ 48,13**
2013-2014	
Books	0.56
E- Resources	24.51
Others	3.13
Total Expenditure	**₹ 28.2**
2014-2015	
Books	0. 30
E- Resources	30.84
Others	0 2.33
Total Expenditure	**₹ 33.47**
2015-2016	
Books	12.5
E- Resources	40.0
Others	0 2.5
	₹ 55

4.2.9 What initiatives has the university taken to make the library a 'happening place' on campus?

JUET LRC is situated near to administrative, academic block and student's hostels so that users may approach LRC very easily. LRC is fully air-conditioned. LRC play very proactive role to promote the collection and services among the user by organizing the orientation

programmes for students, Ph.D. Scholars and faculty members to make them aware about the new resources and services other than normal Library services such as:

CAS (Current Awareness Service): In CAS LRC notifies the students and faculty members for the latest development of LRC and their respective fields.

SDI (Selective Dissemination of Information): In SDI, LRC has made the profile of area of interest of faculty member's and matches it with all the subscribed e- journals. Thereafter, latest full text research papers and articles are sent to faculty members every day.

SMS Alert: LRC provides book reservation facility: Users can reserve the unavailable books, as books returned LRC sent the SMS to users on the arrivals of books.

IIL (Inter Library Loan Service: If Users dose not find any book and articles/ papers in LRC, we arrange that from DELNET members Libraries.

News paper clipping alert: LRC keep update to management, faculty & staff members with the latest news by sending the news clips of their area of interest.

4.2.10. What are the strategies used by the library to collect feedback from its users? How is the feedback analyzed and used for the improvement of the library services ?

Time to time LRC interacts with students and faculty members to get the feedback of LRC services by personalised discussion and interviews, at the time of final no-dues of students. LRC interact with every students and asked the area of improvements for development of resources and service of LRC, On the basis of their feedback and suggestion LRC implement all the feasible suggestions on their level itself , if any major issues comes LRC forwards that suggestion to higher authority or LRC Committee members for their further suggestions and approval.

4.2.11. List the efforts made towards the infrastructural development of the library in the Last four years.

In last four year LRC has made following efforts towards infrastructural development.

Shifting of LRC in new building
Three reading rooms with new furniture were provided
Separate digital library section with 25 new computers with internet facility was provided.
Separated lending section with more numbers of shelves was provided.

4.3   IT INFRASTRUCTURE

4.3.1   Does the University have a comprehensive IT policy with regard to
  - **IT Service Management.**
  - **Information Security.**
  - **Network Security.**
  - **Risk Management.**
  - **Software Asset Management.**
  - **Open Source Resources.**

- **Green Computing.**

  University have a comprehensive IT policy, details are pointed below:

- **IT Service Management:**

  The University has a well defined planning on IT management which brings on following aspects.
  (a) Efficiency at work place
  (b) Paperless work environment.
  (c) Confidentiality
  (d) Cost effective.

  The University has dedicated team of IT experts for managing IT services. Who has set up IT infrastructure with latest technologies to facilitate students and faculty members for their academic usage. IT Cell team ensures maximum possible up time of Server, Network and PC's by continuous monitoring, prompt problem resolution and regular preventive maintenance.

- **Information Security:**

  The University has committed towards data integrity, secured data transfer and data access control. The University has deployed Active Directory server to control information flow in secure and authentic manner.

- **Network Security:**

  The University is using required network security tools like Cyberoam Firewall, Symantec Antivirus Server, Cisco managed switches etc. to protect network against various network threats, cyber attacks and virus infections.

- **Risk Management:**

  IT team is taking all required safeguard measures to minimize risk related to critical information i.e. scheduled server data backup, DR servers.
  Risk is an inherent aspect of all academic, administrative and commercial business activities. Sound risk management principles have become part of routine management activity across the University. IT division takes utmost care to safeguard all critical information. Few arrangements are mentiuoned below-

  a) Active Directory Server to replicate user group policy simultaneously: In any circumstances if one server goes down second will automatically take charge for smooth and uninterrupted user access.
  b) Disaster Recovery Server for mailing services.
  c) Internet policy: The University is using two redundant Cyberoam Proxy servers with high availability mode for un-interrupted Internet access under implemented access policy.
  d) Wi-Fi and Network Security: University IT section has structured LAN and Wi-Fi networks effectively.
  e) Backup: Daily and weekly backup is scheduled to take necessary backup of system files and configuration modules in external media to overcome from the data loss risk during sudden break downs.

- **Software Asset Management:**

The University is very much concerned about the use of licensed softwares and departmental softwares for their optimal and utmost use. Licence server and Lab based License servers are deployed in a synchronized manner for perpetual and free ware softwares.

Branded Desktop PCs and Laptops have preload inbuilt licensed OS: IBM/ Lenovo Windows XP, Windows Vista, Windows 7 and Windows 8.1.
Antivirus and Network Threat Protection: one centralized Antivirus Server deployed to deploying client, updating definition files and scheduled scanning.
Licenses renewal and upgradation of softwares are taken place as and when required to use latest modules and keep the pace with upcoming technical updates.

- **Open Source Resources**

IT establishment of University provided centralized access of shared teaching, learning, research resourses for academic purpose. Arrangement is done to provide freeware softwares to all academic users from centralized location on server. That is called N-Drive facility and web based student's information system and webmail to all student and faculty members of University.

- **Green Computing**

The University is committed towards its environmental responsibily. The university does it by reducing paper work of to a maximum possible extent, using environmental friendly colling systems in academic blocks and hostels, proper disposal system of e-wastage, usage of recycling and recycled products.
University has an E-waste Disposal Agreement with Deshwal Waste Management India Pvt. Ltd. (DWMPL), Gurgaon, for suitable disposal of E-waste.

The University takes all possible preventive measures to protect environment against global warming to reduce the use of paper by:-

a) Mass mailing and messaging.

b) IRP based processes.

c) Projection and visualization provided for teaching purpose.

d) Using Wi-Fi network thus reducing cable dependences.

e) Using Recyclable Cat-6 cables, Printer Cartridges, UPS batteries etc.

f) Energy Star Computers with hibernate and sleep mode function in PCs to reduce heat generation and power consumption.

g) Circulating required guidelines regarding switch off all computer system and peripherals while not in use.

h) Water based cooling system offers 0% greenhouse gases effect.

The University follow all required Green Computing practices to reduce the environmental impact. When next generation PCs are procured old PCs which are less efficient to fulfill the present criteria of application handling along with speed are refurbished rather than discarding or dumped or else eventually donated to our old inner group schools when there is probably no way around.

4.3.2 Give details of the University's computing facilities i.e., hardware and software.

a) Number of systems with individual configurations

	List of Desktops	
S No	**SPECIFICATION**	**QTY**
1	Windows XP Professional Preload Desktop PC - PIV	1
2	IBM Thinkcentre, Windows XP Professional Preload Desktop PIV 3.0 GHz, 512MB RAM, 80 GB HDD, Win XP, 15" Color monitor	28
3	IBM Thinkcentre Windows XP Professional Preload Desktop PIV 3.0 GHz, 512MB RAM, 80 GB HDD, Win XP, 19" Color monitor, CD DRIVE	20
4	IBM Thinkcentre Windows XP Professional Preload Desktop CPU 3.0 GHz, 945GHz, 256MB RAM, Opt. Mouse, 80GB Sata HDD, 15"Color Monitor, Win XP Model A-52	85
5	IBM Thinkcentre Windows XP Professional Preload Desktop CPU 3.0 GHz, 945GHz, 512MB RAM, Opt. Mouse, 80GB Sata HDD,CD ROM 19"Color Monitor, Win XP Model A-52	5
6	IBM Thinkcentre Windows XP Professional Preload, Model no A55 with 17" Color monitor	71
7	IBM ThinkCentre Windows XP Professional Preload Desktop 1.80GHz with 17" color monitor	30
8	Lenovo Windows XP Professional Preload Desktop Core2 Duo 1GB RAM, 160GB HDD, DVD Player, USB Keyboard, Optical Mouse 17" Color monitor	20
9	Lenovo ThinkCentre M-57 Windows XP Professional Preload Desktop, Core2, DVD, 1GB RAM, 160GB HDD, USB Keyboard, Optical Scroll Mouse, Win XP Professional with 17"CRT Flat color monitor	50
10	Lenovo ThinkCentre Windows Vista Preload Desktop, Intel Core 2Duo,3.0GHz, 2GB DDR2 RAM, 160GB HDD, DVD ROM,Optical Mouse, Keyboard with 17" Color monitor	50
11	Lenovo ThinkCentre-M-90 Windows 2007Preload Desktop-Intel i3-530, 2.93GHz, 4MB Cache, 250GB HDD Sata@7200RPM,16XDVD Drive, 18.5" TFT Monitor, USB Keyboard, USB Optical Scroll mouse, Microsoft Windows2007 Preload	180
12	Lenovo ThinkCentre Windows XP Professional Preload Desktop- Core2 Duo/2GB RAM/ 320GBHDD/ DVD RW/ KB/Mouse/ MS Win7 Professional with 18.5" TFT Monitor	2
13	Lenovo ThinkCentre-M-81 Windows 2007Preload Desktop-Intel i3-2100, 3.10GHz, 3MB Cache, 2GBDDIII RAM, 320GB HDD Sata,DVD Drive, 18.5" TFT Monitor, USB Keyboard, USB Optical Scroll mouse, Microsoft Windows2007 Preload	150
14	Dell Precision I 3500	18
15	Lenovo ThinkCentre-M-81 Windows 2007Preload Desktop-Intel i3-2100, 3.10GHz, 3MB Cache, 2GBDDIII RAM, 320GB HDD Sata,DVD Drive, 18.5" TFT Monitor, USB Keyboard, USB Optical Scroll mouse, Microsoft Windows2007 Preload	10
16	Lenovo ThinkCentre-M-81 Windows 2007Preload Desktop-Intel i3-2120, 4.68GHz, 4GBDDIII RAM, 500GB HDD Sata,DVD Drive, 18.5" TFT Monitor, USB Keyboard, USB Optical Scroll mouse, Microsoft Windows2007 Preload	75
17	Lenovo, Core i3-3220, 4GB/500GBHDD/ Keyboard Mouse, 18.5 TFT/ Win7 Pro	60
	Total	**855**

b) Computer-student ratio

Approx. 3:1 (2250 No. of students/855 No of desktops, 2.63:1)

c) Dedicated computing facilities

The University has provided separate high configuration desktop PCs to all the faculty members and many staff members. All theses PCs are connected with the printing and Internet facility for teaching and office work. HOD's are provided with individual multi functioning printer facility with scanner.

The University has facilitated all students with dedicated LAN/ Wi-Fi and Internet connectivity for their own PCs/Laptops.

d) LAN facility
- Local Area Network with high end managed Cisco Switches.
- Fibre Optics Backbone
- 222 network access points with 25 users/Aps.
- 81 Cisco Switches, 6 Routers, 222 Cisco Wireless Access Points, 2 Cisco Wi-Fi Bridges and 52 VLANs.
- Lotus Mailing system.
- Cyberoam 1000ia Firewall/Anti spam/ Antivirus/BW management

e) Proprietary software

Sr. No.	Software Name	Sr. No.	Software Name	Sr. No.	Software Name
1	Adobe Acrobat 6.0	18	FEA Solver Abaques	35	Primavera Contractor
2	Adobe Illustrator CS	19	Honeywell Automation	36	Pro Engineer
3	Adobe Photoshop CS	20	Lotus Domino	37	PSW software
4	Aldec	21	IBM SPSS	38	QualNet
5	Ansys	22	Infinity DLL	39	Rational Suite
6	AutoCad	23	Intel Visual Fortran	40	SAP
7	Bentley Academic Civil Bundles	24	Keil	41	Softlink Liberty Library Automation
8	Borland Turbo C/C++	25	Lan Trainer Software	42	StaadPro
9	CAMCAD	26	Macromedia Flash	43	Symantec Endpoint Protection Antivirus
10	Campus Lynx IRP Software	27	Magics RP	44	Synopsis
11	Clarity Tense Buster	28	Matlab	45	Tally ERP9
12	Connected Speech	29	MS Dream Spark	46	The Sky Pronunciation suite
13	Director MX	30	MS Office	47	Ultiboard
14	EOS RP Tools	31	SENSE nuts WSN sensation-teach lab	48	VHDL simulation
15	EOSTATE Base	32	Multisim	49	Xilinx
16	ETABS	33	Oracle 11G	50	ZEdit Pro
17	E-TDS	34	Plaxis2D Suite	51	ZPrint

f) Number of nodes/ computers with Internet facility

JUET campus is fully connected through LAN/ Wi-Fi arrangement consisting of around 3500 node. Internet facility is available 24 X 7 on all theses nodes through 1 Gbps leased line from National Knowledge Network. On this network (LAN/ Wi-Fi), 855 Desktop Systems are made available to faculty and staff members. Other nodes are available for connections of personal computing devices by faculty/staff/students.

g) Dedicated and secured Data centre.

The University has deployed 22 Servers running various applications mainly File Server, Campus connect Server, Lotus Domino Server with latest firewall and network threat protection server at one centralized server room with 24X7 uninterrupted power supply and air conditioning.

4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

The University has vision of upgrading IT infrastructure according to changing academics and technological environment. The University follows a practice to upgrade IT infrastructure as per changing academic needs. All the HODs are asked for their IT related requirements before commencement of every academic session to make required financial provision in budget. Quotations are invited from various vendors and after careful consideration of relevant factors procurement of IT gadgets are finalized. University take necessary steps to maintain the AMC for existing computers, network devices, software's and servers etc.

The University has anticipated to upgrade in the following areas:

a) University will extend LAN / Wi-Fi connectivity to connect newly constructed 470

b) bed capacity hostel.

c) Wi-Fi connectivity at new students technical clubs.

d) Network connectivity to cafeteria.

e) Planning to convert all partial Wi-Fi hostels to fully Wi-Fi zone.

f) Planning to extend LAN/Wi-Fi connectivity to all residential locations.

4.3.4 Give details on access to on-line teaching and learning resources and other knowledge and information database/packages provided to the staff and students for quality teaching, learning and research.

JUET is proving the online access of following teaching and learning resources, databases/ packages to staff and students for quality teaching learning and research purpose.

a) IEEE Multi-users access

b) ACM

c) ASCE

d) ASME

e) Springer

f) ProQuest ABIINFORM

g) Open Source Technical Journals

h) NPTEL courses

i) Video lectures

j) Online e- books

k) E-Ph.D. thesis

l) E- Standards of IEEE & ACM

m) E- Conference Procedings

n) E- Dictionaries

o) E- News papers.

4.3.5 What are the new technologies deployed by the University in enhancing students learningand evaluation during the last four years and how do they meet new / future challenge.

The University is committed towards creation of an efficient system for teaching-learning, evaluation, and research with the aid of latest technology.

- In the year 2010, University switched network from Extreme to Cisco network switches.

- The university has upgraded Internet Bandwidth time to time as per upcoming requirement
  - In the year 2009, University upgraded internet Bandwidth from 2 Mbps to 4 Mbps.
  - In the year 2011, University upgraded internet Bandwidth from 4 Mbps to 1 Gbps. Currently University connects to National Knowledge Network started under NMEICT project for 1 Gbps high speed Internet connectivity.
- In the year 2011, University has setup Digital LRC (Learning Resource Center) to facilitate students for access of online academic content.
- In the year 2011, University established a Multi Purpose Facility Hall with latest Audio Visual Techmology.
- In the year 2012, University converted network mode at some hostels from LAN to partially Wi-Fi.
- In the year 2013, University extended Wi-Fi network facilities to newly constructed Girls Hostel Rooms.
- In the year 2014, University extended LAN connectivity at Faculty and Staff Accomodations.
- In the year 2015, University established Wi-Fi network connectivity at departmental clubs.

- In the year 2015, University Set up full Wi-Fi network connectivity at newly constructed five floors Boys Hostel 22.
- In the year 2015, University established LAN connectivity at newly constructed Accomodation Blocks.
- University facilitates access to various databases, open source software, proprietary software and web-based resources for academic purpose.
- Classrooms are equipped with enhanced AV facilities, i.e. Projectors, screens, mikes etc.

4.3.6 What are the IT facilities available to individual teachers for effective teaching and quality research?

Every faculty member has been provided with a dedicated desktop with all required application software's, application tools, LAN, Internet and printing facility for teaching and research purpose. It division of University provides one dedicated server for the faculty members and staff for the uploading and downloading of the teching and learning material for effective and innovative teching and quality research.

All the desktop systems have also been connected with centrally accessed student information system for various academic related activity.

4.3.7 Give details of ICT-enabled classrooms/learning spaces available within the University? How are they utilized for enhancing the quality of teaching and learning?

a) The University has facilitated all faculty members to prepare their own lecture presentation. Lecture theatres are equipped with multimedia projectors, audio video facilities, visualisors for interactive teaching. Faculty members use power point presentation, excel spreadsheet, videos and online database in lecture theatres which help the students to gain knowledge of subject with greater clarity of the concepts. Students are allotted assignments using this medium. Such activities not only enhance the leaning outcomes but also develop self confidence among students. Similary in many courses the quizzes are conducted online.
b) The University has also provided centralized storage space on file servers to access their academic data for visualization and projection at Lecture Theatre.

Table: Class room details with facilities available

Class Room	Location	Purpose/Status	Projector & Screen	PA System	LAN	PC	Mike	No. of Seats	White Board
LT-1	Ramanujan Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	120	Y
LT-2	Ramanujan Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	120	Y
LT-3	Ramanujan Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	120	Y
LT-4	Ramanujan Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	120	Y

LT-5	Raman Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	250	Y
LT-6	Visvesvaraya Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	120	Y
LT-7	Visvesvaraya Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	120	Y
LT-8	Visvesvaraya Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	120	Y
LT-9	Visvesvaraya Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	120	Y
LT-10	Visvesvaraya Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	120	Y
LT-11	Visvesvaraya Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	120	Y
LT-12	Visvesvaraya Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	120	Y
LT-14	Visvesvaraya Bhawan	Lecture/Shared	Y	Y	Y	Y	Y	120	Y
CR-I	Ramanujan Bhawan	Lecture/Tut/Shared	Y	N	Y	Y	N	45	Y
CR-4	Ramanujan Bhawan	Lecture/Tut/Shared	Y	N	Y	Y	N	45	Y
CR-5	Ramanujan Bhawan	Lecture/Tut/Shared	Y(No Screen)	N	Y	Y	N	45	Y
CR-14	Raman Bhawan	Lecture/Tut/Shared	Y	N	Y	Y	N	70	Y
CR-21	Visvesvaraya Bhawan	Lecture/Tut/Shared	Y(No Screen)	N	Y	Y	N	90	Y
CR-22	Visvesvaraya Bhawan	Lecture/Tut/Shared	Y(No Screen)	N	Y	Y	N	70	Y
MPH	Tagore Hall	Multi Purpose	Y	Y	Y	Y	Y	1800	N

Table: Laboratory details

Laboratory Name	Location	LAN	PC	Power backup	Capacity	Display Board	White Board
Computer Lab-1	Ramanujan Bhawan	Y	Y	Y	61	N	Y
Computer Lab-2	Ramanujan Bhawan	Y	Y	Y	38	N	Y
Computer Lab-3	Ramanujan Bhawan	Y	Y	Y	74	N	Y
Computer Lab-4	Ramanujan Bhawan	Y	Y	Y	70	Y	Y
Computer Lab-5	Ramanujan Bhawan	Y	Y	Y	64	N	Y

Lab	Bhawan						
VLSI Lab	Ramanujan Bhawan	Y	Y	Y	41	N	Y
DSP Lab	Ramanujan Bhawan	Y	Y	Y	43	Y	Y
Power Electronics Lab	Ramanujan Bhawan	Y	Y	Y	4	N	Y
Analog Lab	Ramanujan Bhawan	Y	Y	Y	4	N	Y
Communication Lab-1	Ramanujan Bhawan	Y	Y	Y	6	N	Y
Communication Lab-1	Ramanujan Bhawan	Y	Y	Y	7	N	Y
Digital & Microprocessor Lab	Ramanujan Bhawan	Y	Y	Y	2	N	Y
Basic Lab	Ramanujan Bhawan	Y	Y	Y	1	N	Y
Physics Lab	Ramanujan Bhawan	Y	Y	Y	1	N	N
Environment Lab	Raman Bhawan	Y	Y	Y	2	Y	N
Research Lab	Raman Bhawan	Y	Y	Y	3	N	N
Process Simulation Lab	Raman Bhawan	Y	Y	Y	35	N	Y
Instrumentation & Process Control Lab	Raman Bhawan	N	Y	N	4	N	Y
Language Lab	Raman Bhawan	Y	Y	Y	35	N	Y
CAD Lab	Vishwakarma Bhawan	Y	Y	Y	35	N	Y
CIMS Lab	Vishwakarma Bhawan	Y	Y	N	7	N	Y
AM Lab	Vishwakarma Bhawan	Y	Y	Y	5	N	Y
CNC Lab	Vishwakarma Bhawan	N	Y	N	2	N	Y
Concrete Tech Lab	Vishwakarma Bhawan	Y	Y	Y	1	N	N
Highway Engg Lab	Vishwakarma Bhawan	Y	Y	Y	1	N	N
Fluid Mech Lab	Vishwakarma Bhawan	Y	Y	Y	1	N	N
Structure Lab (UTM)	Vishwakarma Bhawan	Y	Y	Y	1	N	N

4.3.8 How are the faculty assisted in preparing computer- aided teaching-learning materials? What are the facilities available in the University for such initiatives?

Faculty members are bestowed with dedicated desktop with LAN and Internet connectivity to aid them in preparing the course content, lectures and in updating their

knowledge. The course material and lecture ppts are also available at study material folder.

 Faculty members are endowed with desktop PCs and printing facility to make best use of IT infrastructure to enhance their academic and research activities. Application softwares such as MS Office, Matlab and SPSS etc commonly used by faculty members for effective teaching and interactive tutorials. The University has a highly qualified team of IT professionals to deliver their expertise for un-interrupted IT management for smooth functioning.

The University provides 24 x 7 accesses to Internet to all users i.e. faculty, staff, students and visitors.

The University is connected with the help of National Knowledge Network 1Gbps Internet lease line circuit using high-speed multi-services enabled network infrastructure.

4.3.9 - How are the computers and their accessories maintained?

IT infrastructure is managed by highly skilled IT professionals with adequate technical knowledge and experience. University has Annual Maintenance Contract (AMCs) with OEMs. IT division has also signed AMCs with various private vendors for maintenance of uninterrupted power supply and servers.

4.3.10 Does the University avail of the National Knowledge Network connectivity? If so, what are the services availed of?

Yes ,University is availing National Knowledge Network (NKN) connectivity. NKN is providing 1Gbps Internet connectivity through its high configuration Juniper router.

4.3.11 Does   the University,   avail of web resources such as Wikipedia,   dictionary and other education enhancing resources? What are its policies in this regard?

The University provides the access of Wikipedia, dictionaries, video lectures, blogs, online course content, discussion forums via email, video-conferencing and live lectures (video streaming) discussion boards, chat rooms, online assessment facilities and access of all open source resources such e- books, e- journals, lecture notes, ppt. etc .

