International Institute of Information Technology, Hyderabad
(Deemed University)

SELF STUDY REPORT
2011-16

Part-2
Criteria-wise Inputs
Part 2 - Criteria - wise Inputs

CRITERION I: CURRICULAR ASPECTS

1.1 Curriculum Design and Development

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

Institute has academic boards for UG and PG programmes. Each respective boards will take into consideration institutional vision and mission while preparing curriculum and subsequent revisions and put up before Academic Council which consists of Institute members and external subject experts. Their inputs will be taken for further revision.

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 Institute follows a systematic process in the design of curriculum such as it ensures balance between basic science courses, engineering, HSS and open electives.
- Institute has frequent interaction with industry, government and alumni body. Feedback on the curriculum is taken from the above bodies and the same will be incorporated in the courses if the feedback is small. However, if the feedback demands major change, the same will be discussed in academic boards.

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

* Employability - The institute prepares the students to take up a job, and industry specific skills that are needed will be acquired by the student as and when needed. The students are sufficiently trained in their ability to how to learn new concepts and apply them. The institute aims to train students not only for their first job but also for their last job.

* Innovation - Institute encourages hands on learning by introducing projects in most of its courses and quite often students are motivated to innovate new solutions while working on the projects. Some of these projects will lead to start ups. Institute has strong support of CIE. ......

* Research - The goals of the institute are implemented by a novel institutional structure, an innovative curriculum, a project based pedagogy and an environment of inquiry all built carefully to meet the requirements. The institute is structured as research centers and not departments, the curriculum has flexibility allowing even the undergraduates to do research, many of the courses have projects and term papers, there is an environment of questioning and inquiry, and discussion on issues of ethics. The institute conducts extension activities to spread the research culture and ethics in the country.

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 institute uses various guidelines including ACM/IEEE guidelines for forming its curricula. The institute’s curriculum has been discussed in various forms and MHRD has planned start 20 new IIIT’s on IIIT-Hyderabad institute and curriculum model.
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?

Industry specific courses have been offered by adjunct faculty from industry. Many guest lectures and distinguished lectures have been offered by people of eminence of civil society which helped the institute to review the contents of curriculum.

In this process, institute has benefitted and to quote few examples, students have taken up socially relevant projects by working with NGOs.

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

**Under Graduate:**
- B.Tech (Computer Science and Engineering)
- B.Tech and MS dual-degree (Computer Science and Engineering)
- B.Tech (Electronics and Communication Engineering)
- B.Tech and MS dual-degree (Electronics and Communication Engineering)
- B.Tech (Computer Science) and Master of Science in Computational Linguistics by Research
- B.Tech (Computer Science) and Master of Science in Computational Natural Sciences by Research
- B.Tech (Computer Science) and Master of Science in Exact Humanities by Research
- B.Tech (Civil Engineering) and Master of Science in Building Science Engineering by Research

**Post Graduate:**
- M.Tech (Computer Science and Engineering)
- M.Tech (Computer Science and Information Security)
- M.Tech (Computer Aided Structural Engineering)
- M.Tech (Bioinformatics)

**MPhil:**
- M. Phil (Computational Linguistics)

**Master of Science by Research**
- Master of Science in Computer Science and Engineering by Research
- Master of Science in Electronics and Communication Engineering by Research
- Master of Science in Computational Natural Sciences by Research
- Master of Science in Computational Linguistics by Research
- Master of Science in Civil Engineering by Research
- Master of Science in Bioinformatics by Research
- Master of Science in IT in Building Science by Research

PhD:
- PhD (Computer Science and Engineering)
- PhD (Computational Natural Sciences)
- PhD (Electronics and Communication Engineering)
- PhD (Computational Linguistics)
- PhD (Civil Engineering)
- PhD (Bioinformatics)
- PhD (Spatial Informatics)
- PhD (Cognitive Science)
- PhD (Exact Humanities)

* Overseas programmes offered on campus

Nil

* Programmes available for colleges to choose from

Not Applicable – No affiliated colleges.

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

a. Core / Elective options
b. Enrichment courses
c. Courses offered in modular form

Yes. Distribution of Courses

Institute Core
Institute core consists of compulsory courses taken in specific semesters of the program. All students of the institute must satisfy the institute core requirement.

Program Core
Program stands for the individual student joins. The programs have certain compulsory courses to be taken in specific semesters of the program. All students must satisfy the respective program core requirement.

Institute Flexi-Core
The Institute states that some courses must be taken by all the students, but the semester in which they can be taken is not fixed. Students can flexibly schedule these courses. All students must satisfy the institute flexi-core requirement.

Program Flexi-Core
Program stipulates that some program courses must be taken by all the students but the semester in which they can be taken is not fixed. Students can flexibly schedule taking of these courses. All students must satisfy the respective program flexi-core requirement.

Electives
The institute offers a suite of electives that students need to take for any of the programs. There are minimum limits set on the number of credits that need to be taken for these electives.
Institute Electives - offered by the institute, do not belong to any specific program.

Program Electives - offered by different programs of the institute.

Other Than Program (OTP) Electives - every student belongs to a home program, and electives offered by programs other than the home program are Other Than Program Electives.

The above provide only the minimum requirements to graduate. All students are free to take any course offered in the Institute over and above the minimum requirements as long as they meet the pre-requisites of the course.

d. Credit accumulation and transfer facility

The Institute follows semester system with credits earned in each semester. A student has to fulfill the required credits for award of the programme. We truly follow Choice Based Credit System (CBCS) with a large amount of flexibility (in choices) available to the student, both in terms of courses to choose from and in sequencing of compulsory or core courses.

For Post Graduate programs, the institute provides credit transfer. Unused credits from other reputed institutions may be transferred to a target programme at IIIT. Application with supporting documents is to be made to the Dean for this. Decision is taken on each case after examining the documents. The institute does not accept transfer students for undergraduate programs.

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

Yes. Only first year students of the 4 year Under Graduate programme are considered for branch change. For PG Programmes, students may convert from M.Tech to MS by Research or MS by Research to PhD but not vice versa.

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

No.

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

No

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

Yes. We have the following Dual Degree programmes.

- B.Tech in CSE and Master of Science in CSE by Research
- B.Tech in ECE and Master of Science in ECE by Research
- B.Tech in Computer Science and Master of Science in Computational Linguistics by Research
- B.Tech in Computer Science and Master of Science in Computational Natural Sciences by Research
- B.Tech in Computer Science and Master of Science in Exact Humanities by Research
- B.Tech in Civil Engineering and Master of Science in Building Science Engineering by Research

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?

All the programmes (listed under point 1.2.1) run by the Institute are self-financing programmes.

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.

No

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?

From the inception, Institute is following Choice Based Credit System for All the programmes. There are no affiliated colleges.

1