JUET Policy regarding the web resources access :-

(a) The University provides 1Gbps Internet connectivity.
(b) The student can download 1 GB data per day.
(c) All the students have been allotted individual space on the file server to keep their personal data.
(d) All the students have been allotted personal login IDs to access their file server profile on all the computers of campus.
(e) One shared network folder has been provided to students to upload and access the academies contents.
(f) All faculty members have been provided shared network folders   to upload their academic contents, lecture notes, ppt slides, timetable etc. for the students.

4.3.12 Provide details on the provision made in the annual budget for the update, deployment and maintenance of computers in the University.

The University is always concerned about IT infrastructure development and optimal use of latest IT   technology.   University always welcomes adequate budgetary

provision for purchase, upgrading and maintenance of computers and IT related services to keep pace with the latest changing technological environment.

Sl	PARTICULARS	BUDGETED AMOUNT (VALUE IN LAC)
I	**CAPITAL EXPENDITURE**	
a)	**Computers**	
	Computer Parts	0.150
	Computer Repairing Work	0.100
	Sub-Total (a)	**0.250**
b)	**Networking**	
	Network Cables (OFC cable 6 core,Patch Cord etc.)	1.000
	Patch Panel	0.200
	Sub-Total (b)	**1.200**
c)	**Others**	
	Projector Lamps	1.600
	Audio Visual Items	0.650
	Projector Repairing work	0.500
	UPS Batteries replacement	2.000
	UPS Repairing work	0.500
	Billing Printer for Cafeteria	0.150
	Sub-Total (c)	**5.400**
	Sub-Total (I) - a+b+c	**6.850**
II	**RECURRING EXPENDITURE**	
a)	**AMC**	
	Server	0.550
	Savior Biomatric Machine	0.250
	Liberty Software Installed in LRC	0.350
	Subtotal (a)	**1.150**
b)	**Renewal/ Annual Subscription**	
	Symantec Antivirus License	1.500
	Cyberoam Firewall	4.500
	Subtotal (b)	**6.000**
	Sub-Total (II) - a+b	**7.150**
	GRAND- TOTAL (I+II)	**14.000**

4.3.13 **What plans have been envisioned for the gradual transfer of teaching and learning from closed University information network to open environment?**

The University is planning for the creation of digital repository for the conversion and display of all printed & non printed University copyrighted material into digital format for the benefit of students.

Shodhganga : The University has also provided the access of all awarded Ph.D. theses on open network environment for the benefit of scholars.

4.4 Maintenance of Campus Facilities

4.4.1 Does the university have an estate office / designated officer for overseeing the maintenance of buildings, class-rooms and laboratories? If yes, mention a few campus specific initiatives undertaken to improve the physical ambience.

Yes. The University has an Estate Officer who is responsible for looking after the entire campus including academic, residential and hostel area.

- The maintenance of buildings, class rooms and laboratories are managed by the Estate officer.
- Whitewash, cleaning, water harvesting, security, drinking water supply and maintenance of lawns and gardens is looked after by the Estate Officer.
- Lawn mowers are available to maintain lawns on the campus.
- Sprinklers are used for watering of the lawns.
- Nursery of plants is maintained in university campus, by the supervision of horticulture experts. Regular manuring, watering and pest controlling are taken care by the horticulture section.
- Appropriate numbers of aqua- guards/ROs are connected with drinking water system in academic blocks and hostels. A person is deployed to take care of aqua-guards/ROs on regular basis.

4.4.2 How are the infrastructure facilities, services and equipments maintained? Give details.

The University has sufficient number of housekeeping staff (gents and ladies) for the cleaning of classrooms, laboratories, academic blocks, faculty offices, administrative offices, messes, LRC, hostel rooms & corridors. A very due care has been taken for cleaning of rest rooms of university. Cleaning staff cleans the rest rooms on frequent intervals. Maintains of equipment is carried out as when required. Whenever, equipment /apparatus /machine is not in working condition, then authentic University official contacts supplier/engineer to repair them.

Any other information regarding Infrastructure and Learning Resources which the university would like to include.

Nil

JAYPEE UNIVERSITY OF ENGINEERING & TECHNOLOGY, GUNA

EXCELLENT INFRASTRUCTURE FACILITIES AT JUET GUNA

Road

The campus is connected with main NH-3 Agra-Bombay Road at km stone 358/480 with its main gate on East of the road. The campus has 4.5 km long 7 meter wide concrete tarmac roads maintained in excellent condition and provided with side drains. The other circular roads and inner service roads help in controlling traffic inside the campus. The roads are well lit by street lights.

Electric Supply

In order to ensure uninterrupted power supply, the campus has 33 KV 24 hours independent feeder from Bholapura 132 KV substation and is equipped with two 33/0.433 KV Electric Substation and Distribution System and four DG sets of 750,500,320,320 KVA capacities are also available for 100% power back up.

Water Supply

(a) The University has elaborate water supply system. We draw raw water from Gopisagar dam at Pagara and after initial storage / cleaning pump it to the Institute through a 8.5 km long underground pipeline.

(b) The water supply system holds/storage a capacity of 40 lacs liters of water against our current demand of 7 lacs liters.

Sewage Disposal

The campus has two underground sewage disposal systems with a 1500 cubic lakhs liters per day capacity sewage treatment plant (STPs). The reclaimed water is effectively used for horticulture through underground pipe system while solid waste is used as manure.

Medical Support

(i) The University has one full time medical officer with four paramedical staff

(ii) The hospital complex comprises of two separate wards for boys and girls, a pharmacy, a laboratory and consulting chamber for medical officers.

(iii) The hospital has one ambulance for emergency.

Transport

The University has sufficient transport to meet the requirement such as:

(i) Two, 42 seater and 52 seater buses.

(ii) Two trucks for administrative purpose.

(iii) 10 Light vehicles.

Services

Following facilities exist in the campus:

(a)   Annapurna (Boys & Girls students) messes

(b)   Cafeteria

(c)   Tuck-shop

(d)   Barber shop

(e)   Books & stationary shop

(f)   Multipurpose hall

(g)   Laundry

(h)   Beauty parlor for girls

(i)   Swimming pool for girls

(j)   Three Gymnasiums for boys & girls

(k)   ATM / Banks (OBC & Axis)

(l)   Fire fighting Lorry

Horticulture

In order to keep our 122.5 acre campus green and beautiful we are employing approximately 40 gardeners and three horticulture experts. The effort is evident by beautiful ambience.

Schooling

In order to meet the primary and higher secondary level educational requirements of children of faculty and staff, a modern higher secondary school is run by name of "Jay Jyoti School" in the campus. At present it is upto Class 10 with CBSE affiliation and and we are planning to enhance it to 10+2 level.

Hostel

The University offers 100% residential facilities in campus for boys and girls in separate hostels. Presently, there are 21 blocks of boy's hostels having capacity to accommodate 1830 students. The girl's hostel is having capacity to accommodate around 425 inmates with its own sporting & messing facility.

INFRASTRUCTURE – BUILT UP AREA

S/No.	Description	Built up area in Sq.Mts.
1.	Academic Blocks (Ramanujan (A), Raman (B), Visvesvaraya (C) Bhawan)	5679.00+6593.00+9886.15 = 22158.15
2.	Mechanical lab.	1550.00
3.	Civil lab.	1732.00
4.	Boys' Hostels H -1 to H - 22	48490.00
5.	Girls' hostel.	14665.00
6.	Faculty & Staff Accommodation Type ATS –I (A to J).	12998.00
7.	Faculty & Staff Accommodation Type ATS – II (A to H).	7284.00
8.	Bachelor Accommodation.	1045.00
9.	Main Guest House	683.45
10.	Staff Guest House	1500.00
11.	Students Annapurna (Mess)	4397.61
12.	Staff Annapurna (Mess)	625.37
13.	Cafeteria & Shopping Complex	2325.00
14.	Multipurpose hall.	5000.00
15.	Visitors lounge near W.T.P.	490.00
16.	Laundry.	305.00
17.	Water treatment plant.	330.22
18.	Sub-Station I & II.	720.00
19.	Sewage Treatment Plant (STP)	575.19
20.	Under Ground Water Tank.	803.00
21.	School Building.	5192.00
22.	Wind Engineering Application centre	6000.00
23.	Peripheral Boundary Wall for 120 Acre- 3743 mtr.	---------------------
	Total	**138868.99** Sq.Mts.
	Water harvesting Lake Area roughly 16750 Sq. Mts. with capacity of 1 Lac cubic Mtrs.	

LABORATORY FACILITIES

S.No	Laboratory	Area (Sq.Mts.)	Value in ₹ (Lacs)
	Mechanical Engineering Department		
1	Thermodynamics Lab	Thermal Lab	3.64
2	Internal combustion (IC) Engine lab		17.06
3	Refrigeration &Air Conditioning Lab	243.00	5.07
4	Fluid Machinery lab	95.25	7.61
5	Strength of Materials Lab	Design lab	6.60
6	Theory of machines Lab		3.20
7	Dynamics of machine lab	243.00	3.87
8	Additive Manufacturing lab	Advanced manufacturing Lab	214.74
9	Mechatronics Lab		11.18
10	Computer Integrated Manufacturing Lab (CIM)		84.36
11	Computer Numerical control(CNC) trainer lab	239.12	7.96

12	Computer Aided Design/Computer Aided manufacturing Lab	96.04	11.19
13	Welding shop	Mechanical workshop 378.76	1.14
14	Foundry shop		1.39
15	Sheet Metal shop		0.69
16	Machine shop		11.83
17	Carpentry shop		1.10
18	Thermal power plant simulator	108.00	36.56
	Civil Engineering Department		
19	Geotechnical Engineering Lab	156.00	12.79
20	Structural Engineering & Concrete Lab	290.00	43.75
21	Highway Engineering Lab	100.00	08.27
22	Surveying Lab	25.00	08.33
23	Fluid Mechanics Lab (Common with Chemical & Mechanical Engineering)	240.00	10.00
24	Engineering Graphics Lab (Common with Mechanical Engineering)	305.00	00.88
	Computer Science Engineering Lab		
	Computer Lab – I	104.25	12.20
25	Computer Lab – II	100.91	09.05
27	Computer Lab – III	188.04	21.91
29	Computer Lab – IV	188.04	25.15
28	Computer Lab – V	164.28	28.82
	Chemical Engineering Department		
30	Process Simulation Lab	105.00	44.25
31	Instrumentation Process Control Lab	240.00	20.58
32	Chemistry Lab	240.00	13.66
33	Environmental Engineering Lab (common with Civil Engineering)	240.00	21.32
34	Chemical Reaction Engineering Lab	100.00	02.83
35	Mass Transfer Operations Lab I & II (Common with Mechanical Engineering)	290.00	13.57
36	Heat Transfer Operations Lab I & II (Common with Mechanical Engineering)	170.00	07.49
37	Solid Fluid Mechanical Operations Lab	240.00	04.59
38	Cement Research and Development Centre (CRDC), Boiler & Compressor House	100.00	45.43
39	Research Lab	90.00	10.00
	Electronics & Communication Engineering		
40	Basic Electronics & Electrical Lab	105.00	06.89
41	Digital Singal Processing (DSP) Lab	115.00	33.55
42	Very Large Scale Integrated (VLSI) Lab	116.00	32.03
43	Digital & Micro Processor Lab	100.00	10.08
44	Communication Lab – 1 & 2	162.00	34.98
45	Analog Electronics Lab	100.00	12.77
46	Power Electronics Lab	116.00	06.47
	Physics Department		
47	Physics Lab I	125.00	09.98
48	Physics Lab II	125.00	01.04
	Humanities & Social Sciences		

49	Language Lab	115.00	21.00
	TOTAL	**6258.69 Sq.Mts.**	**962.85 Lacs**

COMPUTERIZATION OF UNIVERSITY

The university is fully network connected with 1 Gbps dedicated line. Entire campus is connected by LAN and hostels are connected by Wi-Fi.

Currently the following activities of the University are managed through an IRP Software (**Campus Lynx):**

- Counseling & Student Master Data Creation
- Student Information System
- Examination Management
- Student Fee Management
- Financial Accounting System
- Human Resource Management System
- Web-Kiosk for student and staff
- Training & Placement

CRITERION V

STUDENT MENTORING AND SUPPORT

5.1   Student Support

At Jaypee University of Engineering & Technology, students are mentored by various academic and administrative heads from the entry to the exit points. Students are guided by necessary information, class room training, mental training, physical training, job-oriented training and placement. During their stay, students can avail of support services like library, internet, hostel, laboratories, state of the art multipurpose hall, sports and cafeteria. In addition, medical support and personalized counseling / mentorship services are also provided. Also there is a marked improvement in student performance in curricular, co-curricular and extra-curricular aspects.

5.1.1   Does the university have a system for student support and mentoring? If yes, what are its structural and functional characteristics?

The University has a structured system to provide support, guidance and mentoring to the students in all their activities as follows:

(i)   Dean: Overall academic & research activities
(ii)   Controller of Examination: Overall co-ordination of university examination system
(iii)   Registrar: Complete support in terms of admission, registration, documentation and attendance monitoring etc.
(iv)   HODs: Overall mentoring of students on the department related activities
(v)   Faculty: Small groups of students have been assigned to designated faculty for their mentoring and guidance on subject related issues.
(vi)   Professional guidance and mentoring – Faculty in charges, departmental societies.
(vii) Extra-curricular and co-curricular activities – Faculty in charges of various JYC clubs.
(viii) Counselor: Facilitate in psychological counseling of students
(ix)   Wardens: Complete support to students for their well being in the hostels

5.1.2   Apart from classroom interaction, what are the provisions available for academic mentoring?

Besides classroom interaction following provisions are available for academic mentoring in the university;

i.   The University offers an academic mentorship program where the faculty members across the University are active mentors for a group of 10 students and are responsible for addressing their academic and social needs on and off campus. Each student is allotted to a mentor (faculty member) in the first year of the program, to whom he / she confides on academic and nonacademic issues. The faculty member maintains strict confidentiality and helps student with counseling

and guidance to improve his/her academic performance. Whenever required, faculty discusses the problems with HOD / Dean / Wardens for further action. The mentors are also the contact person for parents.

ii. Moreover students can share their problems with the Dean / faculty member / hostel wardens. The Dean / faculty member / hostel warden concerned is very supportive in guiding them to fight their problems.

iii. In addition to above practices, student's tutorials are being conducted in small groups of 30 for guidance & support on academic issues, workshops/seminars are organized periodically and technical events, quizzes, etc., are conducted regularly.

iv. Student attendance, discipline issue are discussed with the stake holders.

5.1.3 Does the university have any personal enhancement and development schemes such as career counseling, soft skill development, career-path-identification, and orientation to well-being for its students? Give details of such schemes.

Career counseling, soft skill development, career-path-identification are integral part of the University curricula. Students are encouraged to participate in both technical & cultural activities to enhance their skills, qualities of leadership and team spirit. Details of the measures taken up by University to address the concerns are as;

A. COUNSELLING:

i. **Career counseling:** The students, at the time of the admission, are helped by the faculty member in choosing right stream. They are informed about the scope and nature of the various subjects that form the syllabus. The students are not pressurized in choosing the branches. They are given right kind of counseling which helps them to shape their career. The choice of the career and the doubts of the students are listened carefully and the solutions of the problems are provided.

ii. **Personal & psycho-social counseling:** The students during the course of their studies in the University come across various issues. They are, at times, too immature to handle the problems. A dedicated psychological counselor has been appointed who provides them personal counseling. The candidates at times come face to face with certain social issues or problems which tend to bring the inferiority complex in them. The counselor makes it sure that no such deterioration happens with the psychosocial understanding of the students. They are counseled to become better human beings and advised to stand tall for the social cause.

iii. Formal sessions for the students in career counseling, career identification are also held. Individual guidance is also provided by Training and Placement Cell. Students are also guided to draw their strategies to succeed in Campus placement.

iv. **Leadership skills:** Various wings of JUET youth club are coordinated by students under the supervision of faculty coordinators. Students display high level of leadership skills in organizing mega activities round the year.

B. SOFT SKILL DEVELOPMENT :

i. **Communications Skills:** In order to inculcate effective communication skills a three credit CORE course on Presentation & Communication Skills is being imparted, across all engineering branches, during first year of B.Tech curriculum.

ii. **English Language:** On the basis of marks obtained by student in English subject in Class X & XII examination, medium of school education and performance of students in Communication skills course, approximately 70-80 students are being identified every year during the first year, for which an English (Audit) course is being run during 1st year of B.Tech curriculum.

iii. **Language Lab:** With the objective of providing practical exposure to the students for improving their communication skills, a state of art English Communication language laboratory (Language lab) has been established. B.Tech I st year students are given hands on experience (batch size 30 students) to develop & sharpen their speaking, listening, reading and writing skills through audio-video facilities available in the language lab.

C. To enhance the employability of students, mock drills for campus recruitment preparation, is conducted regularly for final & pre-final year students.

D. Remedial classes are organized for weak students on regular basis.

5.1.4 Does the university provide assistance to students for obtaining educational Loans from banks and other financial institutions?

The University facilitates the students for obtaining educational loans from bank. To ease the process, kiosks of various banks are set up at the time of admission. University has also tied up with banks like Oriental Bank of Commerce and Axis Bank to process the loan applications of the students admitted to the University. To help the students and simplify the process of loan applications, University also provides all certificates/documents required, as per the banks requirements and customized requests of student.

Year wise details of number of education loans financed through various bank

S. No.	Academic Year	Educational loans financed through banks(Nos)
1	2012-13	1
2	2013-14	2
3	2014-15	1
4	2015-16	1

5.1.5 Does the university publish its updated prospectus and handbook annually? If yes, what are the main issues / activities / information included / provided to students through these documents? Is there a provision for online access?

University publishes following documents on regular basis;

A. **Prospectus:** The prospectus contains general information about the University, Courses offered, criteria and process of admission.(Published annually offline as well as online).

B. **Handbook:** During admission, each student is given handbook at the time of registration. The hand book contains the syllabus outline, details of examination system, rules and regulation. It also contains the rule/code to be observed by the student during his/her stay in the University.The same information, which is published in the University handbook, is also updated on the university website (www.juet.ac.in). (Published offline as well as online and updated on annual basis)

C. **Academic calendar:** Calendar of all academic, co-curricular and extra-curricular activities is planned in the beginning of an academic semester and is made available, in advance. (Published offline as well as online every semester)

D. **Webkiosk:** In order to monitor the student's performance, University has a webkiosk (online) which carries the detail about the attendance record, academic performance and other relevant details of each student. Not only students but their parents can also use this facility of accessing the webkiosk.

5.1.6 Specify the type and number of university scholarships / freeships given to the students during the last four years. Was financial aid given to them on time? Give details (in a tabular form) for the following categories: UG/PG/M.Phil./Ph.D./Diploma/others (please specify).

Yes the University has been providing financial aid to the students in the form of following scholarships / fellowships;

A. **Teaching Assistantship & Research Assistantship:** Teaching Assistantship of ₹ 8,000/- per month is provided to the students admitted to M. Tech. based on their GATE Score. Research Assistantship of ₹18,000/- per month is available for Ph.D. Scholars registered in fulltime category provided they are not in receipt of any assistance/scholarship/fellowship/ salary, etc., from any organization/ Institution/ source, etc.

B. **Jaypee Employees Ward:** The employees of Jaypee group of companies having served for more than five years are entitled to avail fee concession for their ward subject to approval from the corporate office.

C. **Jaypee India Scholarship:** The Jaypee India Scholars Fund had been launched to provide financial assistance to meritorious students with poor financial and economic conditions for pursuing higher technical education. Students are being provided financial assistance equivalent to the total fee (Tuition Fee and Development Fee as applicable to the batch of their entry) every year for pursuing the programme starting from the admission year.

D. **William Webster Merit-Cum-Means Scholarship:** JAI PRAKASH SEWA SANSTAN (Sponsoring body of the University) has setup an initial corpus of ₹ 20 Lacs for the William Webster Merit-Cum-Means Scholarship to be provided to

eligible students from the income earned by way of interest from the corpus. Selected students will get a tuition fee waiver for the year up to a maximum of one semester tuition Fee. All scholarship amounts will be adjusted against the tuition fees of the year in which approved.

E. **Toppers of Jaypee Schools** : The student toppers of the schools run under the aegis of JAI PRAKASH SEWA SANSTAN are given scholarship to purse engineering education programmes at University.

Details of number of financial aid, scholarships / freeships given to the students by the university in the last four years are as follows

Description	Period	No. of Students	Amount (₹ in lacs)
Jaypee India Scholarship	2011 to 2012	5	5.75
	2012 to 2013	2	0.8
	2013 to 2014	0	0
	2014 to 2015	0	0
William Webster Scholarship	2011 to 2012	1	0.35
	2012 to 2013	1	0.35
	2013 to 2014	1	0.4
	2014 to 2015	0	0
Jaypee Employees Ward	2011 to 2012	7	7.46
	2012 to 2013	5	6.81
	2013 to 2014	13	10.37
	2014 to 2015	19	23.54
Toppers of Jaypee Schools	2011 to 2012	3	5.25
	2012 to 2013	3	5.7
	2013 to 2014	4	7.8
	2014 to 2015	5	10.5
Fellowship to M.Tech students	2011 to 2012	65	26
	2012 to 2013	39	14.3
	2013 to 2014	28	9.4
	2014 to 2015	24	8
Teaching Assistance ship to research scholars	2011 to 2012	35	33.6
	2012 to 2013	45	43.2
	2013 to 2014	53	57.24
	2014 to 2015	54	58.32

5.1.7 What percentages of students receive financial assistance from state government, central government and other national agencies?

There are lots of students who belong to the non creamy layer of the society or who are from economically weaker sections of the society. University facilitates financial assistance to these students, which is received from the Scheduled caste / Scheduled tribe, OBC & Minority Development Corp. of Govt. of Madhya Pradesh and national agencies.

Details of number of financial assistance received from SC/ST, OBC & Minorities Dept. of Govt. of Madhya Pradesh in the last four academic years:

S.No	Academic year	Total Number	Total amount (₹ Lacs)
1	2011-12	96	₹ 12.26230
2	2012-13	129	₹ 17.96865
3	2013-14	152	₹ 23.16475
4	2014-15	140	₹ 29.80812

Year wise Percentage of students receiving financial assistance

S.No	Academic year	Scholarship %
1	2011-12	4.76%
2	2012-13	5.74%
3	2013-14	6.13%
4	2014-15	5.43%

5.1.8 Does the university have an International Student Cell to attract foreign students and cater to their needs?

University has been established just 5years back, so far there have not been any admissions from abroad , however university provide all support to students going abroad for higher studies. No separate International Student Cell has been created.

5.1.9 Does the university provide assistance to students for obtaining educational loans from banks and other financial institutions?

The University facilitates the students for obtaining educational loans from bank. To ease the process, kiosks of various banks are set up at the time of admission. University has also tied up with various banks to process the loan applications of the students admitted to the University. To help the students and simplify the process of loan applications, University also provides all certificates/documents required, as per the banks requirements and customized requests of student.

Year wise details of number of education loans financed through various bank

S. No.	Academic Year	Educational loans financed through banks(Nos)
1	2012-13	1
2	2013-14	2
3	2014-15	1
4	2015-16	1

5.1.10 What types of support services are available to;

A.   To overseas students :

So far we do not have students coming from abroad , however university provide all support to students going abroad for higher studies. The issues pertaining to foreign students are directly handled by the Registrar assisted by one more member from the academic section.

B. Physically challenged / differently-abled students

There is no reservation for students belonging to differently-abled category or physically challenged students. However, their requirements and needs are given a special care and attention. The University ensures that infrastructure facilities meet the requirement of the students with physical disabilities. For differently-abled students, it is ensured that they don't have any physical obstruction. The University is committed to accommodate them on the ground-floor for their classes. They are provided front-seating arrangement, comfortable furniture and attendant facility (depending upon necessity). The library facility is provided to them in the ground floor by some of the departments. The need of the help from the supporting staff, if required, is fulfilled on the request of physically challenged students. The students are given extra attention during the University examinations.

C. SC/ST, OBC and economically weaker sections

The students who belong to SC/ST, OBC and the economic weaker sections are identified during the process of the admission only. The University maintains a detailed record of the same. These students are provided every possible help during their stay in the University. This besides the Central Govt., the State Govt., and the University sponsored scholarships and concessions are also given to such students.Since the inception of university in 2010 a dedicated SC/ST Cell has been formulated which cater to the specific needs of students belonging to the community , Later on in 2015-15 as per the directive the nomenclature of the cell has been changed to Equal Opportunity Cell , wherein students can register problems / complaints. Problems if any are dealt with individually

<u>**Equal Opportunity Cell**</u>

Prof. S.K. Agrawal	: Chairman
Shri Deepak Sharma	: Member
Shri.Ajay Kumar	: Member
Shri.Krishna Murari	: Member
Shri.K.L.Dhaker	: Member
Dr.Sudeep Kumar De	: Member
Secretary	: Mr. Neeraj Jain

D. Students participating in various competitions/conferences in India and abroad

Faculty mentorship in form of coaching for soft skills and technical expertise along with some financial assistance for travelling is being provided to the students to participate in various competitions/ national & International events. In deserving cases, appropriate measures for relaxation in attendance are taken care off.

E. Health centre, health insurance etc.

The University has a very special concern for the health and hygiene of the students, staff and other members. A dedicated six bedded medical center having full time Medical Officer is available within the campus and is assisted by a nurse and a compounder to provide initial treatment for minor ailments and also offer medical advice. A dedicated ambulance is available round the clock. Proper arrangement of drinking water is present in the University campus at different locations (R.O. purified drinking water). Lots of proactive efforts have been made to provide healthy environment i.e. lush green campus, rain water harvesting, spray of insecticides on regular basis etc.

Each student is insured for ₹ 2.0 Lacs under accidental Insurance policy issued by The New India Assurance Co. Ltd. for which the premium is paid by the University, annually.

F. Skill development (spoken English, computer literacy, etc.)

University has set up with the intention of producing well-rounded engineers, not only having good technological skills but also with the ability to interact with different organs of an organization , the department of Humanities & Social Sciences serves as a center for the dissemination of professional and behavioral knowledge pertaining to Communication skills, Interpersonal skills and Managerial skills among students. Enrichment courses like personality development programmes are also conducted to improve students' personality and motivate them for an innovative and creative mindset for boosting computer literacy among students, a fundamental core course on Introduction to Computers and Programming is being imparted to students across all branches in the first semester. To augment the learning, Computer Science department students are given hands on training on multimedia development, Unix programming language. On the similar pattern other engineering branches are providing learning facilities on CAD/CAM programming language and simulation tools.

University also facilitates Campus Recruitment Training (CRT) to all the students during end of sixth semester. Resume Writing, Group Discussions, Mock Interviews are conducted to improve the personality development of the interns. Mock online test Software has been developed by department of CSE to facilitate mock online test for students to prepare them for various test patterns of companies and regular test being conducted during the start of 7th semester. Aptitude classes being conducted at the end of 6th semester or at the start of 7th semester by a freelancer trainer to prepare students for campus recruitments test by various companies.

For technical skill development of students, five student's technical societies are operational. Many events for skill development of students are being organized by theses societies. Theses event help students in achieving technical certifications. List of student societies operational are as –

a. Computer Society of India - Student Branch
b. Institution of Electronics and Telecommunication Engineers (IETE) students' forum.
c. Student section of American Society of Mechanical Engineers (ASME)
d. Jaypee Chemical Engineering Students Society (JCESS)
e. Student Chapter of Indian Concrete Institute (ICI)

G. Performance enhancement for slow learners

The students who are slow in their learning or if their grasping power is not up to the mark, the faculty members identify such students at the beginning of the session. For them the University conducts remedial classes in different subjects to enhance their skills and competence. There is a provision for final year students who could not clear maximum of 2 courses are allowed to register for summer course wherein regular classes are conducted and the examinations are conducted in the end.

H. Exposure of students to other institutions of higher learning/ corporate/business houses, etc.

Faculty mentorship in form of coaching for soft skills and technical expertise along with some financial assistance is being provided to the students to participate in various competitions/ events. All departments support and encourage students to prepare and appear for professional certification courses, faculty members identifies desiring students and facilitates them with best possible guidance to acquire certification.

The University is facilitating to conduct an MBA Entrance Examinations Coaching Program for the final year & 3rd year students who are appearing in IIMs and other reputed Business Schools. The programme is being conducted in collaboration with M/s Career Launcher India Ltd.

Engineering departments conducts seminars and workshops on career oriented courses for the benefit of graduates/postgraduate students of the University and the public. Departments also provide hands on coaching to students for preparing in GATE and other competitive examinations.

I. Publication of student magazines

The literary wing of University youth club (JUET youth club) publishes the annual University magazine '**Vartika**'. The students of the university very enthusiastically contribute with their expositions in the magazine. The University magazine is printed in the supervision of the editorial board. All the sections of the magazine are having their staff editors as well as the students' editors. The staff is always there to help the students chisel their artistic and creative skills. A University e-newspaper '**Observer**' encompassing all the major activities of the University online by literary wing of University JUET youth club, on quarterly basis. The literary wing of JUET youth club publishes its annual alumni brochure **'Atisarga',** which contains the complete details of the information of alumni.

5.1.11 Does the university provides guidance and/or conduct coaching classes for students appearing for Civil Services, Defence Services, NET/SET and any other competitive examinations? If yes, what is the outcome?

The University is facilitating to conduct an MBA Entrance Examinations Coaching Programme for the final year & 3rd year students who are appearing in IIMs and other reputed Business Schools. The programme is being conducted in collaboration with M/s Career Launcher India Ltd.

Career Information talk: This is a periodic feature, in which experts in various career fields are invited to address the students. These sessions deal with aptitudes, job requirements, selection procedure, preparation required, and other pertinent information. The sessions always conclude with an interactive session in which the expert(s) field questions from the participants.

Engineering departments conducts seminars and workshops on career oriented courses for the benefit of graduates/postgraduate students of the University and the public. Departments also provide hands on coaching to students for preparing in GATE and other competitive examinations.

Aptitude training: Aptitude training is regularly conducted at the end of 6th semester to enhance the employability of students. Mock drills for campus recruitment preparation are conducted regularly for final & pre-final year students.

5.1.12 Mention the policies of the university for enhancing student participation in sports and extracurricular activities through strategies / schemes such as
- **additional academic support and academic flexibility in examinations**
- **special dietary requirements, sports uniform and materials , any other (please specify)**

JUET Youth Club (JYC) - a student body under faculty mentorships extends all help in promotion of participation in various extracurricular activities.

The JUET Youth club (JYC)**,** amongst students and faculty members, was formed since inception. JYC it is responsible for organizing various literary, cultural, sports and technical events every year. JYC endeavors its members in gainfully utilizing their time and energy beyond the normal academic activities, which help them to inculcate the moral values and feeling of social responsibility in them. Since its inception, JUET Youth club is truly succeeded in achieving its goal by providing the students a platform for exercising their interests and managerial skills. Every year the basket of variety of events involves and entertains the entire student community and provides them the opportunity for planning and execution of events outside the class room. This gives students real life exposure and experience. Activities are carefully planned to provide a stimulating environment for nurturing of excellence, self-confidence and personality and inspiring team based goal achievement. It is totally run by students under the guidance of faculty co-ordinators.

JUET Youth Club, being the active body behind conduct of this festival involves student's participation to the farthest extent, creating a charged up effervescent zeal and enthusiasm. The platform provided by JYC through its absolute support from the back-end gives a thrust to the talent of the future engineers to come up and express themselves. The onus of spreading a wave of turmoil is beard by the students.

The JYC is divided into five sub-clubs or wings. Each wing is responsible for organizing and managing their events.

i. The Literary Wing: The Literary Wing organizes and manages all the literary activities like English plays, debate, youth concord, GK quizzes etc. and gives a platform to students to express their literary talents. The Literary Wing also publishes university magazine (Vartika) and the alumni brochure (Atisarga) on an annual basis. This Wing also takes care of University e-newspaper 'Observer.'

ii. The Cultural Wing: The Cultural Wing provides an aggrandized platform to members to polish their hobbies of music, dance and dramatics. The Cultural Wing perennially organizes mega events like Fresher's night, Cultural fest and musical nights etc.

iii. The Sports Wing: The Sports Wing ensures that all the hunger for action is replenished. The Sports Wing is responsible for organizing intra and inter university sports tournaments. JUET Guna has been a host university for organizing Inter University sports meets of all the Universities of Jaypee Education System.

iv. The Arts & Events Management Wing : The Arts and Events Management Wing see to it that the artists of JUET are given a great platform to improve and polish their skills. Besides organizing the events on fine arts the Wing has always been on the forefront of managing all the major events of JYC.

v. The Media Wing: The Media Wing captures all the activities and events organized in aegis of JYC. Media Wing maintains an official social networking site like FACEBOOK page and portrays the major youth events on YOUTUBE on regular basis.

While preparing University academic calendar it is ensured that the sumptuous time is given for enhancing student participation in sports and extracurricular activities.

Annapurna mess provides hygienic & nutritious diet to all students round the year. Flexible mess timings are offered during the conduct of extracurricular activities. Energy drinks & refreshments are being served to the participants in sports activities.

5.1.13 Does the university have an institutionalized mechanism for students' placement? What are the services provided to help students identify job opportunities, prepare themselves for interview, and develop entrepreneurship skills?

YES.

University has a dedicated Training & Placement (T&P) cell under the overall co-ordination of a Training & Placement Officer. Every engineering branch of the University has nominated a faculty as well as a team of student co-coordinator, which renders efficacious training & placement service to the students. The placement cell extends its service to the students in career guidance, organizes lectures concerning career planning and invites companies for campus recruitment. The following services are provided in the career guidance and placement service:

A. Information of job opportunities:

The students are informed regarding the vacancies offered by Corporate and other agencies. The notice of the advertisement is put up on the official facebook page, email

and notice board available at placement cell as well at every department and updated information is also available on University website. The students are informed regarding important information related to vacancies.

B. Discussion of Exam Module:

The T&P organizes lectures on career opportunities. A thorough discussion takes place on the exam module. The students are informed regarding the syllabus, the pattern and the ways of attempting the paper. Mock tests are held to facilitate them in this pursuit. Their performance is analyzed after every test and then a brain storming session is organized to assess their strengths and weaknesses.

C. Follow up:

The placement cell keeps track of the post examination developments. As and when the result is declared, the cell informs the students regarding the result. The results are analyzed and then the next process of helping the successful candidates starts.

D. Mock recruitment drills:

The T&P cell organizes sessions of mock online tests, GDs and interviews on regular basis. The drilling exercise takes place till the candidate is totally confident regarding his/ her performance for the final interview.

E. Develop entrepreneurship skills

In order to facilitate entrepreneurial skills, such as critical and creative thinking as well as practical skills, The department of Computer Science & Engineering believes in the philosophy that to become an entrepreneur, one needs practicing it. Teaching entrepreneurship along with the regular courses is a culture prevalent in the department of CSE. We believe that the projects, preferably real-life, are an excellent avenue to inculcate entrepreneurship skills among our students. Risk assessment, strategic thinking, self-confidence, the ability to make the best of personal networks, motivating others to achieve a common goal, and the ability to deal with other challenges and requirements is the skill set indispensable for an individual to start or enter into a new venture. These skills can be developed by encouraging students to develop projects as a team work. The department of CSE offers regular courses as a part of B.Tech program where project development is mandatory. Often, such courses exercise more weightage in terms of credits as compared to other courses. This works as a motivation to the students. We provide a continuous stress on the three 'C's on our students during the projects. The three 'C's are:

i. **Competence:** Specific software related skills and the underlying process of the project that the team of students has chosen should be taught to all the team members.

ii. **Common Focus:** We acknowledge that all the students in a team may not possess similar degree of skills or they may have a variety of skills, as a result, each will perform a different task. But, we encourage them to have a common

focus on timely delivery of their project updates. The department of CSE routinely evaluates the progress of the concerned projects in a semester through a well established pattern.

iii. **Collaboration:** Entrepreneurship is about assessing, analyzing and processing information given in an efficient and effective way. It is also about creating and building information in a way that it may also be helpful to others. To achieve this, collaboration is the key. This department believes that the collaboration is not limited to communication; as a result, we emphasize individualism as creative ideas sometimes extricate from plight.

During these projects, we ensure that the students are given full autonomy to control their own destiny; however, necessary monitoring and guidance is not subjugated at any stage.

Apart from curriculum the department takes keen interest in organizing regular workshops and seminars. These seminars are conducted on various current/hot technologies by experts of various realms of Computer Science and Engineering. The main mode of conducting these seminars is brain storming lectures as well as hands-on training sessions. Additionally, to encourage inclination towards novel research at par with industrial level, the department is in a continuous process of purchasing and using various hardware and simulation software. Students, especially research scholars are encouraged to attend conferences and workshops so as to interact with eminent personalities. These interactions have helped the students to develop interpersonal skills such as effective communication and active listening.

The Mechanical Engineering Department has been offering an elective on "Additive Manufacturing (AM)" since AY 2012-13. This is a course on product development is offered in the final year of B.Tech. program. The department has a well established AM lab with two state-of-the-art AM machines namely Eosint P395 laser sintering machine and Z-Printer 450 3D printing machine. The department has also introduced some other courses (i.e., Computer Integrated Manufacturing, Advanced Manufacturing Processes, Thermal Power Plant Engineering etc) to impart knowledge in concerned area for conceptual designing, simulation and rapid product development. Operators Trainee Simulator (OTS) is used to make students familiar with real Power plant Processes. This is 660 MW generic super critical power plant simulators.

The Mechanical Engineering Department encourages entrepreneurship and the programs are designed keeping that in mind. A product needs to be developed during incubation. Several design iterations are required in the conceptual design stage to develop a product. The AM Machines allow fabrication of a physical model in a matter of hours for a design iteration. Therefore, design iteration can be done rapidly. It is thus a "Time Compression Technology (TCT)" in product development. Time to market is reduced and a product does not loose in competition. The students pass out with an excellent understanding of the process with the in- house AM machines in the department.

Industry oriented courses on construction management is being imparted by Civil Engineering Department.

A practical course on instrumentation is being conducted by Electronics and Communication Engineering Department.

Chemical Engineering Department is offering industry oriented courses like cement technology and fertilizer technology.

5.1.14 Give the number of students selected during campus interviews by different employers (list the employers and the number of companies who visited the campus during the last four years).

Campus Placement:

The placement cell of the university invites many reputed companies for campus recruitment. The students of the university are sent to off campus interviews also. The details of the placement for the last four academic years are is as under:

Course-wise placement data for last 4 years

S.No.	Content	B.Tech				Diploma				M.Tech			
		2008-12	2009-13	2010-14	2011-15	2009-12	2010-13	2011-14	2012-15	2010-12	2011-13	2012-14	2013-15
1	No. of students admitted	358	400	456	492	36	36	73	63	51	47	36	21
2	No. of students eligible and Interested for placement	344	324	377	412	31	30	68	57	25	21	19	13
3	No. of students Placed-Multi offers	375	234	336	454	31	30	60	40	4	5	5	3
4	No. of students placed-Single offer	320	201	271	288	31	30	60	40	4	5	5	3
5	No. of students opted for higher studies	12	42	53	79	2	4	5	10	15	18	12	4
6	Placement %	112.50	85.19	103.18	129.37	106.45	113.33	95.59	87.72	76.00	109.52	89.47	53.85

Year wise placement trend for B.Tech. students

Bar chart showing year wise placement trend for B.Tech. students across categories: Placement %, No. of students opted for higher studies, No. of students placed-Single offer, No. of students Placed-Multi offers, No. of students eligible and Intrested for placement, No. of students admitted. Legend: 2011-15*, 2010-14, 2009-13, 2008-12. X-axis ranges 0 to 600.
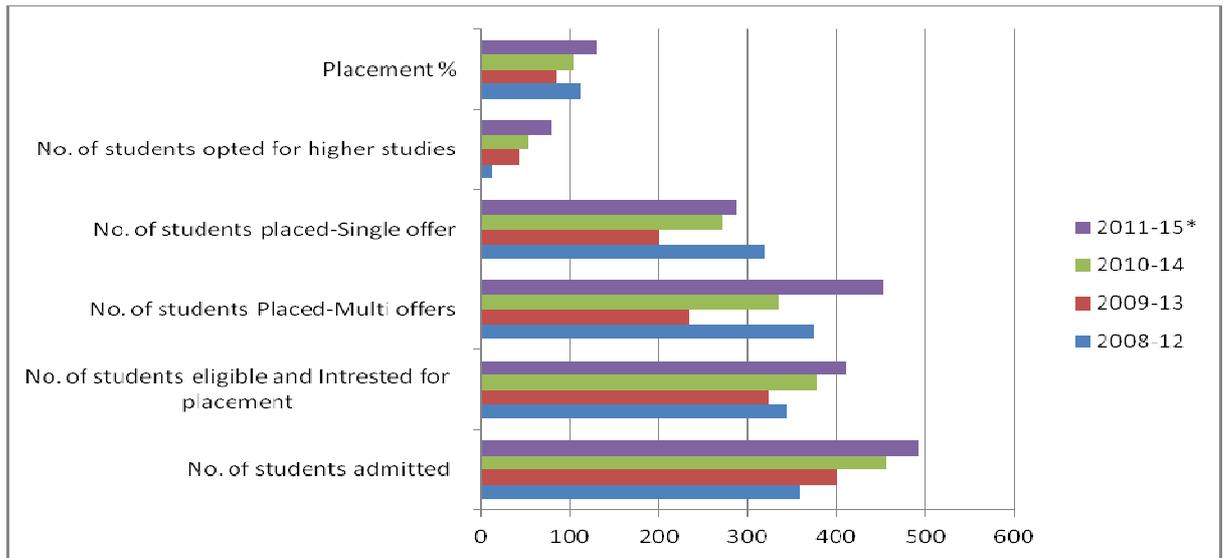
The details of visiting companies and the number of students placed are given below during the last four years.

Company wise placement data of last four years

S.No.	Company Name	2011	2012	2013	2014	2015
1	ABAS	#	#	#	#	3
2	Accenture	205	41	82	121	#
3	Aircom International (TEOCO)	#	#	#	#	1
4	Ambuja Cement	1	#	#	#	#
5	APAC Sourcing Solutions Ltd.	#	#	10	6	3
6	Apex Encon Pvt Ltd	13	#	#	#	#
7	Aricent	#	#	#	#	2
8	Asahi Glass	#	#	2	#	#
9	B&S Eng Consultants	1	#	#	#	#
10	Bestylish.Com	#	2	#	#	#
11	Birlasoft	1	#	#	#	#
12	BL Kashyap	4	#	#	#	#
13	Bosch Limited	#	#	5	4	#
14	Brigdecon Infra	#	#	6	3	4
15	Capgemini	#	#	#	6	#
16	CMC Ltd.	#	1	#	#	#
17	Code Nation	#	#	#	#	1
18	Cognizant	#	#	4	8	154
19	Continental Automotives	#	1	#	4	2
20	CSC	1	7	#	#	#
21	Dell	#	#	4	#	#
22	Dilip Buildcon Ltd.	#	#	#	5	12
23	Ernst & Young	#	1	#	1	#
24	ERA Group	4	6	5	#	3
25	Ericsson India	2	#	#	1	#
26	Family RO Purifier Limited	#	#	#	1	#
27	Grofers	#	#	#	#	1
28	HCL Technologies	15	29	8	#	2
29	IBM India Pvt. Ltd.	#	#	2	7	4
30	India Bulls Technology	#	#	#	#	1
31	Indian Air Force	#	#	#	2	#
32	Indian Army	#	#	#	#	2
33	Indian Navy	#	#	#	1	1
34	Infosys	194	238	41	88	119
35	Jaypee Cement	39	#	#	#	#
36	Jaypee fertilizer	#	#	#	25	#
37	JMC Projects (India) Ltd, (Kalpataru Group)	#	#	13	9	2
38	Jutera Labs	#	#	1	#	#
39	Kaysons Pigments (Pvt.) Ltd.	#	#	#	#	1
40	KJS Cement	#	#	5	#	#

41	Kuliza.com	#	#	1	#	#
42	L&T Construction	8	#	#	#	#
43	L&T Hydrocarbons	#	#	#	#	1
44	Lucky Group	#	#	2	#	#
45	Magic Software	#	#	#	#	1
46	Mahindra EPC Services Pvt. Ltd.	#	#	#	#	1
47	MAQ Software	#	1	#	#	#
48	Maruti	#	#	#	1	#
49	MAZ Digital	#	#	#	#	1
50	Mothersonsumi Infotech & Design Ltd.	#	1	#	#	#
51	Naukri.com	#	#	#	#	1
52	NEC Technologies	#	#	#	#	1
53	NIIT Tech	#	#	#	#	2
54	NIRMA Ltd.	#	#	#	11	23
55	NTT Data	#	#	2	4	8
56	RNB Cements	#	#	#	1	#
57	Rudra Buildwell Realty Pvt Ltd	#	#	#	#	3
58	S&P Capital IQ	#	#	#	1	#
59	Sanaroo	#	#	#	#	1
60	SAP Labs	#	#	2	#	#
61	Shree Shyam Pulp & Board	#	3	#	#	#
62	Simplex Infra	1	#	#	#	#
63	Sobha Developers	#	#	#	3	#
64	SuperTech	#	#	3	#	#
65	Syntel	#	#	15	11	2
66	TCS	#	#	12	3	#
67	Tech Mahindra	3	#	#	#	#
68	Tectura	#	#	1	#	#
69	Varroc Group	#	#	#	#	3
70	Vijay Nirman Company Pvt. Ltd.	#	#	#	6	#
71	Vinayak Shri Construction	#	#	1	#	#
72	Vinsol	#	#	#	#	1
73	VKS Pvt Ltd	#	#	4	#	#
74	WA Corp	#	#	3	#	#
75	WebKlipper	#	#	#	#	1
76	Wipro	12	40	#	2	86
77	Xlt-Jaypee	#	4	#	#	#
78	Yamaha Motor Solutions	#	#	#	1	#
	Grand Total	**504**	**375**	**234**	**336**	**454**

 # - Refers to either company not visited or 0 offers

5.1.15 Does the university have a registered Alumni Association? If yes, what are its activities and contributions to the development of the university?

YES, the JUET Alumni Association (JAA) comprises of faculty members and few distinguished alumni, maintains database of alumni. JUET Alumni Association (JAA) promotes and encourages the alumni to exchange professional knowledge through regular interaction with the alumni. Last alumni meet was held on November 06, 2015.

5.1.16 Does the university have a student grievance redressal cell? Give details of the nature of grievances reported. How were they redressed?

Grievance Redressal Cell actively interacts with the students to help them sort out their grievances. It attends to both registered and unregistered grievances of the students. The University has a grievance redressal cell headed by the Dean (A&R). It is also supported by the other faculty members.

Grievance Redressal Cell

a.	Prof. S. Arunachalam	Chairman
b.	Dr. Anuj Kumar	Member
c.	Dr. Rashmi Tyagi	Member
d.	Dr. Sunil Srivastava	Member
e.	Dr. Baliram Gupta	Member
f.	Dr. Ravi Kumar Sharma	Member
g.	Mrs. Ranu Gupta	Member

Students are also free to share their grievances with the faculty members and their respective Wardens. The necessary action is taken after issues are discussed in the concerned cell.

5.1.17 Does the university promote a gender-sensitive environment by (i) conductingGender related programmes (ii) establishing cell and mechanism to deal with issues related to sexual harassment? Give details.

The University is having Women Harassment Cell. Women Harassment Cell was constituted to take all necessary measures to ensure the safety and the dignity of the female students. University takes necessary steps if the incidents pertaining to sexual harassment require the intervention of the law. Till date no such case of sexual harassment has been reported in the University. Continuous vigilance of University authority and strict punishment provisions prevent sexual harassment of women student.

Woman Harassment Cell

Dr. (Mrs.) Rashmi Tyagi	: Chairperson
Dr. Kanchan Mala	: Member
Dr. Rachna Chaturvedi	: Member
Dr. Jitendra Kanungo	: Member
Mr. Dinesh Kumar Verma	: Member

Well secured girls hostel near the residential premises, separate messing facility, special facility for girl activities are added proactive steps being taken up by the university to promote a gender-sensitive environment.

5.1.18 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 in these cases?

The University is also very cautious regarding the menace of ragging. The University has set up an anti-ragging committee in this direction. In the beginning of first semester, an extensive campaign is carried out to sensitize the students about ragging and its consequences. Faculty & staff members are put on special duty to monitor students to prevent ragging in any form. Anti Ragging Flying squad of the University is assigned to check the students, make surprise visits in the academic areas and hostels. Details of wardens including their mobile numbers are displayed on all notice boards for reporting any untoward incidents. Besides above an undertaking of not involving in any ragging activity is being taken from every student, at the time of registration.

ANTI RAGGING

Prof. S. Arunachalam : Chairman
Prof. P.K. Singh : Member
Prof. S.K. Agarwal : Member
Mrs. Shefali Sharma : Member

ANTI RAGGING FLYING SQUAD

Brig. O.P. Gurung (Retd.) : Chairman
Shri V.C. Pandey : Member
Dr. Sudeep Sharma : Member
Shri K.P. Mishra : Member
Shri Santosh Kumar Pandey : Member

Till date, no incident of ragging of any kind has been reported in the university. (Police reporting)

5.1.19 How does the university elicit the cooperation of all its stakeholders to ensure the overall development of its students?

The University through its overall dynamic and transparent approach towards holistic education ensures that all the stake holders are informed about the various activities occurring in the University. This is done through an instituted policy of communication that is looked after by the University administration. University receives feedback from students, faculty members / supporting staff, industries / employers, external academic experts and regulatory bodies and makes improvements in the teaching and learning system to ensure the overall development of its students. Feedback is obtained from students on courses offered, courses desired and on modifications of curriculum. Students share decision-making powers by being members and conveners of several organizing committees. They carry suggestions to decision-making bodies regarding academic and administrative needs. Every Departmental Board of Studies has a member from a relevant industry that ensures that the curriculum meets requirements of industry. Another member is from a reputed educational institution to ensure that the curriculum is on par with premier educational institution. The local community helps University by providing support services during construction and maintenance works. Periodical meetings with the officials of regulatory bodies and directions/ guidelines received from regulatory bodies helps in improving the teaching and learning system of

University. Industry is another stakeholder. Their evaluation of student performance during industrial training and their suggestions to University to offer courses which meet their needs are taken seriously and acted upon.

5.1.20 How does the university ensure the participation of women students in intra- and inter-institutional sports competitions and cultural activities? Provide details of sports and cultural activities where such efforts were made.

The University ensures the participation of girl students in intra- and inter-institutional sports competitions and cultural activities in the following manner:-

i. The events organized by the University students' body, JUET Youth Club, are planned keeping in mind the effective participation of both the male and female students. The student body comprises of uniform number of office bearers from both the genders, which in turn is effective in ensuring and encouraging participation of female students.

ii. The cultural events organized within the University are co-ed in nature like Dramatics, Singing, Dancing, and Ramp-Walk. Among these events, some of them have separate judging criteria for the males and females.

iii. There are proper bulletin boards in each and every hostel, including the girl's hostels and in the academic blocks, on which proper notices regarding the upcoming events, are put-up.

iv. There exist teams for sports as well as cultural activities comprising of both male and female students, which regularly participate in inter-university events and college fests.

v. The University has a dedicated team constituted by female students for sports like Basketball, Table-Tennis, Badminton, Volleyball, etc. These teams have participated in several inter-university sports fests and brought laurels for the university. The intra-university sports events are organized for both the males and females at regular intervals. All the sports leagues have matches for both male and female students separately.

vi. The participation ratio of male: female student in JYC activities is roughly 3:2 or 60:40.

vii. Females are encouraged to be member of student's clubs functioning in the University.

5.2   Student Progression

5.2.1   What is the student strength of the university for the current academic year? Analyze the Programme-wise data and provide the trends for the last four years.

Trend of student strength at University in various programmes over last 4 Years is given below.

Year & Category Wise Student's Strength
JAYPEE UNIVERSITY OF ENGINEERING & TECHNOLOGY, GUNA

Category & course wise students details as on 20.11.2015

Sr. No.	Name of Course	Category	Year 2012-2013			Year 2013-2014			Year 2014-2015			Year 2015-2016		
			M	F	Total	M	F	Total	M	F	Total	M	F	Total
1	B. Tech	SC	6	3	**9**	9	3	**12**	17	3	**20**	11	2	**13**
		ST	0	0	**0**	0	0	**0**	0	0	**0**	1	0	**1**
		OBC	80	15	**95**	63	6	**69**	106	13	**119**	61	5	**66**
		Gen	403	99	**502**	302	72	**374**	303	66	**369**	315	60	**375**
2	M. Tech	SC	0	1	**1**	0	0	**0**	0	0	**0**	0	1	**1**
		ST	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
		OBC	4	0	**4**	7	0	**7**	3	1	**4**	3	1	**4**
		Gen	14	17	**31**	5	9	**14**	13	8	**21**	0	7	**7**
3	Diploma	SC	1	1	**2**	4	0	**4**	1	0	**1**	#	#	**#**
		ST	0	0	**0**	0	0	**0**	0	0	**0**	#	#	**#**
		OBC	25	1	**26**	35	0	**35**	20	0	**20**	#	#	**#**
		Gen	34	3	**37**	29	0	**29**	15	1	**16**	#	#	**#**
	BSc	SC	0	0	**0**	#	#	**#**	#	#	**#**	#	#	**#**
		ST	0	0	**0**	#	#	**#**	#	#	**#**	#	#	**#**
		OBC	0	0	**0**	#	#	**#**	#	#	**#**	#	#	**#**
		Gen	1	4	**5**	#	#	**#**	#	#	**#**	#	#	**#**
4	Ph.D	SC	1	0	**1**	0	0	**0**	0	0	**0**	1	0	**1**
		ST	0	0	**0**	0	0	**0**	0	0	**0**	0	0	**0**
		OBC	3	0	**3**	2	0	**2**	1	1	**2**	3	0	**3**
		Gen	3	1	**4**	7	6	**13**	11	5	**16**	4	5	**9**
		Total	**575**	**145**	**720**	**463**	**96**	**559**	**490**	**98**	**588**	**399**	**81**	**480**

Trends for the last four years
Year & gender wise – Number of students
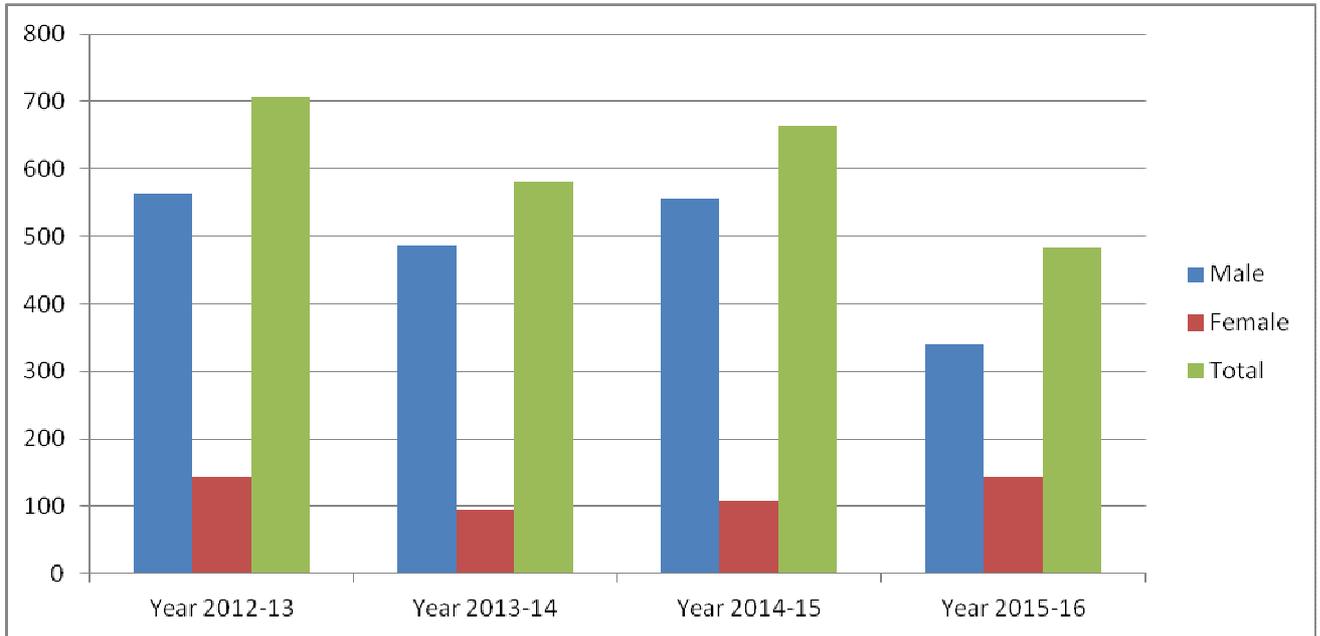
Year & State-wise Distribution of Students
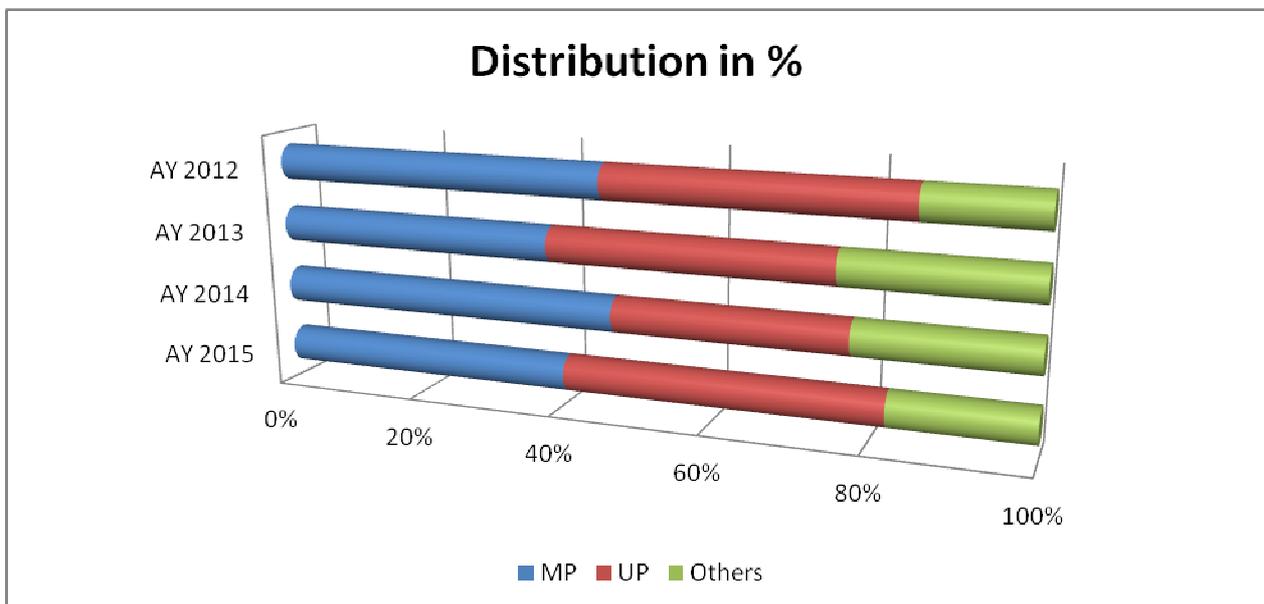
Year & category wise student distribution

Legend:
- Year 2015-16
- Year 2014-15
- Year 2013-14
- Year 2012-13
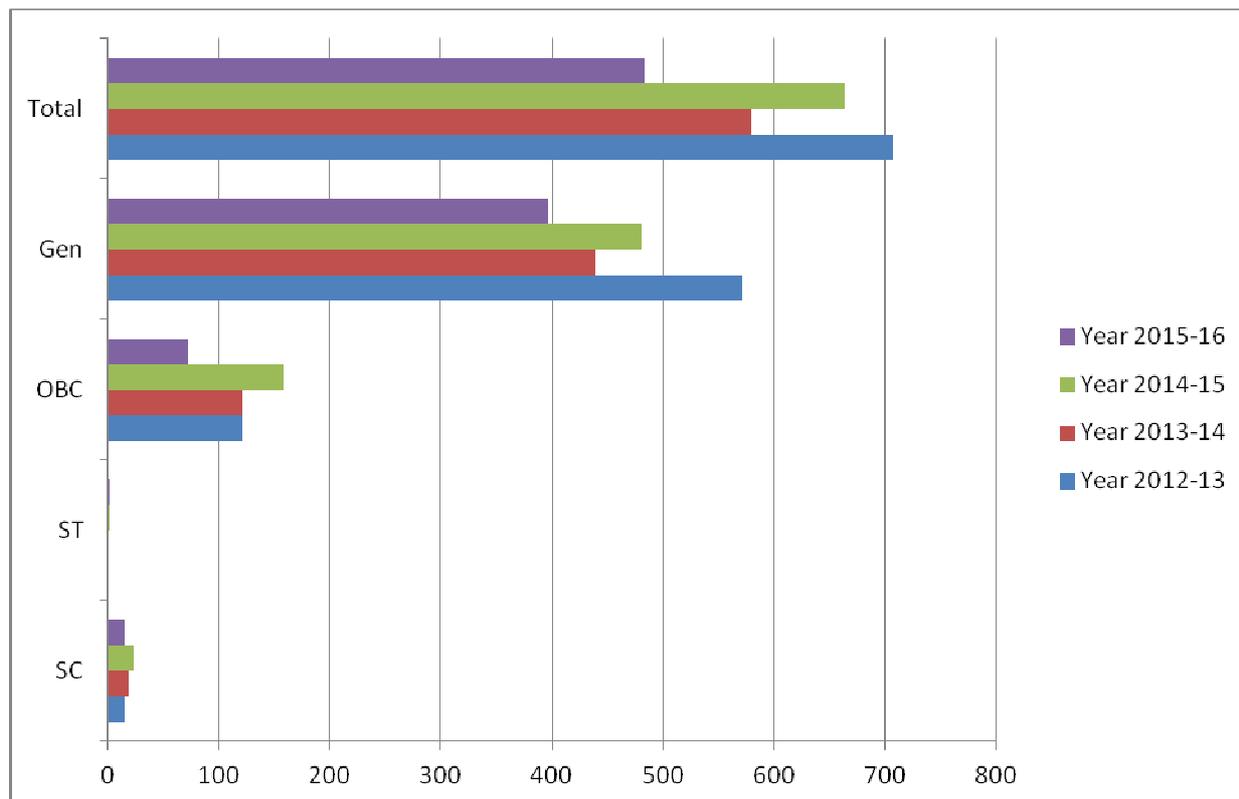
5.2.2 Providing the percentage of students progressing to higher education or employment (for the last four batches) highlights the trends observed.

The University does not have a systematic data on the progression of students after graduating from the University like proceeding for higher studies or joining the companies after placements, etc. However, the details of alumni available with the University indicate following trends:

Students progressing to higher education or employment

Student progression	Percentage
UG to PG	~ 10%
PG to M.Phil.	NA
PG to Ph.D.	NA
Ph.D. to post-doctoral	NA
Employed	
Campus Selection	~ 90%
Other than campus recruitment	~ 5 %
Entrepreneurs	~ 1%

5.2.3 What is the programme-wise completion rate during the time span stipulated by the University?

Upto 95% students complete their degree requirements within the specified duration stipulated in the academic rules and regulations for B. Tech programme. The balance students have to extend the period of studies by 1-2 semesters to complete the degree requirements. The dropout rate after joining the programme ranges from 5-6% for undergraduate, 7-8% for PG & about 20% for the Ph.D. programmes. The University however, provides all opportunities including additional classes, counseling, etc. to ensure that the dropout rate is minimized.

Programme & year wise completion / dropout rate

B.TECH

Branch	2009-2013			2010-2014			2011-2015		
	Pass Out	Drop Out	% Of Drop Out	Pass Out	Drop Out	% Of Drop Out	Pass Out	Drop Out	% Of Drop Out
ECE	128	14		131	7		121	6	
CSE	94	4		114	5		107	6	
CHE	47		**4.6**	51		**3.5**	62	4	**5.2**
CE	62			59	3		83	6	
MEC	62			77			88	2	
TOTAL	393	18		432	15		461	24	

Dropouts at the end of 1st Year (B.Tech)
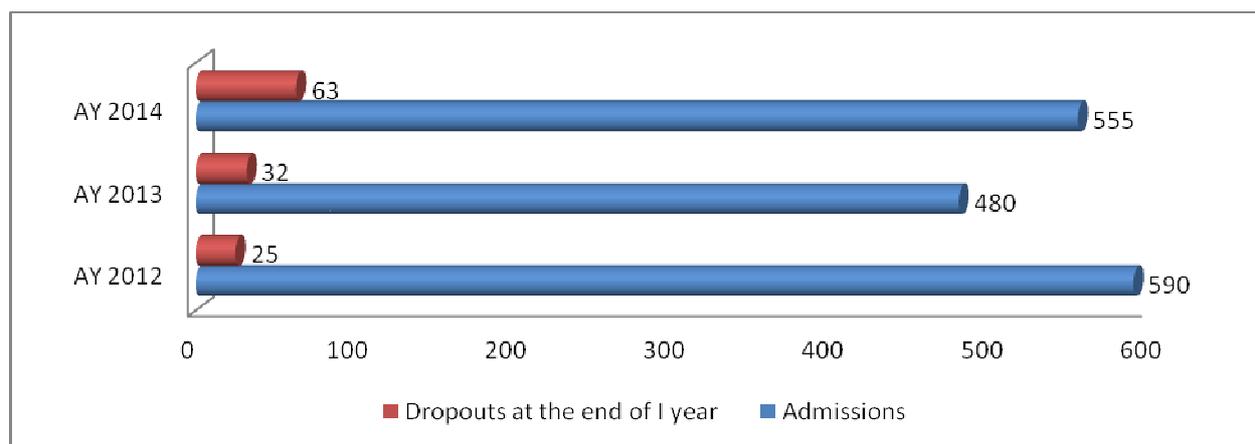
Dropouts at the end of 1st Year (B.Tech)
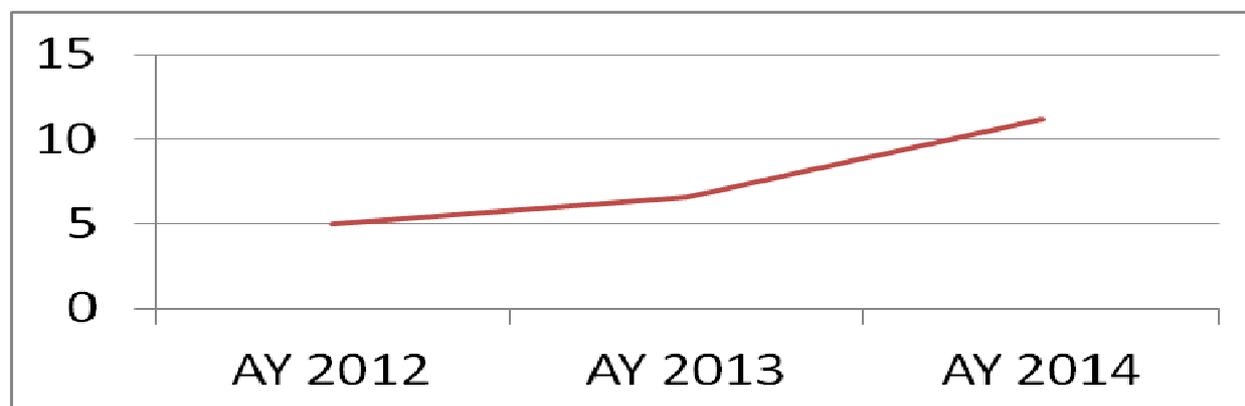
Programme & year wise completion / dropout rate

M.TECH

Branch	2011-2013			2012-2014			2013-2015		
	Pass Out	Drop Out	% Of Drop Out	Pass Out	Drop Out	% Of Drop Out	Pass Out	Drop Out	% Of Drop Out
ECE	19	1		9	2		4	1	
CSE	15			15			13	1	
CHE	0		2.4	7		5.1	2	1	14.3
ENV	2			1			1		
MT	5			7			2		
TOTAL	41	1		39	2		21	3	

Department wise completion rate –CSE Dept.

Name of the Program (refer to question no. 4)	Applications received *	Selected		Pass percentage	
		Male	Female	Male	Female
B.Tech.					
2006-2010	#	103	14	100(97.08)	14(100)
2007-2011	22229	134	20	124(92.53)	20(100)
2008-2012	32017	123	20	119(96.74)	20(100)
2009-2013	31210	72	29	65(90.28)	29(100)
2010-2014	26150	84	41	73(86.9)	41(100)
2011-2015		72	40		40(100)
M.Tech.					
2010-2012	29	15	10	15(100)	10(100)
2011-2013	15	10	15	10(100)	5(100)
2012-2014	16	7	9	7(100)	8(88.89)
2013-2015	14	8	6	8(100)	5(83.33)
Ph. D.					
Up to 2015	44	19	5	No. awarded:	9(9M,0F)
				No. Continuing:	15(10M, 5F)
				No. Discontinued:	Nil

Department wise completion rate –ECE Dept.

Name of the Programme	Applications received	Selected		Pass percentage	
		Male	Female	Male	Female
B. Tech					
2010	186	107	29	#	#
2011	183	95	34	99.35	#
2012	203	135	48	100	#
2013	100	61	24	97.67	#

2014	52	36	12	97.79	#
M. Tech					
2010	17	10	4	100	100
2011	21	13	6	100	100
2012	11	4	5	100	100
2013	05	2	2	#	#
2014	07	2	4	#	#
Ph.D.					
2010	05	3	1	#	#
2011	03	2	1	#	#
2012	06	2	1	#	#
2013	03	2	1	#	#
2014	04	04	#	#	#

Department wise completion rate - CE Dept.

Name of the Program (refer to question no. 4)	Applications received *	Selected		Pass percentage	
		Male	Female	Male	Female
B.Tech.					
2006-2010	#	25	02	25(100)	02(100)
2007-2011	22229	35	00	35(100)	-
2008-2012	32017	26	01	26(100)	01(100)
2009-2013	31210	63	01	61(96.8)	01(100)
2010-2014	26150	62	04	55(88.7)	04(100)
2011-2015	#	86	01	84(97.67)	01(100)
M.Tech.					
2010-2012	#	03	0	3(100)	#
2011-2013	#	02	0	2(100)	#
2012-2014	#	01	0	1(100)	#
2013-2015	#	#	#	#	#
Diploma					
2013-2016	30	25	0	Yet to pass	Yet to pass
2014-2017	30	17	0	Yet to pass	Yet to pass
Ph. D.					
Up to 2015	10	03	01	Nos. awarded:	2(1M,1F)
				Nos. Continuing:	2(2M, 0F)
				Nos. Discontinued:	Nil

Department wise completion rate - MEC Dept.

Diploma					
Batch	**Applicants called**	**Selected**		**Pass percentage**	
		Male	Female	Male	Female
2011-14	125	32	5	91.89	100
2012-15	176	28	4	100	100
2013-16	113	42	0	#	#
2014-17	29	21	1	#	#
B. Tech					
Batch	**Applicants called**	**Selected**		**Pass percentage**	
		Male	Female	Male	Female
2008-12		28	0	100	NA
2009-13		61	1	100	100
2010-14	1803	86	0	96.51	NA
2011-15	2007	92	2	96.81	100
2012-16	2157	97	5	#	#
2013-17	1880	99	1	#	#
2014-18	1650	144	1	#	#
2015-19	2062	92	0	#	#
M. Tech					
Batch	**Applicants called**	**Selected**		**Pass percentage**	
		Male	Female	Male	Female
2010-12	9	6	1	100	100
2011-13	6	5	0	100	NA
2012-14	7	6	1	100	100
2013-15	2	1	1	100	100
2014-16	9	6	1	#	#
2015-17	6	0	0	#	#
Ph. D.					
Batch	**Applicants called**	**Selected**		**Pass percentage**	
		Male	Female	Male	Female
2008	1	1	0	100	#
2009	0	0	0	#	#
2010	2	1	0	100	#
2011	1	1	0	#	#

2012	0	0	0	#	#
2013	0	0	0	#	#
2014	10	2	0	#	#
2015	10	3	1	#	#

Department wise completion rate – CHE Dept.

Name of the Program (refer to question no. 4)	Applications received *	Selected		Pass percentage	
		Male	Female	Male	Female
B.Tech.					
2006-2010	#	21	8	21(100)	8(100)
2007-2011	22229	33	1	33(100)	1(100)
2008-2012	32017	16	13	16(100)	13(100)
2009-2013	31210	35	13	34(97.14)	13(100)
2010-2014	26150	44	10	41(93.18)	10(100)
2011-2015	#	55	07	55 (100)	7(100)
M.Tech.					
2010-2012	5	3	2	3(100)	2(100)
2011-2013	4	4	0	4 (100)	#
2012-2014	4	1	3	1(100)	3(100)
2013-2015	5	1	1	1(100)	1(100)
Diploma					
2007- 2010	#	7	0	7(100)	#
2008-2011	#	31	0	31(100)	#
2009-2012	#	30	1	30(100)	1(100)
2010-2013	#	33	3	33(100)	3(100)
2011-2014	#	35	1	33(94.28)	1(100)
2012-2015	#	31	1	29(93.54)	1(100)
Ph. D.					
Up to 2015	#	4	1	Nos. awarded:	2(2M, 0F)
				Nos. Continuing:	3(2M, 1F)
				Nos. Discontinued:	Nil

5.2.4 **What is the number and percentage of students who appeared/ qualified in examinations like UGC-CSIR-NET, UGC-NET, SLET, ATE / CAT / GRE / TOFEL / GMAT / Central / State services, Defense, Civil Services, etc.?**

Number and percentage of students who appeared/ qualified in examinations

COMPETITION	ACADEMIC YEAR				
	2010-11	2011-12	2012-13	2013-14	2014-15
NET	#	#	#	#	#
SLET	#	#	#	#	#
GATE	#	8	14	16	43
CAT	#	#	3	2	1
TOEFL	#	2	3	2	3
GRE	1	3	3	2	5
G-MAT	#	1	#	#	#
Defense Entrance	#	#	#	2	4
Civil Services	#	#	#	#	#
Any Other	#	#	03 (Himachal Power Corp; SBI PO; M.Tech. in ISM Dhanbad)	#	#

5.2.5 Provide category-wise details regarding the number of Ph.D./ D.Litt./D.Sc. theses Submitted/ accepted/ resubmitted/ rejected in the last four years.

Category-wise details regarding the number of Ph.D./ D.Litt./D.Sc.

Academic Year /Ph.D. thesis	2011-12	2012-13	2013-14	2014-15
No. of Ph.D. thesis submitted	4	3	10	12
No. of Ph.D. thesis accepted	4	3	10	12
No. of Ph.D. thesis re-submitted	0	0	0	0
No. of Ph.D. thesis rejected	0	0	0	0

5.3   Student Participation and Activities

5.3.1 List the range of sports, cultural and extracurricular activities available to students.

 A. Range of JYC Wing wise activities available to students

  i. **The Cultural Wing:** The Cultural Wing provides an aggrandized platform to members to polish their hobbies of music, dance and dramatics. The Cultural Wing perennially organizes mega events like Fresher's Night, Cultural fest and musical nites. List of major events of Cultural wing are as ;

  a) El Partido Grande (Fresher's Night)

  b) Open Musical Night.

  c) Music IQ

d) Dequinox (University Cultural fest)

e) Cultural Evening

   (Udit Narayan Musical Evening on the eve of first convocation)

f) Adios (Farewell to final year students)

ii. <u>T**he Arts & Events Management Wing**</u> : The Arts and Events Management Wing see to it that the artists of JUET are given a great platform to improve and polish their skills. Besides organizing the events on fine arts the Wing has always been on the forefront of managing all the major events of JYC. List of major events of this wing are as ;

a) 'First Appearance'

b) 'Dumb Charades'

c) 'Theme Photogrphy'

d) Vartika Cover Design competition

e) Antakshari

f) 'Expressions' - A Theme Sketching Competition

iii. **The Literary Wing:** The Literary Wing organizes and manages all the literary activities, English plays and gives a platform to students to express their literary talents. The Literary Wing also publishes university magazine (Vartika) and the alumni brochure (Atisarga) on an annual basis. List of major events of this wing are as ;

a) 'Fantasia- The Comic Quiz'

b) The Sudoku Quiz,.

c) Koffee With Karan

d) JUET Crossword

e) Battle of the Brains (G.K.Quiz)

f) THE BIG FIGHT(The English Debate)

g) English Play "A Midsummer Night`s dream"

h) Youth Parliament

iv. **The Sports Wing**: The Sports Wing ensure that all the hunger for action is replenished. The Sports Wing is responsible for organizing intra and inter university sports tournaments. JUET Guna has been a host university for rganizing Inter University sports meets of all the three Jaypee Universities.

a) Inter Year Volleyball League

b) Inter Year Handball League

c) Inter Year Chess league

d) Inter Year Cricket League

e) Inter Year Basket Ball League

f) Inter Year T 20 Cricket League

g) Inter Year Table tennis league

iv. **The Media Wing:** The Media Wing captures all the activities and events organized in aegis of JYC. Media Wing maintains a official social networking site like FACEBOOK page and portrays the major youth events on YOUTUBE on regular basis.

JYC Activity Calendar

	JYC Calendar -2012-13	
S.No.	Event	Date
1	Volume V, of University magazine Vartika was released by Hon`ble Chief Minister of MP , Shri Shivraj Singh Chauhan ji on the day of Ist convocation of the University	May 04, 2012
2	Atisrga 2012 (Alumni brochure) was released by Vice-Chancellor on the eve of farewell,	May11, 2012.
3	MIC Check	August22, 2012
4	Battle of the Brains- G.K Quiz	September 13,2012
5	Filmology	September 14-17 2012
6	Dumb Charades	September 21, 2012
7	FootLoose – dance competition	September 24-25, 2012
8	Shaheed-E-Azam	September 27, 2012
9	English Play	September 29, 2012
10	English Debate competition	October 01, 2012
11	Ad Maniac	November 02, 2012
12	Cine Buzz	October 06, 2012
13	Musical Night	November 03, 2012
14	Poster Making Competition	November 07, 2012
15	Yes + Course (At of living foundation)	November 17-22, 2012
16	Do You Know Him	November 19, 2012
17	Youth Parliament	November 21, 2012
18	University Cricket league	January 01, 2013
19	University Volleyball league	January 01, 20133
20	Music IQ – Gusss , Sing & win	January 21, 2013
21	University Badminton league	February 01, 2013
22	University Table tennis league	February 01, 201301
23	University Handball league	February 01, 2013
24	Cultural fest Dequinox 2013	March08-09, 2013
25	Jaypee Inter university sports meet	March 20-23,2013
26	Made in India (Quiz)	April 17, 2013
27	Adios 2013 Farewell programme	May 04, 2013

S.No.	Event	Date
	JYC Calendar -2013-14	
1	El Partido Grande Freshers	September 28, 2013
2	Dandiya Night	November26,2013
3	Musical Night	November 09,2013
4	Release of Observer Vol.1	November 09,2013
5	Battle of the Brains-G.K Quiz	October 29, 2013
6	Comedy circus	November 15, 2013
7	Youth Parliament	November 17, 2013
8	English Play (The Twelfth Night)	November 22, 2013
9	English / Hindi Debate competition (Round I and II)	January 15- 20, 2014
10	BOX OFFICE 1.0: Rang De Basanti	October15,2013
11	Filmology	October18,2013
12	Dumb Charades (BARFI)	November 12,2013
13	FUKREY: The Mind Blowing Quiz	November 20,-13
14	Antakshari	January 23,2014
15	University Football Tournament	October 28, 2013
16	University Basketball Competition	November08, 2013
17	University Badminton Competition	November 11,2 013
18	University Table Tennis league	January 16, 2014
19	University Cricket league	January 19, 2014
20	Dequinox 2014 : University Cultural fest	February 27 - March 01 2014
21	Release of Observer Vol.2	November19,2014
20	Hindi Play `Jaane bhi do Yaaro`	April 19,2014
21	English Play `Pygmalion`	April26, 2014
22	Adios 2014 - Farewell party	May 10,2014
23	Release of University magazine Vartika - Vol. 7 e-version	May 10,2014

S.No.	Event	Date
	JYC Calendar -2014-15	
1	El Partido Grande de Fresher's 2014:	September 13, 2014
2	Box Office:	September 20, 2014
3	Filmology:	September 24, 2014
4	Opinions- The DebateChallenge(English):	September 26, 2014
5	Photography Workshop:	September 26-27, 2014
6	G.K. Quiz:	October 31, 2014
7	Dis-Pics:	October 31, 2014
8	Dumb charades:	May11, 2014
9	English Play:	August 11, 2014
10	DJ Night:	August 11, 2014

11	Designing Workshop:	November 08-09, 2014
12	Basketball Inter-year League:	November 08-09, 2014 November 10 16, 2014
13	Football Inter-year League:	November 17-22, 2014
14	Fukrey:	November 19, 2014
15	Retro Mania:	November 22, 2014
16	JUET MUN 2014:	November 23, 2014
17	Cams On U:	November 08-09, 2014
18	Badminton Inter-year League:	November 29-December 04, 2014
19	Free Lancer:	May 11,2014
20	De'quinox 2015:	February19-21, 2015
21	Opinions- The Debate Challenge (Hindi):	March 18, 2014
22	Cricket Inter-Year League:	April 12-24, 2015
23	Volley-Ball Inter-Year League:	April 18-25, 2015
24	Handball Inter-Year League:	April 15-22, 2015
25	Table-Tennis Inter-Year League:	April 24-30. 2015
26	Jaypee Youth Concord'15:	April 25-26, 2015
27	Musical Night:	September 05,2015
28	Adios 2015:	May 23, 2015

B. Range of Technical Society wise activities available to students

a.   Mechanical Engineering Society (MES)
Activities conducted on regular basis:-
   i.   Technical paper presentation

   ii. Carrus : An Automobile Quiz

   iii. Technical event "Paskal's Logic"

   iv. Automobile Workshop .

   v.   Prize and Certificate Distribution event.

   vi. Aptitude quiz organized for Ist year students

   vii. Paper presentation events

   viii. Automobile Quiz

   ix. ASME student chapter

   x.   SAE events

b.   JUET Chemical Engineering Students Society
Activities conducted on regular basis:-
   i. Ionize
   ii. COMSOL software

    c.   **List of student societies operation in Department of CSE is as under-**

    i.   CSI Student Branch

    ii.   Google Student Community

    iii.   FSA (Firefox Student Ambassadors) Club

    iv.   MSA (Microsoft Student Partners) Club

I.   CSI Student Branch

Activities conducted on regular basis:-

    i.   Series of programming contest "KodeAthon"

    ii.   Typing contest "Typolympics"

    iii.   Series of LAN gaming event "Oblivion"

    iv.   Web desiging contest, technical esay contest

    v.   Workshops on web designing

    vi.   Workshops on C programming.

II.   Google Student Community

Activities conducted on regular basis:-

    i.   Series of contest "Pictionary"

    ii.   Quiz contest "Google Maniac"

    iii.   Android workshop

    iv.   Graphics designing workshop.

III.   FSA (Firefox Student Ambassadors) Club

Activities conducted on regular basis:-

    i.   Start up camp for Mozilla Firefox

    ii.   Coding event "TRACE IT OUT"

    iii.   Workshop on web designing and advanced web development

    iv.   Online contest "TREASURE HUNT".

IV.   MSA (Microsoft Student Partners) Club

Activities conducted on regular basis:-

    i.   Microsoft Women In Tech Web Seminars

    ii.   "Rapid Fire" event on basic question on computer and windows

    iii.   Microsoft massively empowered classroom programs.

Department of CSE organized the following workshop during last 4 years:-

i. Workshop on Computer System Performance Analysis, July 05- 09, 2010.

ii. Workshop on Java Androids & Web Technology, December17- 19, 2010.

iii. Workshop on Selected Topics in Distributed System & Security, June30 – July03 2011.

iv. IUCEE Workshop 2012 on "Application Oriented Networking," July 09–13, 2012

v. Department of CSE has organized National Workshop on "Advancements in Network Communication and Security (ANCS-2013)", December 19 -21, 2013.

vi. Workshop on "Advancements in Network Communication and Security (ANCS-2013)", December 19-21, 2013.

vii. Workshop on "Intelligent Approaches for Object Oriented Modeling in Component Based Software Engineering" during the April 18-20, 2014.

viii. Workshop on "Advancements in Network Communication and Security (ANCS-2014)", December 19 -21, 2014.

ix. Workshop on Intelligent Approaches for Object Oriented Modeling in Component Based Software Engineering held during April18-20, 2014.

d. **The Institution of Electronics and Telecommunication Engineers (IETE) students' forum:-**

Activities conducted on regular basis:-

i. Technocryptic: A technical quiz contest

ii. Robotics Events

iii. Face The Open Challenge: Technical presentation

iv. Dextra: Annual Technical Fest

Department of ECE organized the following workshop during last 4 years:-

i. Workshop on " VLSI Design", by Senior ECE Dept. Faculties, July 14 - 16, 2015.

ii. Workshop on "Automobile Mechanics & IC Engine Design" during April 26-27, 2014.

iii. Workshop on "Industrial Automation (PLC/SCADA System)" on April 26-27, 2014.

iv. Workshop on "Cyber security – Ethical Hacking" on April 21, 2013.

v. Workshop on "Eye-Botics" on April 19-20, 2013.

vi. Workshop on "Android Application" on April 21-22, 2012.

vii. Workshop on the "Instrumentation and Process Control of Cement Industry" from May 25, 2011 – June 21, 2011.

viii. Workshop on "Image processing and digital Communications" during June 06 - 10, 2011.

ix. Workshop on "Multidimensional Signal Processing" November 18, 2011.

x. Workshop on "Digital Signal and Image Processing (DSIP-2010)," July 5 - 10, 2010.

5.3.2 Give details of the achievements of students in co-curricular, extracurricular and cultural activities at different levels: University / State / Zonal / National / International, etc. during the last four years.

List of student participation in University / State /Zonal / National / International level technical / co-curricular activities, during previous four years.

Name of Students	Detail of achievement
Utkarsh pandey (B.Tech student)	• Selected for Microsoft Student Partner for 2014-16
Vishabh Chauhan, Kushwant Singh Chouhan, Yamini Gupta, and Vishal Mishra (B.Tech students)	• Selected for Microsoft Student Associates 2014-16
Priyam Srivastava (B.Tech student)	• Selected for the Firefox Student Ambassadors 2014-16
Pulkit Sharma (B.Tech student)	• Selected for the Hackerearth Student Ambassador, 2014-16.
Prashant Agrawal (B.Tech student)	• Selected by GOOGLE as the Google Student Ambassador to represent Jaypee University of Engineering & Technology for academic year 2013-14.
Yash Raj Singh (B.Tech student)	• Won the student scholarship for GOPHERCON India 2014. • Ranked in Top 10 Apps developers in National event of Google Cloud Developer Challenge, December 2013. • Finalist in Google cloud developer's challenge 2013.
Prashant Agrarwal (B.Tech student)	• Selected for the Google for Education: Student Ambassador Program, 2013-14.
Keshav Goel (B.Tech student)	• Selected for Microsoft Student Partner for 2013-14
Harshit Sharma	• Selected for the Firefox Student Ambassadors 2012-14
Shivam Rana, Anmol Arora and Shivam Singh (B. Tech students)	• Cleared the 1st round in onsite event of ACM ICPC held at IIT Kanpur, during December 12-13, 2012.
AKhil Garg (B.Tech student)	• Selected for the Microsoft Student Partner Program for 2010.
Anshul Sharma	• Secured 2nd position in war of bands

(B.Tech student)	held at Maffick (Annual Cultural fest of NIT Bhopal). • Won 2nd position in Footsal event held at Dequinox 2014 (Annual Cultural fest of JUET Guna).
Bhoomik Sharma (B.Tech student)	• Received Model United Nations Awards at Amity University (Noida), 2015. • Received Model United Nations Awards at Ansal University (Gurgaon), 2015. • Received Model United Nations Awards at LNMIIT (Jaipur), 2015. • Received Model United Nations Awards at JUIT Wakhnaghat, 2014.
Rajat Garg (B.Tech student)	• Won the first prize in the event Maglev at IIT Kharagpur, 2014-15.
Siddhant Mukherji, Vikram Jangir and Shivam Chawla (B.Tech student)	• Secured first position in aero dynamic event "Impulse" in Techkriti at IIT Kanpur, Feb, 2012.
Ipsit Tarun (B.Tech student)	• Was invited by DST for delivering lecture on Nuclear Energy, 2011-12.
Pulkit Verma (B.Tech student)	• Secured first position in "Vaigyaniki" National Level Paper Presentation at IIT Bombay. March 03-04, 2012. • Awarded 1st prize for 'Ergonomic rotary Joint' in RADIANCE 2012, national level project-paper presentation at the annual technical festival of Mechanical Engineering, IIT Bombay. • Awarded 2nd prize in the event 'GREEN MEDIA' in Techkriti 2012 – Annual Technical Fest of IIT Kanpur for making a video promoting Environmental Conservation. • Awarded 2nd prize in 'Technical Paper Presentation' organized by Mechanical Engineering Society, at JUET Guna for 'Ergonomic rotary Joint' • Awarded 3rd prize in 'Tech Talks', a national level paper presentation at annual technical fest of JUET – 'DEXTRA 2012' for 'Ergonomic rotary Joint' • Awarded 1st prize in 'Paryavaran', an event at the annual technical fest of JUET – 'DEXTRA 2012' for 'To provide a non-conventional method for treatment of water" • Awarded 2nd prize in 'Blindfold Sketching' at the Annual Technical Fest of JUET 'Dextra 2011'

	• Awarded 2nd prize in 'Software roadies' at the Annual Technical Fest of JUET 'Dextra 2010'
Param Tripathi (B.Tech student)	• Secured 1st position in Carrus-2012 (University Annual Automobile Quiz) conducted by MES. • Secured 1st position in War of Bands Dequinox-2012 (University Annual Cultural Fest). • Secured 2nd position in Technocryptic-2010 (University Annual Technical Quiz) conducted by ISF in association with IETE.
Anuj Sharma (B.Tech student)	• Secured 3rd position in the event "Engineering Mechanics" in Dextra 2010 organized by IETE. • Secured 2nd position in the debate competition organized in Ghaziabad at the district level.
Shubham Vijay (B.Tech student)	• Awarded 2nd prize in Tech-Design during Tech-Fest • Awarded 2nd in Quiz competition in Literary-Fest
The team "Nirvana", a group of B.Tech- students	• Has passed virtual round of BAJA SAE INDIA - 2014 event held at Shri Venkateshwara College of Engineering, Bangalore on July 26, 2013.
The team "Acriolis Cruzaders"-", a group of B.Tech- students	• Has passed virtual round of EFFICYCLE SAE INDIA- 2013 event held at Amrutvahini College of Engineering, Sangamner, Maharastra on June 29, 2013.
The team of Nineteen B.Tech students	• Achieved 13th Rank in the finals of the National Go-Kart Championship held in Bhopal and Indore after a rigorous screening procedure, 2014-15.
Chaitanya R. Goyal (B.Tech. Student)	• Article on 'Eco Trends for 'Greener' homes: Insulation' published in 'The Masterbuilder' India's premier construction magazine, pp. 216 – 222. 2012 • Attended and presented the work in 4th KKU -International Engineering Conference, (KKU-IENC2012), May 10, 2012, Thailand.
Anurag Sharma, Anant Jain, Azher Ahmed Khan, Brijbhan Lodha, Harsh Sharma, Jasveer Singh Raghuvanshi, Prateek Shukla and Pranjul Agrawal (B.Tech. Student)	• Participated in workshop on 'Testing of Soil & Highway Materials' during 21-22 October, 2012 at Jaypee University of Engineering and Technology, Guna

Sudhir Jain (B.Tech. Student)	• Participated in 4th WBPF World Championship held at Bangkok, Thailand during 04-12 December, 2012 and secured 6th position in Junior men under 75 kg body building.
Anshul Mishra (B.Tech. Student)	• Scored GATE Score of 508 in GATE-2013
Gaurav Gupta (B.Tech. Student)	• Selected in Build India scholarship conducted by Larsen & Turbo.
Anmol Tandon (B. Tech student)	• Won first prize in a Tech Fest "Kshitij" 2015 held at, IIT, Kharagpur
Chitresh Kumar Bhargva(B. Tech student)	• Won first prize for best under graduate research paper in India. Prize and citation will be given to him in 68 IICHE meeting at IIT Guwahati in December 27-30, 2015.

5.3.3   Does the university conduct special drives / campaigns for students to promote heritage consciousness?

While the university encourages students to participate in activities enucleating the spirit of India , both modern and classical this is done through a variety of activities in the cultural festival like dramatics, music and activities including cultural shows highlighting the strong heritage of the country. Siksha- Setu an initiative from JUET students for spreading education among weaker part of society.

5.3.4   How does the university involve and encourage its students to publish materials like   catalogues, wall magazines, college magazine, and other material? List the major publications/ materials brought out by the students during the last four academic sessions.

The literary wing of university youth club (JUET youth club) publishes the annual university magazine '**Vartika**'. The students of the university very enthusiastically contribute with their expositions in the magazine. The university magazine is printed in the supervision of the editorial board. All the sections of the magazine are having their staff editors as well as the students' editors. The staff members are always there to help the students chisel their artistic and creative skills. A University e-newspaper '**Observer**' encompassing all the major activities of the University online by literary wing of university JUET youth club, on quarterly basis.

List of papers published / presented by students during previous four years.

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3. Nilesh Kumar Dubey and Shishir Kumar, "An Effective Approach of Distortion-Resistant Video Watermarking for Piracy Deterrence", International Journal of Security and Its Applications, vol. 9, Issue 1, pp.283-294, 2015.

4. R.K. Arya and C.K. Bhargava, Simulation analysis of drying of ternary polymeric coatings, Progress in Organic Coatings, vol. 78, pp155-167, 2015.

5. Rajesh K. Vishwakarma and Vinay Sharma," Multiband microstrip antenna with defected ground structure (DGS), "National conference on recent advances in microwave Engineerin,'" Madhav Institute of Technology & Science, Gwalior India,

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and Mass Transfer" , HEFAT 2014 10Th International Conference on Heat Transfer, Fluid Mechanics and Thermodynamics July14-16 2014 Orlando, Florida EFFCET.

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15. Chitresh K Bhargava and R.K. Arya, "Design of binary polymeric coatings for minimizing the residual solvent", Part 1: Experimentation, Drying Technology, vol.33,Issue 1,pp 92-102, 2014.

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5.3.5 Does the university have a Student Council or any other similar body? Give details on its constitution, activities and funding.

JUET Youth Club (JYC), a student's body, has been in existence since 2003. Its main role is to organize and execute various extra/co-curricular activities of the students. A students Organizing Committee under a Faculty adviser, is responsible for the entire functioning of JYC including finance. Committee members are selected from the volunteer students of different seniority and streams. Recommendations of outgoing committee members and academic performance of students are given due weightage for selection. Students below 6 CGPA are not allowed to be part of the Committee. The main source of revenue of JYC is annual subscription by students. The University provides faculty advisors, infrastructural support, integrating the programs with the University calendar and encouraging the participation of students from outside the University in University activities and vice - versa. For specified activities sponsorships are also sought. All activities of students such as cultural/technical, annual fest are funded by JYC and coordinated by the students under the guidance of Faculty in charge.

The JYC is divided into five sub-clubs or wings. Each wing is responsible for organizing and managing their events.

i. The Literary Wing**:** The Literary Wing organizes and manages all the literary activities, English plays and gives a platform to students to express their literary talents. The Literary Wing also publishes university magazine (Vartika) and the alumni brochure (Atisarga) on an annual basis.

ii. The Cultural Wing**:** The Cultural Wing provides an aggrandized platform to members to polish their hobbies of music, dance and dramatics. The Cultural Wing perennially organizes mega events like Fresher' Night, Cultural fest and musical nights.

iii. **The Sports Wing:** The Sports Wing ensures that all the hunger for action is replenished. The Sports Wing is responsible for organizing intra and inter university sports tournaments. JUET Guna has been a host university for organizing Inter University sports meets of the JUET- Guna, JIIT-Noida, JUIT-Waknaghat.

iv. **The Arts & Events Management Wing :** The Arts and Events Management Wing see to it that the artists of JUET are given a great platform to improve and polish their skills. Besides organizing the events on fine arts the Wing has always been on the forefront of managing all the major events of JYC.

v. **The Media Wing:** The Media Wing captures all the activities and events organized in aegis of JYC. Media Wing maintains a official social networking site like FACEBOOK page and portrays the major youth events on YOUTUBE on regular basis.

5.3.6. Give details of various academic and administrative bodies that have student representatives on them. Also provide details of their activities.

Students are encouraged to take responsibilities by being part of some the administrative bodies to promote camaraderie and leadership. Some of the activities are as follows:

a. Around 10 students are selected as T&P coordinators every year from pre final year. These students play a key role in smooth conduct of entire placement process in the University. They also get valuable exposure by interacting with corporate executives and helping them in coordination.

b. Students play leading administrative role under the guidance of faculty to coordinate execution of JYC/ Fest activities. Students are involved in the entire event management including selection of items/theme, short listing of participants, schedule, publicity, hospitality, security, etc.

c. Students are selected as members of the hostel committee, Mess Committee to help Wardens / mess administration in smooth and disciplined conduct of activities in hostels and mess.

d. Students are invariably assigned responsibility to coordinate administration whenever any Industry sponsored workshops/ seminars/ lectures are held in the University.

CRITERION VI

GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1   Institutional Vision and Leadership
6.1.1   State the vision and the mission of the university.
Vision:

Playing a pivotal role to enable the country and state of Madhya Pradesh, in particular, in developing high caliber trained manpower in the frontier areas of Technologies, to take up challenges of the industry in the fields of infrastructure development, manufacturing innovations, chemical processing and developments, communication, networking and industrial biotechnology applications

Mission:

Our Mission is to make the University a "Center of Excellence" in the field of Engineering and Technology. Envisaged as a university, with highly developed educational infrastructure, excellent faculty with an international outlook and active interaction with the relevant industries. It will be able to make total development of engineers and technologists to become leaders to industry tomorrow

6.1.2 Does the mission statement define the institution's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, the institution's tradition and   value orientations, its vision for the future, etc.?

Yes, We started as Jaypee Institute of Engineering and Technology, Guna in the year 2003 based on the MOU signed between Jaiprakash Sewa Sansthan (a not-for-profit trust sponsored by Jaypee Group) and the Government of Madhya Pradesh with an aim of becoming a Center of Excellence in Engineering and Technology in rural area of Madhya Pradesh for higher education. Later, Government of MP has (vide gazette extra ordinary no. 3 of 2010 dated 29th April 2010) established Jaypee University of Engineering and Technology (JUET), Raghogarh, Guna as a private university in the State of MP under the provisions of MP Niji Vishwavidyalaya Adhiniyam 2007. The University has been notified by the UGC under section 2(f) of the UGC Act, 1956.

Quality Policy:

We aspire to continuously improve our performance through systematic monitoring & upgradation of all aspects of Teaching – Learning process and Research & Development. It focuses on the systematic and structured grooming of students to become professionals who can serve the society better.

Distinctive Characteristics of the University:

➢ Readiness to provide infrastructural facilities and learning resources.
➢ Promoting research culture among students and faculty by establishing research labs like Cement Research and Development Centre (CRDC), Wind Engineering Application centre (JP-WIND CENTRE), Advanced Manufacturing Laboratory (AML) housed with Rapid Prototyping, Operating Thermal Simulator (OTS). Exposing

students and faculty members to latest technologies by frequent interaction with industry personnel.

Vision for the Immediate Future:

➢ Obtaining and sustaining accreditation at National / International level.
➢ Introducing industry specific programmes and making its graduates acceptable to current industrial needs. Electives have been framed to fulfill the requirement of current industry needs. For Examples Advanced concrete technology, Nanotechnology & its application (Physics), Wind Engineering, Petrochemical Technology are few such electives.

6.1.3   How is the leadership involved
in ensuring the organization's management system development, implementation and continuous improvement?
in interacting with its stakeholders?
in reinforcing a culture of excellence?
in identifying organizational needs and striving to fulfill them?

The organization's management system development, implementation and continuous improvement have been discussed in detail with sections 6.1.5 and section 6.1.11.

Interaction with Stakeholders
Keeping in mind the stakeholders whom the University has to serve such as students, faculty members, parents, industry, government and society, the leadership focuses on how to interact with various stakeholders. The inputs and feed back about the functioning and various other aspects of the University is collected through a number of ways.
Interacting and getting the opinion of the regular students through various platforms like class room interaction, formal & informal feedback, counseling etc.

➢ Organizing parents meeting during the admission process, interacting with them during counseling and obtaining the views and suggestions of parents.

➢ Input of the academicians and other eminent persons when they visit the University.

➢ Interaction with faculty members through various formal and informal meetings and also obtaining feedback from them.

• Interacting with parents to let them know about students performance and his conduct.

➢ Alumni is best source to obtain un-biased feedback based on their experience within the University and the external world.

➢ The feedback of the recruiters from various companies helps the University to identify any improvisations required in the talents of the students.

➢ The University also tries to get feedback from the employers about the performance of our students working in their organization.

The feedback received from all stakeholders is reviewed; analyzed and remedial actions will be initiated. Thus, participatory role of the management encourages and sustains the involvement of the University staff, which is necessary for the efficient and effective running of the University.

Proper support for policy and planning through need analysis, research inputs and consultations with the stakeholders. The inputs collected from various stakeholders will be taken into cognizance by the management; and through various interactive methods identification of critical areas for development and reviews progress for continuous improvement will be carried out.

6.1.4 **Were any of the top leadership positions of the university vacant for more than a year? If so, state the reasons.**

No.

6.1.5 **Does the university ensure that all positions in its various statutory bodies are filled and meetings conducted regularly?**

University ensures that all positions in its various statutory bodies are filled and meetings conducted regularly. University leadership has introduced a management structure to foster innovation and participatory development. University leadership is provided by statutory bodies, and individual position holders. These are

Statutory Bodies:
Governing Body
Board of Management (BOM)
Academic Council (AC)
Board of Studies (BOS)

The Governing Body:
(1) The Governing Body will have the following members:-

   (a) Chancellor;
   (b) Vice-Chancellor;
   (c) Three eminent persons nominated by Jaiprakash Sewa Sansthan of whom at least one should be eminent academician;
   (d) Three members nominated by the Visitor from a list of six eminent persons submitted by the State government; and
   (e) One member representing the Government not below the rank of Deputy Secretary.
   The Chancellor will be the Chairman of the Governing Body.

(2) The Governing Body shall be the principal executive body of the University. All the movable and immovable property of the University shall vest in the Governing Body. It shall have the following powers, namely:-

   (a) To provide general superintendence and directions and to control the functioning of the University by using all such powers as are provided by this Act or the Statutes, Ordinances, Regulations or rules made there under;

(b) To review the decisions of other authorities of the University in case they are not in conformity with the provisions of this Act or the Statutes, Ordinances, Regulations or rules made there under;

(c) To approve the budget and annual report of the University;

(d) To lay down the policies to be followed by the University;

(e) To recommend to the Sponsoring Body about the voluntary liquidation of the University if a situation arises when smooth functioning of the University does not remain possible, in spite of all efforts; and

(f) Such other powers as may be prescribed by the Statutes.

(3) The Governing Body shall meet at least three times in a calendar year.

(4) The quorum for the governing body shall be five members.

The Board of Management:
(1) The Board of Management of the University shall consist of the following, namely:-

(a) The Vice Chancellor;

(b) Two representatives nominated by the Sponsoring Body;

(c) Two representatives nominated by State Government;

(d) Two senior most professors of the University by rotation; and

(e) Two senior most teachers of the University other than those in clause (d) above by rotation.

The Vice-Chancellor shall be the Ex-officio Chairperson of the Board of Management.

(2) The Board of Management shall meet at least once in every two months.

(3) The quorum for the Board of Management shall be five members.

(4) The powers and functions of the Board of Management shall be such as may be prescribed by the Statutes.

The Academic Council:
(1) The Academic Council shall consist of the Vice-chancellor and such other members as may be prescribed by the Statutes.

(2) The Vice-chancellor shall be the Chairperson of the Academic Council.

(3) The Academic Council shall be the principal academic body of the University and shall, subject to the provisions of this Act and the Rules, Regulations, Statutes or Ordinances made thereunder, co-ordinate and exercise general supervision over the academic policies of the University.

(4) The quorum for meeting of the Academic Council shall be such as may be prescribed by the Statutes.

Board of Studies:
- (1) There shall be a Board of Studies for each department comprising of:-
  (a) All the teachers of the concerned department.
  (b) Two members to be nominated and co-opted by the Department, from outside the University, from academia/Industries., after approval of Vice-Chancellor from a panel of five persons.
- (2) The Head of the Department shall be the Chairman of the Board of Studies.
- (3) The term of the Co-opted members of the board of studies shall be three years.
- (4) The Vice Chancellor can constitute a Board of Studies for the subjects to be started by the University as and when required.
- (5) Detailed syllabus of the different courses of the department shall be prepared by the board of studies and be submitted to the Academic Council for its approval and publication.
- (6) Contents of the syllabi shall be revised and updated by the Board of Studies from time to time and be submitted to the Academic Council for its approval.
- (7) Board of studies meeting shall be arranged atleast once in a year.

Administrative/Leadership Positions:
Chancellor
Vice Chancellor
Dean
Head of Department
Controller of Examination
Registrar
Chief Accounts and Finance Officer (CAFO)

The Chancellor:
- (1) The Chancellor shall be appointed by the Sponsoring Body with the consent of the Visitor.
- (2) The Chancellor shall be the head of the University.
- (3) The Chancellor shall preside over the meeting of the Governing Body and shall when the Visitor is not present, preside over the convocation of the University.
- (4) The Chancellor shall have the following powers, namely:-
- (a) To appoint and remove the Vice-Chancellor;
- (b) To call for any information or record; and
- (c) Such other powers as may be conferred by the Statutes.

The Vice-Chancellor:
- (1) The Vice-chancellor shall be appointed by the Chancellor from the panel recommended by the Selection Committee constituted for the purpose.
- (2) The Selection Committee will comprise of two eminent academicians nominated by the Sponsoring Body and one eminent person nominated by the State Govt. of Madhya Pradesh.
- (3) The Chancellor shall appoint one of the members of the Selection Committee as Chairman.
- (4) The Selection Committee shall submit a panel of at least three eminent persons for appointment of the Vice-Chancellor.
  Provided that if the Chancellor does not approve the recommendation of the Selection Committee, he may call for fresh recommendation from the Selection Committee.

(5) Notwithstanding anything contained in the foregoing sub sections, the Chancellor may appoint the first Vice Chancellor for a period of two years to conduct the affairs of the University.

(6) The Vice-Chancellor shall hold the office for a term of four years and shall be eligible for re-appointment for another term of four years.

Provided that the Vice Chancellor shall continue to hold the office even after the expiry of the term till a new Vice-Chancellor joins, however, in any case this period shall not exceed six months.

(7) The Vice-Chancellor shall be the principal executive and academic officer of the University and shall exercise general superintendence and control over the affairs of the University and shall execute the decisions of various authorities of the University.

(8) The Vice-Chancellor shall preside at the convocation of the University in the absence of the Visitor and the Chancellor.

(9) If in the opinion of the Vice-Chancellor it is necessary to take immediate action on any matter for which powers are conferred on any other authority by or under this Act, he may take such action as he deems necessary, and shall at the earliest opportunity thereafter report his action to such officer or authority as would have in the ordinary course dealt with the matter.

Provided that if in the opinion of the concerned officer or authority such action should not have been taken by the Vice-Chancellor; than such case shall be referred to the Chancellor, whose decision thereon shall be final:

Provided further that where any such action taken by the Vice-Chancellor affect any person in the service of the University, such person shall be entitled to prefer, within three months from the date on which such action communicated to him, an appeal to the governing body and the decision of the governing body shall be communicated to the person concerned within three moth from the date of appeal.

(10) If in the opinion of the Vice-Chancellor, the decision of any authority of the University is not in conformity with the power conferred by this Act and Statutes, Ordinances or Regulations made thereunder or is likely to be prejudicial to the interests of the University, he shall request the concerned authority to revise its decision and in case authority refuses to revise such decision wholly or partly or fails to take any decision within fifteen days, then such matter shall be decided by the Chancellor.

(11) The Vice-Chancellor shall exercise such power and perform such duties as be prescribed by the Statutes and the Ordinances.

(12) If at any time upon representation made or otherwise, it appears to the Chancellor that the Vice-Chancellor:-

(a)   has made default in performing any duty imposed on him by or under this Act; or

(b)   has acted in a manner prejudicial to the interest of the University; or

(c)   is incapable of managing the affairs of the University.

The, Chancellor may, notwithstanding the fact that the term of office of Vice-Chancellor has not expired, by an order in writing stating the reasons therein require the Vice-Chancellor to relinquish his office from such date as may be specified in the order.

(13) No order under sub-section (12) shall be passed unless the particulars of the grounds on which such action is proposed to be taken are communicated to the Vice-Chancellor and he is given reasonable opportunity of showing cause against the proposed order.

(14) As from the date specified in the order under sub-section (viii), the Vice-Chancellor shall be deemed to have relinquished the office and the office of the Vice-Chancellor shall fall vacant.

The Registrar:

(1) The Registrar shall be appointed by the Chancellor, in such manner as may be prescribed by the Statutes on the recommendations of the Expert Committee appointed for the purpose by the "Governing Body".

(2) The first Registrar will be appointed by the sponsoring body for a period of two years.

(3) All contracts shall be signed and all documents and records shall be authenticated by the Registrar on behalf of the University.

(4) The Registrar shall be the Member Secretary of the Board of Management and Academic Council but he shall not have a right to vote.

(5) The Registrar shall exercise such other powers and perform such other duties as may be prescribed by the Statutes.

(6) If at any time it is considered that the presence of the Registrar is detrimental to the University, the Vice Chancellor may request the Chancellor to remove the Registrar. However, before any action is taken, the Registrar shall be given opportunity of being heard.

The Chief Finance and Accounts Officer:

(1) The Chief Finance and Account Officer shall be appointed by the Chancellor in such manner as may be prescribed by the Statutes.

(2) He shall perform such duties and exercise such powers as defined in the Regulations.

Other Officers:

(1) The University may appoint such other officers as may be necessary for its functioning.

(2) The manner of appointment and powers and functions of such officers shall be such as may be prescribed by the Statutes.

The Governing Body is the supreme body of the University and its powers and functions are as prescribed by the Statutes. The Board of Management is responsible for the general management and administration of the University.

The Academic Council, subject to the provisions of the Act, the Statutes and the Ordinances of the University, has the power of control and general regulation or, and is responsible for the maintenance of standards of instruction, education and examination within the University and exercises such other powers and performs such other duties as may be conferred or imposed upon it by the Act or the Statutes and it has the right to advise the Board of Management on all academic matters.

There is no Finance Committee as per private University Committee act of Madhya Pradesh and all its issues are looked by Board of Management as per our statutes.

The meetings of all the Statutory Bodies are held regularly since the inception of the University. (Details are in Annexure 6.1.5)

6.1.6   Does the university promote a culture of participative management? If yes, indicate the levels of participative management.

Yes. Departmental meetings are regularly held for allocation of courses in the beginning of semester, to assess academic progress, resolve problems, lab management and its development, etc. Additionally HODs interact with students and faculty informally. The issues arising thereof are also discussed in these meetings.

Regular HOD meetings with Deans and Vice Chancellor are organized to discuss the department and University level issues, planning of new programmes, attendance, extra and co-curricular activities, etc. The issues proposed to be taken to Academic Council and Board of Studies (BOS) are also deliberated. In the overall structure, participatory decision making and accountability are emphasized. The University ensures timely filling of vacancies in statutory bodies and at other levels. It also ensures regular meetings of statutory bodies.

Faculty is represented on the Departmental BOS, Boards of Management and Academic Council. The opinion of the faculty is also sought through departmental and general faculty meetings. Issues related to discipline, admission, quality of teaching and research, training & placement of the University are well brought out by their participation for due consideration and implementation by higher authorities.

6.1.7   Give details of the academic and administrative leadership provided by the university to its affiliated colleges and the support and encouragement given to them to become autonomous.

Not Applicable.

A private University cannot have an affiliated Institute in the first five (5) year of its formation. Thereafter, a University may plan to have affiliate institute subject to approval by regularity bodies and UGC.

6.1.8   Have any provisions been incorporated / introduced in the University Act and Statutes to provide for conferment of degrees by autonomous colleges?

Not Applicable.

6.1.9   How does the university groom leadership at various levels? Give details.

The University grooms leadership at various levels. Inculcation of creativity through motivation and drive which helps to produce innovative professionals is vital for the inclusive growth of any University. Senior faculty members are assigned responsibilities as Deans, Controller of Examination, Heads of the department and chairman of academic forum/association. Other faculty members are groomed to take up individual leadership roles under the guidance of experienced faculty members.

Almost every faculty member in JUET is allocated responsibility of coordinating various activities at department and/or University level. Coordination of JUET Youth Club (JYC), University Disciplinary Committee, Equal Opportunity Cell, Training & Placement Cell, Hostel Wardenship, Course coordination, Laboratory In-charge, Time Table coordinators are few examples.

These and other similar participations by both faculty and students provide an ample opportunity and ensure systematic and sustained development of leadership and management skills by practice.

Students fully take the role of leadership in technical societies and conduct all activities motivated and encouraged by experienced faculty members.

Similarly, all major activities/events like conferences, Workshops, short-term courses, etc., have multiple faculty coordinators with active student participation. The initiatives, dynamism, overall performance, contributions to department and /or University are recognized and duly reflected in the annual appraisal of the faculty.

6.1.10 Has the university evolved a knowledge management strategy? If yes, give details.

Yes, Knowledge creation, acquisition and dissemination are three arms of Knowledge Management. Human capital forms the basis for accomplishment of University vision, mission and goals. The syllabus, contents and durations of every academic course are thoroughly discussed and recommended by BOS and duly approved by Academic Council. Other knowledge management strategy comprises of:

- Scientific recruitment and selection: Candidates with necessary academic qualification and with teaching and research aptitude are recruited as faculty members, as per approved University guidelines.
- Performance appraisal: The management appraises the performance of the faculty members through self-appraisal, student's feedback and academic performance.
- Faculty knowledge enrichment: Regular conduct of Workshops/ conferences, faculty development programmes, freedom to organize and participate events in University and outside University with logistic, administrative and financial support.
- Student's aspects: Individual courses are evenly distributed throughout the semester to make learning more effective. Practical examinations are given equal importance as theory subjects. Examination pattern are based on fixing percentage of course in each of three exams. Evaluation and grading system of the University is completely transparent.
- Study Materials and Student Assignments are made available to students and they can access them from anywhere within the campus by logging to JUET server.
- University adapted IRP (Campus Connect) system to manage all important academic, administrative, financial activities and information. Learning Resource Centre (LRC) serves as central house of knowledge through access to books, e-journals and other scientific reports.
- University maintains all the academic rules, academic calendar, course details, faculty profile, etc. on its website (www.juet.ac.in), which can be viewed by all.

6.1.11 How the following values are reflected the functioning of the university?

Contributing to national development

Fostering global competencies among students

Inculcating a sound value system among students Promoting use of technology

Quest for excellence

Contributing to National Development

University is fully involved in developing skilled human resource in the field of

Engineering and overall excellence in every field viz. teaching, learning and research with focus on technology as well as social issues. Several of the faculties are serving in national bodies of Sciences and Engineering including Bureau of Indian Standards (BIS).

Fostering Global Competencies among Students

Qualified faculty and their leadership through cutting edge and emerging technology, periodic monitoring of courses, organizing specialized lectures from academia and industry, multidisciplinary and industrial based elective choices are the some objectives that University is continuously fostering in academic system.

Students are trained in social and legal issues, intellectual property right, leadership quality, etc through our education system. For extracurricular activities, JUET Youth Club and departmental forum organizes technical events for student's active participation and polishing their talent. State-of-art research, Choice Based Credit System (CBCS), Industry based projects and training are few examples which help in inculcating sound values among students.

Inculcating Sound Value System among Students Promoting Use of Technology

Excellence culture building in faculty is supported through yearly assessment of their performance. University adapted IRP (Institutional Resource Planning) system to manage all its academic, administrative, financial and informative work. Attendance and academic performance of students is regularly monitored and conveyed to students and their parents as feedback. Highest CGPA holder among all B. Tech. students is awarded Chancellor's Gold Medal every year. University leadership through its efforts has been successful in creating atmosphere where excellence in all fields is recognized and encouraged.

Quest for Excellence

Students are motivated and encouraged to participate in national level competitions (both academic and extra-curricular) to exhibit their talents and excel in their academics carrier, as also evidenced by some of their achievements.

6.2   Strategy Development and Deployment

6.2.1   Does the university have a perspective plan for development? If yes, what aspects are considered in the development of policies and strategies?

   Vision and mission
   Teaching and learning
   Research and development
   Community engagement
   Human resource planning and development
   Industry interaction
   Internationalisation

Yes, University had already made perspective plan in year 2010 both infrastructure wise and academic- wise, then after several changes have taken place based on new model of course-structure and requirement. Management and Science courses are

initiated but due to poor response these are presently under review for reconstruction in its structures. Similarly, Diploma courses are also under revision to meet the present industry requirements.

Now, University is preparing five year perspective plan and implementation of the same. The plan is framed keeping in view the vision and mission of the University.

Vision and Mission:

Playing a pivotal role to enable the country and state of Madhya Pradesh, in particular, in developing high caliber trained manpower in the frontier areas of technologies, to take up challenges of the industry in the fields of infrastructure development, manufacturing innovations, chemical processing and developments, communication, networking and industrial biotechnology applications.

Our Mission is to make the University a "Center of Excellence" in the field of Engineering and Technology. Envisaged as University, with highly developed educational infrastructure, excellent faculty, with an international outlook and active interaction with the relevant industries. It will be able to make total development of engineers and technologists to become leaders to industry tomorrow.

Teaching and Learning
- University is already following the mission of becoming centre of excellence for teaching and learning by student-centric processes, trust & transparency, autonomy and impartiality. Perspective development of infrastructure and other resources for modern teaching through transparency in evaluation system are the other aspects.
- Strengthening and modernization of existing courses and introduction of new UG/PG programs.

Research and Development
- Strengthening research through increase in strength of research scholars, identification and strengthening of research centers like Cement Research and Development Centre (CRDC), Wind Engineering Application Centre (JP-WINCENTRE), Advanced manufacturing Laboratory housed with Rapid Prototyping (AML), Operating Thermal Simulator (OTS) and enhancement of research facilities/facilitation of research through collaborations and funded research and development projects.

Human Resource Planning and Development
- Growth of human resources in accordance with development of existing human resources through conferences, workshops, faculty development programs, both in-house as well as of other institutions, and interaction with outside experts.
- Develop and improve physical infrastructure commensurate with growth plans.

Industry Interaction
- Improve interaction with industry, community and other stakeholders.
- Training & Placement, Research and Development, Consultancy activities in University.
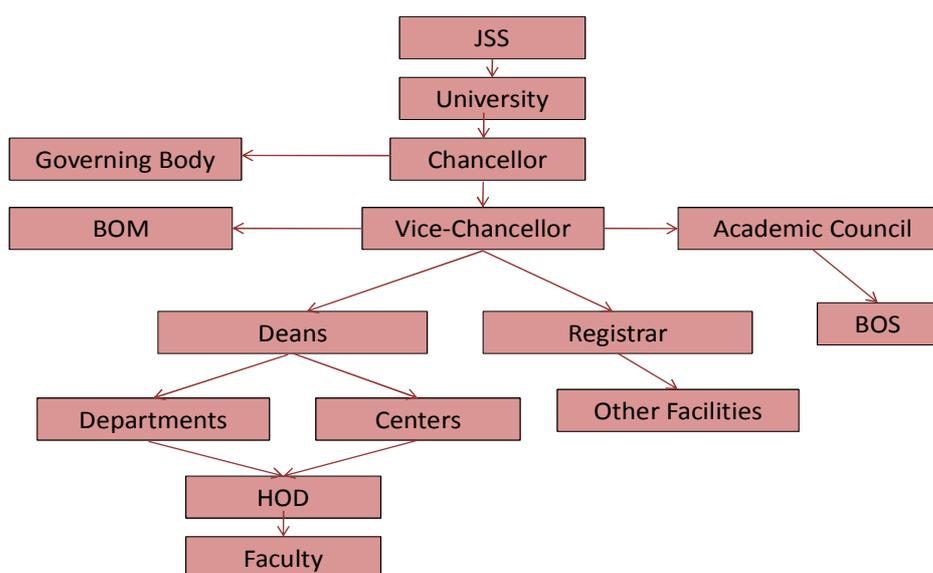- Recruitment of faculties with industrial expertise and experience.

Internationalisation
- Enhance international interaction by collaborative programs. JUET is actively

associated with IUCEE (Indo-US Collaboration for Engineering Education). This association provides for most up-to-date trends in Engineering Education, Faculty Development Programme (FDP), discussions and online webinars for over all professional growth.

6.2.2   Describe the university's internal organizational structure and decision making processes and their effectiveness.

Organizational Chart

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                        ┌──────────┐
                        │   JSS    │
                        └────┬─────┘
                             ↓
                        ┌──────────┐
                        │University │
                        └────┬─────┘
                             ↓
   ┌────────────────┐   ┌──────────┐
   │ Governing Body │←──│Chancellor│
   └────────────────┘   └────┬─────┘
                             ↓
   ┌────────────────┐   ┌──────────────┐   ┌──────────────────┐
   │      BOM       │←──│Vice-Chancellor│──→│ Academic Council │
   └────────────────┘   └───┬──────┬───┘   └─────────┬────────┘
                            ↓      ↓                 ↓
              ┌───────────┐      ┌───────────┐   ┌───────┐
              │   Deans   │      │ Registrar │   │  BOS  │
              └──┬─────┬──┘      └─────┬─────┘   └───────┘
                 ↓     ↓               ↓
   ┌─────────────┐  ┌──────────┐  ┌────────────────┐
   │ Departments │  │ Centers  │  │ Other Facilities│
   └──────┬──────┘  └────┬─────┘  └────────────────┘
          └────────┬─────┘
              ┌────────┐
              │  HOD   │
              └───┬────┘
                  ↓
              ┌────────┐
              │Faculty │
              └────────┘
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2

The decision making processes and their effectiveness are detailed in section 6.1 above.

6.2.3   Does the university have a formal policy to ensure quality? How is it designed, driven, deployed and reviewed?

Yes, The various bodies such as Governing Body, Board of Management, Academic Council, BOS constituted as per Act and Statutes of the University enable through their policies in ensuring the quality of teaching and research as described below:

Formal Policy to Ensure Quality
JUET Act empowers the authority i.e., Board of Management and Academic Council to fix qualifications and experience of Faculty, and permits no deviation from it. All Faculty members are appointed according to qualifications and experience prescribed by UGC regulations. All faculty and staff follow Code of Ethics prescribed in UGC Regulations. There is a policy for reviewing the standard of whole examination system through Paper moderation, evaluation and grading system.

Review of Formal Policy to Ensure Quality
University and Departments review the quality in terms course completion, feedback assessment, etc. in each semester of the academic year. Review reports of each

department (course wise) are made available to every HODs for official meeting to enhance the teaching learning process and for further improvement. Quality policy is designed, driven and deployed in such a way that students are served in the best possible way by the faculty members and staff.

6.2.4 Does the university encourage its academic departments to function independently and autonomously and how does it ensure accountability?

Encouraging Independent and Autonomous Functioning

University encourages its academic departments to function independently and autonomously in curriculum development, course plans, evaluation and most academic and many administrative aspects. University has also delegated financial support to organize conferences, workshops and short-term courses to promote every department towards Industry-University interaction.

University has departmental coordinators for various academic activities and its administration. Most of decisions regarding these activities are taken by HODs based on the inputs provided by coordinators, faculty members and students. Major suggestions emanating from these interactions are considered by the Academic Council (AC) and Board of Studies (BOS). Accountability of academic processes and department's performance is exercised by Academic Council.

Ensuring Accountability

Academic independence and autonomy is under the overall control of Board of Studies and Academic Council; this as well as Ordinance clauses ensure accountability. Examination and evaluation independence and autonomy is under the purview of Controller of Examination. Almost all decisions related to academic departments of the University are taken by BOS and Academic Council.

6.2.5 During the last four years, have there been any instances of court cases filed by and against the institute? What were the critical issues and verdicts of the courts on these issues?

Nil.

6.2.6 How does the university ensure that grievances / complaints are promptly attended to and resolved effectively? Is there a mechanism to analyse the nature of grievances for promoting better stakeholder-relationship?

Yes. University has an open door policy wherein any stakeholder can walk into concern office to seek remedy to his problem. The following committees specifically address issues related to Grievances/complain from faculty members /students.

Grievances cell

Dr. S. Arunachalam (Dean)   : Chairman
Dr. Anuj Kumar   : Member
Dr. Rashmi Tyagi   : Member
Dr. Sunil Srivastava   : Member
Dr. Baliram Gupta   : Member
Dr. Ravi Kumar Sharma   : Member
Mrs. Ranu Gupta   : Member

University Discipline Committee

Dr. Anuj Kumar	: Chairman
Dr. Rajeev Srivastava	: Member
Dr. Mahesh Kumar	: Member
Dr. Salil Modak	: Member
Mr. Krishna Murari	: Member

Woman Harassment Cell

Dr. Rashmi Tyagi	: Chairperson
Dr. Kanchan Mala	: Member
Dr. Rachna Chaturvedi	: Member
Dr. Jitendra Kanungo	: Member
Mr. Dinesh Kumar Verma	: Member

Equal Opportunity Cell

Prof. S. K. Agrawal	: Chairman
Mr. Neeraj Jain	: Secretary
Mr. Deepak Sharma	: Member(s)
Mr. Ajay Kumar	
Mr. Krishna Murari	
Mr. K. L. Dhakar	
Dr. Sudeep Kumar De	

6.2.7 Does the university have a mechanism for analyzing student feedback on institutional performance? If yes, what was the institutional response?

Yes, The University has a formal mechanism for taking feedback from students regarding the course work, LRC, administration and hostel facilities. The student feedback is regularly analyzed and necessary measures are taken. Some of the responses of the University based on student feedback are:

- Introduction of new elective courses, revision of syllabi & periodic review, up-gradation and introduction of new courses to suit industry and global needs.
- New programmes were initiated for Engineering, Management, B.Sc. & M.Sc. and presently all are under review.
- Infrastructure was augmented with additional Lecture theaters, computer labs, auditorium, play ground, etc.
- Individual Club rooms to every department for professional bodies.
- Specific training in sports, music, dance and theatre are conducted by JYC club.
- Aptitude training and soft skills training were introduced and become regular of academic development through mock interview and tests.
- Hostel capacity enhanced.
- Medical facility enhanced.
- Food monitoring committee.

6.2.8 Does the university conduct performance audit of the various departments?

Yes. Performance of the departments is regularly reviewed by University Academic Council and Board of Studies.

Performance audit is a Continuous activity of every department carried out by departmental Head. It is further looked at Dean and Vice Chancellor levels both at the mid and end semesters and suggestions are considered positively within the semester as

per necessity. Departmental committee will regularly keep checking on the course coverage, question paper moderation, extra classes held, grade awarded, etc. for all possible improvement. Being student-centric system all possible demands of the students are catered and corrective measures are taken where applicable.

The audit report with feedback is given to the Dean and Vice Chancellor for sustaining and improving quality. The departments undertake a self-evaluation of their activities and submit them for perusal of the Vice Chancellor.

6.2.9 What mechanisms have been evolved by the university to identify the developmental needs of its affiliated institutions?

Not Applicable.

6.2.10 Does the university have a vibrant College Development Council (CDC) / Board of College and University Development (BCUD)? If yes, detail its structure, functions and achievements.

Not Applicable.

6.3   Faculty Empowerment Strategies

6.3.1 What efforts have been made to enhance the professional development of teaching and non-teaching staff?

For sustained growth of University, Multiple efforts for enhancement of professional abilities of its human resources are an essential requirement. The University gives priority for continuous enhancement of professional skills of its employees. Programmes are organized at various levels to enhance the competency of its faculty and non-teaching staff.

Teaching Faculty:
University provides an environment and encouragement to its faculty members to conduct research leading to Ph.D. both from JUET and other Institutions. Eighteen faculty members of JUET and thirteen full time research scholars have already completed Ph.D. and another 68 candidates including JUET faculty and full time scholars are pursuing their Ph.D.

Experts are invited to our University for interaction and delivery of lectures on current topics of interest.

University encourages and financially supports faculty members to attend Conferences / Seminars / Workshops in India and abroad.
JUET is actively associated with IUCEE (Indo-US Collaboration for Engineering Education). This collaboration provides for most up-to-date trends in Engineering Education, Faculty Development Programme (FDP), discussions and online webinars for over all professional growth.

The following Workshops and conferences have been arranged:

1. IUCEE Workshop 2012 on "Application Oriented Networking", July 9–13, 2012.

2. IUCEE Workshop 2012 on "Renewable Energy", June 04 –08, 2012

3. National Workshop on Manufacturing Automation, December 16-17, 2011.

4. IUCEE Workshop 2011 on "Numerical Methods", July 04-08, 2011.

5. IUCEE Workshop 2011 on "Image Processing and Digital Communications, June 06–10, 2011.

6. IUCEE Workshop 2011 on "Selected Topics on Distributed Systems and Computer Security", May 29 - 03 June, 2011.

7. IUCEE Workshop 2010 on "Computer System Performance Analysis", July 05-09, 2010.

Conferences

1. 5th International Conference on Information Technology & Business Intelligence (ICITBM-2013), December 13-15, 2013.

2. National Conference on Environmental Sustainability and Society : The Growing Paradigm Shift (ESS-2013), March 30-31, 2013.

3. 17th Annual Conferences of GAMS and National Symposium on Computational Mathematics& Information Technology, December 07-09, 2012.

4. 3rd International Symposium on Emerging Trends and Technologies in Libraries and Information Services (ETTLIS) October 26-27, 2012.

5. National Conference on Recent Advancement in Civil Engineering & Infrastructure Development (RACE-InD 2011), December 21-22, 2011.

6. National Conference on Recent Advances in Materials Science & Engineering: A Multidisciplinary Approach [RAMSE 2010] October 23-24, 2010.

7. 3rd CSI National Conference on Education & Research "Impact of Globalization and Privatization on meeting India's IT Human Resource needs (ConfER 2010) March 06-07, 2010.

Workshops

1. Workshop on "Intelligent Approaches for Object Oriented Modeling in Component Based Software Engineering", (IAOOM-2015), May 07-09, 2015

2. National Workshop on "Advancements in Network Communication and Security (ANCS-2014)", December 29-31, 2014.

3. International Workshop on "Intelligent Approaches for Object Oriented Modeling in Component Based Software Engineering", April 18-20, 2014

4. One Day International Workshop on "Role of Industrial Wind Tunnel in Design of Civil Engineering Structures", December 16, 2013.

5. National Workshop on "Advancements in Network Communication and Security (ANCS-2013)", December 19-21, 2013.

6. National Workshop on "Advanced Manufacturing Technologies (NWAMT)", September 27-29, 2013.

7. National Workshop on "Energy Storage / Conversion Devices Using Ion Conducting Polymer Electrolytes (NWESD-2012)', December 10-12, 2012.

8. Workshop on "Testing of Soil & Highway Materials", October 21–22, 2012.

9. National Workshop on "Manufacturing Automation", December 16-17, 2011.

10. National Workshop on "Optimization and Information Theory With Their Applications", March 24-26, 2011

11. National Workshop on "Advances in Separation Process", December 13-18, 2010.

12. Workshop on "Java Androids & Web Technologies", December 17-19, 2010.

13. Workshop on "Testing of Concrete", August 26, 2010.

Non – Teaching Staff:
Awareness sessions on the following were imparted for non-teaching staff:
- Perspectives for Office Administration.
- Maintenance of office equipment.
- Guideline & Training of examination office staff.
- Organizational effectiveness.
- Usage of IRP system.
- Communication skills and professionalism.

6.3.2   What is the outcome of the review of various appraisal methods used by the university? List the important decisions.

Three different appraisal methods are used viz:
- Self-appraisals in case of faculty members and; yearly appraisals by head in case of non-teaching staff.
- Semester and subject-wise student's feedback. (Format in Annexure 2.3.16)
- Student's feedback regarding hostel facilities and administrative support. (Format in Annexure 6.3.2)

The results of the review of these appraisals are informed to concerned individuals, and wherever necessary, the concerned individual is advised for suitable corrective measures.

Based on student's feedback, required corrective measures at University level in terms of enhancement of LRC resources, introduction of new electives, syllabi modifications have been carried out. Various continuous monitoring, evaluation and corrective actions have led to several useful outcomes. Some are referred here:
- Certain indentified areas of weakness of the students are now focused for corrective action. For example; English language, Presentation and communication skill, etc. courses are started to improve the English of those students who are comparatively weak in subject.
- Overall improvement of academic scenario and performance of students are improved; that can be analyzed through results of first year B.Tech in comparison to other years.
- Student's activities towards academic and co-curricular activities have been increased and streamlined to a large extent through significant faculty advice and professional bodies to inculcate professionalism in them.

6.3.3   What are the welfare schemes available for teaching and non-teaching staff? What percentage of staff have benefitted from these schemes in the last four years? Give details.

The University has a welfare mechanism in place, for teaching and non-teaching staff. The various welfare schemes are:

Facility	Rate/Amount	Remark
Loan facility	Up to 3 Months salary (Int. Free)	
Medical	Maximum One basic pay per annum.	Total amount (in lacs) 2010-11 ₹ 32.59, 2011-12 ₹ 39.13, 2012-13 ₹ 42.75 , 2013-14 ₹ 48.15, 2014-15 ₹ 46.40, (as per balance sheet)
Group Insurance	Each employee and student is insured for Rs 2 Lac (Accidental Insurance).	-----
LTA	Maximum One basic pay per annum.	Total amount (in lacs) 2010- 11 ₹ 28.40, 2011-12 ₹ 37.16 , 2012-13 ₹ 43.84 , 2013-14 ₹ 47.60, 2014-15 ₹ 48.82, (as per balance sheet)
Gratuity & Provident Fund (PF)	As per Govt. of India norms.	Year wise gratuity provision (in lacs) 2010- 11 ₹ 17.23, 2011-12 ₹ 28.06, 2012-13 ₹ (-5.86), 2013-14 ₹ 24.06, 2014-15 ₹ 15.06
Any other (carrier)	Employee children's benefits after five years of service. • Seats quota for primary & secondary education. • Fee Relaxation for higher studies.	For pursue studies in educational institutions supported by JSS. (as per job Grade of concern employee)
Any other (facility)	Fully residential campus for employee (teaching and non-teaching). • Housing (as per Grade) • Water supply • Electricity Supply • Garbage disposal • STP • Medical facility	Full-fledged township created within JUET campus.

6.3.4 **What are the measures taken by the University for attracting and retaining eminent faculty?**

Following are the measures taken by the University to retain faculty:

• Highly conducive academic and research environment.

• Freedom to pursue Academic and Research interest of one's choice area.

• Significant emphasis on research orientation and the facilities for the same.

• Freedom to organize workshops/conferences with logistic, administrative and financial support.

- Freedom to organize and participate in FDP.
- Opportunity to revise course content and introduce new electives.
- Augmenting funds of sponsored research projects.
- Timely promotions under fully transparent policy
- Higher compensation package along with facilities.

6.3.5 **Has the university conducted a gender audit during the last four years? If yes, mention a few salient findings.**

Yes. The University annual academic study incorporates gender based statistics. Some salient findings are given below

- **Women Participation (in percentage)**

	2012-13	2013-14	2014-15	2015-16
Girls	5	6	6	7
Boys	14	15	20	22

- **Details of Students Leadership Positions (in number)**

	2012-13	2013-14	2014-15	2015-16
Literary & Cultural Fests	25 %	25 %	33.33 %	N.A.(fest to be held in next semester)
Sports and Games	23.46 %	24.10 %	23.17 %	21.31 %
Students Leadership Positions	35.71 %	40 %	30 %	31.81 %

- **Total Students Admitted in Ph.D., M.Tech., B.Tech. and Diploma (in numbers)**

	2012-13	2013-14	2014-15	2015-16
Girls	144	95	101	84[*]
Boys	558	493	530	399[*]
Girls: Boys ratio	0.258	0.193	0.191	0.211

[*] Diploma students not admitted in 2015-16.

- Analysis of four years data suggests good percentage of girls' participation both in academic and non-academic activities.
- It reflects that University successfully establishes learning environments wherein all students including girls feel physically, psychologically and socially secure.
- Good male female ratio of faculty provides equal opportunities for their impartial growth.
- University has Women Harassment Cell and Grievances cell wherein any female student or staff can represent her problem and get due justice.

6.3.6 **Does the university conduct any gender sensitization programmes for its faculty?**

University has Grievances cell, Women Harassment Cell and Equal Opportunity Cell headed by Senior Professors /Dean to look after any reported case of intemperate gender sensitive behavior.

6.3.7 What is the impact of the University's Academic Staff College Programmes in enhancing the competencies of the university faculty?

Not Applicable.

6.4 Financial Management and Resource Mobilization

6.4.1 What is the institutional mechanism available to monitor the effective and efficient use of financial resources?

The University has a Board of Management which plans, controls and monitors the financial resources of the University. There is no Finance Committee as per private University Committee act of Madhya Pradesh and all its issues are guided by Board of Management (BOM) as per our statutes.

At the beginning of the academic year, departments submit an annual budget for their activities. The BOM reviews the budgets submitted and allocate the required funds. The University also allocates sufficient budgetary provisions to conduct various academic activities, to create adequate facilities and to organize quality programme such as seminars, conferences and guest lectures to fulfill the University's mission. The annual financial audit ensures effective utilization of available funds.

6.4.2 Does the university have a mechanism for internal and external audit? Give details.

Yes. The University is conducting internal and external audit regularly from external Chartered Accountants since the inception of the Institute. Copies of audited results are sent regularly to the Board of Management (BOM) and concerned authorities.

6.4.3 Are the institution's accounts audited regularly? Have there been any major audit objections, if so, how were they addressed?

Yes, Accounts of the University are audited by Charted Accountant firm on every year regularly. There is no major audit objection so far.

6.4.4 Provide the audited income and expenditure statement of academic and administrative activities of the last four years.

Statement Showing Audited Income & Expenditure Account (Revenue & Capital)

₹ in lacs

S.No.	Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
1	**INCOME**					
	(a) Fee from students	1562.20	2992.12	3483.26	3775.16	4070.29
	(b) Sale of Admission Forms	47.61	45.38	40.05	29.32	26.75
	(c) Miscellaneous Income including Interest, Misc. Charges, Consultancy.	72.07	114.90	150.70	142.33	452.11
	Total Income (a+b+c)	**1681.88**	**3152.40**	**3674.01**	**3946.81**	**4549.15**
2	**EXPENDITURE**					

(a) Institutional Expenses	468.48	584.39	687.08	582.15	531.47
(b) Salary and Allowances:					
Teaching Staff	812.32	1290.45	1395.27	1529.02	1398.95
Non-teaching Staff	236.98	344.02	371.65	444.53	458.43
(c) Hostel Expenses	316.26	443.81	504.74	483.74	505.13
(d) Depreciation and Others	112.57	217.85	211.78	209.12	233.82
(e) Capital Expenditure (Addition to Fixed Assets & Cost of Capital)	1110.27	1173.64	2035.05	2709.53	992.71
Total Recurring & Non –Recurring Expenditure	**3056.88**	**4054.16**	**5205.57**	**5958.09**	**4120.51**

6.4.5 Narrate the efforts taken by the University for resource mobilization.

The University strives to achieve excellence through service to humanity. Efforts taken by the University for mobilizing human and financial resources are:

- JUET is sponsored by big industrial house i.e. Jaypee Group through Jaypee Seva Sansthan (JSS). There is inherent support available from JSS in terms of its strength and facility at various locations in the country. More often advantage of such facility is made use of.

- University also receives financial support for some of its activities from JSS. Statement showing financial support from Jaiprakash Sewa Sansthan to the University under different activities as on March 31, 2015.

Sr.No.	Activities	Financial Support (₹ in lacs)
A.	**Investment**	
1	Buildings, Roads, hostels, messing facilities, Auditorium, sub stations sewage plant etc.	9982.29
2	Lab equipments, Library books, electrical & mechanical equipments, Furniture & fixtures, office equipments like photocopier, projectors, printers etc.	2320.43
3	Corpus Fund with Regulatory Commission	500
	Total Investment	**12802.72**
B.	**Resource of Funds**	
1	Collection From Students (Development Fee upto March 31, 2010)	2800.00 (Appx.)
2	Term Loan From Bank	5500.00 (Appx.)
3	Contribution From Jaiprakash Sewa Sansthan	4502.72

- In infrastructural development and construction activities machinery are transferred from different locations to utilize facilities. Expertise for architectural and design activities are ensured from people having requisite experience in Jaypee Group.

- Resource mobilization also comes through efforts of faculty in the form of projects and consultancy.

- Conduction of Jaypee sponsored training programmes helps to interact with industry persons and encourages faculty for their professional development.

6.4.6 Is there any provision for the university to create a corpus fund? If yes, give details.

As per Act, an endowment fund of ₹ 5 crores was established by sponsor body with Regulatory Commission. The Regulatory Commission shall pay to the sponsor body interest on the amount of endowment fund at the rate at which State Bank of India pays interest, during the period under consideration, on Saving Bank Account. Incomes from the endowment fund shall not be invested in any business connected directly or indirectly with the sponsor body. This income shall be used only for the development of the University.

6.5 Internal Quality Assurance System

6.5.1 Does the university conduct an academic audit of its departments? If yes, give details.

Yes. University finds the strengths, weaknesses and performance through academic audit of each department every year and recommend the actions for next year. Performance of the departments is regularly reviewed by University Academic Council and Board of Studies.

Result committee comprises of Vice Chancellor and all HODs review the overall performance of students both at mid and end semesters and suggestions are considered positively within semester or next semester as per necessity. Academic council (AC) and Board of Studies (BOS) will regularly keep checking on the course coverage, extra classes held, grade awarded feedback from students, etc. for all possible improvement.

The audit report with feedback will be submitted to the Dean and Vice Chancellor for sustaining and improving quality. The departments undertake a self-evaluation through stock taking, budget and other departmental activities and submit them for perusal by the Vice Chancellor.

6.5.2 Based on the recommendations of the academic audit, what specific measures have been taken by the university to improve teaching, learning and evaluation?

The academic processes of the University have been categorized as:
• Academic (Teaching and Learning)
• Academic (Research)
• Stakeholder Relationship

Academic (Teaching and Learning)
• Student feedback analysis of theory and laboratory courses
• Faculty feedback
• Department feedback on learning resources
• Laboratory Equipment Stock Taking

Academic (Research)
• Publications
• Sponsored R&D projects
• Master and Ph.D. projects/ dissertations
• Individual achievements/awards
• B. Tech. Major Projects

- Review articles and books
- Interdisciplinary Research

Stakeholder Relationship
- Faculty feedback
- Non teaching staff feedback
- Student feedback on complete experience in University
- Corporate (Industry) feedback
- Parent feedback
- Alumni feedback

Professional and Social Activities
- Professional consultancy
- Professional and special courses/Workshops
- Conferences
- Industrial Interactions
- Social Activities

6.5.3 Is there a central body within the university to continuously review the teaching learning process? Give details of its structure, methodologies of operations and outcome?

Yes, Academic Council and BOS are the bodies to review the teaching-learning process. BOS consists of all faculty members, HOD as Chairman and at least two external members from industry/academia for individual department.

Structure of Academic Council

S.No.	Name	Position	Remarks
1	Prof. N. J. Rao, Vice Chancellor	Chairman	Ex-officio
2	Prof. S. C. Saxena Vice Chancellor, JIIT, Noida	Member	Chancellor's nominee
3	Prof. Vinayshil Gautam Sr. Advisor KPMG, New Delhi	Member	Chancellor's nominee
4	Shri R.K. Singh, DIC, JAL, Nigrie, Singroli (MP)	Member	Chancellor's nominee
5	Shri Ravinder Mohan COO, JAL, Rewa (MP)	Member	Chancellor's nominee
6	Prof. Nageshawar Rao Pro Vice Chancellor, IGNOU, New Delhi 110068	Member	MPPURC's nominee – New nomination awaited from Regulatory Commission
7	All HODs of the university	Members	Ex-officio
8	All teaching Professors of the	Members	Ex-officio

	University		
9	Registrar	Member Secretary	Ex-officio

Teaching and Learning: Methodology

University is already following the mission of becoming centre of excellence for teaching and learning by student-centric processes, trust & transparency, autonomy and impartiality. Perspective development of infrastructure and other resources for modern teaching through transparency in evaluation system are the other aspects. Strengthening and modernization of existing courses and introduction of new UG/PG programs.

Students are trained in social and legal issues, intellectual property right, leadership quality, etc through our education system. For extracurricular activities, JUET Youth Club and departmental forum organizes technical events for student's active participation and polishing their talent. State-of-art research, Choice Based Credit System (CBCS), Industry based projects and training are few examples which help in inculcating sound values among students.

Outcome

Student feedbacks, stakeholder interactions and academic audit have become formalized. The preparation of University academic calendar, course plans, remedial classes, and induction and orientation activities, mentoring processes, academic audit and career counseling activities has become regular.

6.5.4 How has IQAC contributed to institutionalizing quality assurance strategies and processes?

IQAC system has yet not been constituted yet in JUET. However, it is under our perspective plan of next phase.

6.5.5 How many decisions of the IQAC have been placed before the statutory authorities of the University for Implementation?
Not Applicable.

6.5.6 Does the IQAC have external members on its committees? If so, mention any significant contribution made by such members.

Not Applicable.

6.5.7 Has the IQAC conducted any study on the incremental academic growth of students from disadvantaged sections of society?

Not Applicable.

6.5.8 What policies are in place for the periodic review of administrative and academic departments, subject areas, research centres, etc.?

The University adopts participative administrative approach to review administrative and academic process for continuous improvement through all stakeholders' feedback. Recommendations of Academic Council (AC), Board of Studies (BOS) and Result committee are reported for which the department must submit a corrective action.

The course files of all courses are scrutinized to verify all activities related to teaching learning and evaluation processes have been completed as per norms of the University. The review reports of the departments are called by the authorities from time to time and are analyzed and accordingly directions are given for improvement.

Any other information regarding Governance, Leadership and Management which the university would like to include.

University is keen to realize the concepts of Autonomy with Accountability, Value-based Governance, Participative Management and Collective wisdom. University is making efforts to develop a culture of 'Learning together and working together' by regular interactive meetings with HODs, officials and employees organized by the Vice Chancellor for this purpose.

The following steps were taken for quality sustenance:

- Strengthening of feedback mechanism from all stakeholders including alumni portal.
- More effective Resource mobilization.
- Appointment of more eminent academicians exclusively for teaching, learning and research as per present requirement of the industry.
- Formulation of more effective strategies and action plans for the betterment and growth of the University.
- Meetings and Brainstorming Sessions at Different Levels.
- Starting of new branches in Engineering, Management and Sciences.

Dates/Numbers of All The Statutory Bodies Meeting Held

Governing Body (GB)	September 21,2015 August 30, 2013 May 03, 2012 May 07, 2011
Board of Management (BOM)	September 12, 2015 April 11, 2015 June 07, 2014 November 09, 2013 May 04, 2013 July 28, 2012 April13, 2012 February 04, 2012 August 11, 2011
Academic Council (AC)	April 11,2015 June 07, 2014 November 09, 2013 May 04, 2013 February 04,2012

	Department	Number of Meetings
Board of Studies (BOS)	Chemical Engineering	04
	Civil Engineering	05
	Computer Science & Engineering	07
	Electronics & Communication Engineering	05
	Mechanical Engineering	08
	Mathematics	05
	Physics	04

Students Interaction Records (Format)

Remarks:										Student Signature with date:		
Name:		E N:			Hostel:	Mobile No:				Parents Mob:		
Education Qualifications	10th %	12th %	CGPA	Sem-1:	Sem-2:	Sem-3:	Sem-4:		Sem-5:	Sem-6:	Sem-7:	
Academic Problems												
Administrative Problems												
Medical / Emotional												
Hobbies / Weakness												
Remarks:										Student Signature with date:		
Name:		E N:			Hostel:	Mobile No:				Parents Mob:		
Education Qualifications	10th %	12th %	CGPA	Sem-1:	Sem-2:	Sem-3:	Sem-4:		Sem-5:	Sem-6:	Sem-7:	
Academic Problems												
Administrative Problems												
Medical / Emotional												
Hobbies / Weakness												
Remarks:										Student Signature with date:		
Name:		E N:			Hostel:	Mobile No:				Parents Mob:		
Education Qualifications	10th %	12th %	CGPA	Sem-1:	Sem-2:	Sem-3:	Sem-4:		Sem-5:	Sem-6:	Sem-7:	
Academic Problems												
Administrative Problems												
Medical / Emotional												
Hobbies / Weakness												
Remarks:										Student Signature with date:		

Warden Signature

CRITERION VII

INNOVATIONS AND BEST PRACTICES

7.1 Environment Consciousness

7.1.1 Does the university conduct a Green Audit of its campus?

The campus is lush green with a lot of emphasis being given to horticultural activities. However, no green audit has been done yet. The University has a forward-looking view in this direction since its inception. The construction was done taking care of areas like water conservation (through rain water harvesting), recycling of the domestic waste water, reduced dependence on artificial lighting, cooling and ventilation, etc. These make the University campus very green, pollution free and eco-friendly.

7.1.2 What are the initiatives taken by the university to make the campus eco-friendly?

❖ **Energy conservation:**

- The buildings and class rooms are planned and designed in such a way that they receive sun light throughout the day thus reducing dependence on artificial lightening.
- All the electronic devices in the university are equipped with power-saving features.
- All lights and fans are switched off when a room is not in use.
- The street lights are arranged in such a way that neither the roads are very brightly lit nor is there darkness.
- The University also uses electric lawn mowers that cause no emission and are hence environmental friendly.

❖ **Use of renewable energy**

A renewable resource is a natural resource with the ability to reproduce through biological or natural processes and is replenished with the passage of time. Solar energy is the most easily available source of renewable-energy. Two solar water heaters in the students' mess are being used for washing purposes and solar energy based light is also being used in the department of Mechanical Engineering.

❖ **Water harvesting**

Water harvesting is the accumulation and storage of rainwater for reuse. All the buildings and open areas are provided with drains nearby for capturing rain water which is conveyed to a lake in the campus that has a huge storage capacity of

1500 lakhs liters. In this way the total rain water during the monsoon is captured effectively and is reused for construction and gardening purpose.

❖ **Check dam construction**

The University does not require any check dam as it is located in a plain area.

❖ **Efforts for Carbon neutrality**

The University is trying its level best in this area by making an effort to use more and more renewable energy sources. At present solar water heaters are being used in the mess in place of electric water heater system. Instead of plastic cups, paper cups and plates are used for tea and snacks.

❖ **Plantation**

The University has been maintaining a lush green campus maintained by a good number of gardeners and lots of efforts are being continuously put into it since 2002 when the university came into existence. The campus land was actually barren in 2001 and since then 6900 trees and large number of hedges have been planted. A total of 2, 06,000 Sq.Mts. land is under the horticulture department. Two officers and 25 gardeners have been employed for taking care of horticulture related activities. The University has two Sewage Treatment Plants (STP) to treat entire sewage of campus with handling capacity of 15 lakhs liters/day. This treated water is used for plantation in the campus. Around 300 kg of vegetable waste is composted per day in the pits and the manure thus formed is further used for plantation purpose.

❖ **Hazardous waste management**

The University does not generate any hazardous or wastes.

❖ **E-waste management**

The University has taken an alternative approach to reduce the volume of e-waste generation by adopting the following procedures:

- Buy back system which includes giving systems back to the company from where they are purchased.
- Donate old workable electronic items to other organizations.
- Reuse theses items after slight modifications to the original functioning items.

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 university.

Education is an important part of our society because only a well educated society can make a well developed nation in a real sense. Only well qualified teachers could generate enlightened minds and instill confidence and will- power in students to help

them realize their dreams. The University provides all the requisite facilities to the teachers so that they can impart quality teachings. For the improvements in quality, it is essential to adopt innovations. The University has adopted various innovations in the last few years which have created a positive impact on the functioning of the university.

For the quality education the university has made several innovations which have helped in smooth functioning of the University. These innovations are taken in academic, administration and other levels of the university working. Some of the innovations are given below:

- Computerized scheduling of examination (change of seating arrangement) resulting in minimization of unfair practices in examination.
- Transparent feedback mechanism to help faculty member to improve their teaching skills.
- Showing of evaluated answer scripts to the students within a week of an examination, thus ensuring transparency and trust between teacher and students.
- Conduct of faculty seminars to keep abreast with the latest technological developments in their field of interest as well as sharing and cross fertilization of ideas.
- Involvement of experienced people from nearby industries (GAIL and NFL) to participate in department BOS meetings and in final project evaluations.
- Regular conduct of field visits in environmental studies.
- Mentorship program for improving the quality of weak students through regular counseling by meeting them on a fortnightly basis.
- Provision of 24 x 7 internet facility in all the hostels.
- Digitalization of library helps the students, faculty members and staff to explore and locate the books in the library through OPAC (Online Public Access Catalogue) resulting into huge time saving.
- Provision of audio-video teaching aids in most of the class rooms.
- Encourage students to undertake experimental projects across all the departments aimed at enhancing their experimental and analytical skills that sometimes lead to a journal or conference publication.
- Provision of online teaching learning resources through server and N drive.

7.3   Best Practices

7.3.1 **Give details of any two best practices which have contributed to better academic and administrative functioning of the university.**

Practice I

1. Title of the Practice

Effective Teaching –Learning system for better Academic Standards.

2. **Objectives of the Practice:** To create a student-centric learning environment and systems to enable students to realize their full potential and graduate with adequate professional competence required by the present day technologically advanced multinational industry.

3. **The Context :**

- Quality of teaching is the basic requirement in overall teaching learning process which can only be maintained through highly qualified faculty members. Hence learned faculty with vast teaching and research experience is of utmost importance in an effective teaching learning process.
- Effective design of curriculum is also the need of the hour for an effective teaching learning process.
- Lecture theatres should be well equipped with all modern teaching aids to make the lectures more interactive.
- Laboratories should be well equipped with a wide variety of experiments.

4. **The Practice:**

- The University recruits highly qualified faculty having good teaching and research experience. Around 70% of the faculty members have doctorates from various reputed universities and most of the remaining faculty members are also pursuing their Ph.Ds., thus ensuring that quality education is imparted to the students.
- All the lecture theatres are equipped with necessary teaching aids to improve teaching learning process, such as multimedia projectors, overhead projectors, power point facility and computers with internet facility.
- Every student does a project in the final year of their curriculum by referring to the literature in the relevant area, does experimental / computational work, makes power point presentations and submits reports, thereby enhancing his/her writing and communication skills.
- The University has well equipped state-of-the-art laboratories which further supplement the subject knowledge to the students.
- The whole curriculum is well designed which includes good range of elective subjects to enhance the competence level of the student in relevant areas.
- State-of-the-art library equipped with a large number of books, e-books, and journals which help students understand their subjects thoroughly beyond class room teaching.
- Continuous evaluation system through mid semester examination, end semester examination, surprise quizzes and tutorials facilitate the students to transform into more sincere and punctual in day to day class room activities.
- Provision of fast track semesters for the students who are placed in the companies who desire early joining.
- Moderation of question papers is done through a moderation committee constituted by the head of every department to ensure that (a) questions asked are from the entire syllabus and (b) the question paper is balanced in terms of difficulty level and time allotted.

- Grades for each subject are finalized by the grading committee constituted by the head of every department to avoid any discrimination and to bring more transparency in the evaluation system.

5. Evidence of Success

- Better attendance in class rooms.
- Improved pass percentage.
- Improvement in Communication and Presentation skills.
- Better placement records.
- Better performance in various competitive exams like GATE, GRE etc.
- Word of mouth publicity through successful Alumni.
- Collaboration with the University of Florida provides opportunity to the bright aspiring students to spend last one year at their campus.
- Almost every year, few students are placed at exceptionally high packages.

6. Problems Encountered and Resource Required

- Extra efforts are required for the students who come from Hindi medium background.
- Difficulties in retaining faculty due to its remote location in spite of availability of all the basic amenities in the campus round the clock.
- Better road conditions to improve better admission and retention of students and faculty.

Practice II

1. Title of the Practice

To enhance research potential in students and faculty members.

2. Objectives of the Practice:

To create favorable research environment for carrying out quality research and to achieve excellence in research with the following aims:

- To produce more number of Ph.Ds. in various disciplines.
- To have more number of publications in SCI journals.
- To get research projects from various sponsoring agencies.

3. The Context :

Excellent infrastructure with outstanding research facilities and conducive research environment are the two foremost pre-requisites for carrying out good quality research. Also the faculty members need to be creative and innovative in their approach towards research activities and should possess holistic idea about their area of work / field of specialization.

4. The Practice:

- The university encourages the faculty members and students to publish research papers, attend national / international conferences and to carry out consultancy work. Financial support is provided to the extent possible to those who present papers in national and international conferences.
- Access to online journals in different engineering and science fields helps the faculty and students to carry out their research work efficiently.
- It is mandatory for all the research scholars (registered for Ph.D.) to give a presentation at the end of every semester where the valuable suggestions given by DPMC (Doctoral Programme Monitoring Committee) members regarding their work further boosts the quality of research work, by attending to mid-course connections if any.
- Financial assistance is provided to those research scholars who need experimental set-ups for their Ph.D. work.
- Doctorate degree is awarded only after the rigorous review of the thesis by two potential examiners (one from India and other from abroad) specialized in that particular area of work.
- The University also publishes its own journal "JUET Research Journal of Science and Technology".
- The University also addresses the issue of plagiarism by continuously motivating the research scholars and faculty members to do good and innovative work.

5. Evidence of Success

- Considerable increase in the number of Ph. D. holders in the University in the last few years.
- Enhancement in the number of papers published by the faculty members.
- Increase in the number of papers presented in national and international conferences by faculty members and students.
- Some faculty members have also bagged projects from various sponsoring bodies like DST, CSIR, DRDO and MPCST, etc.
- Some of the faculties have received recognitions in National Science and Engineering bodies due to their subject expertise and contribution.
- Continuous good research has helped some of the faculties, become reviewers for journals of good repute. Few of the faculties are also in the editorial boards.

6. Problems Encountered and Resource Required

Due to the remote location of the University research scholars sometimes face difficulties in carrying out some complex experiments which require lot of outside support for fabrication. Also due to the shortage of some sophisticated expensive testing machines and measuring equipment required for the research in various disciplines scholars have to visit nearby premium institutes for getting their work done. Both these problems finally result into an unnecessary delay.

JAYPEE UNIVERSITY OF ENGINEERING & TECHNOLOGY-GUNA

Declaration by the Head of the Institution

Certify that the data included in this Self-Study Report (SSR) are true to the best of my knowledge.

This SSR is prepared by the institution after internal discussions, and no part thereof has been outsourced.

I am aware that the Peer team will validate the information provided in this SSR during the peer team visit.

Prof N.J. Rao
Vice Chancellor
(Seal)

Date: 26.11.2015

Vice Chancellor
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Raghogarh, Guna (M.P.)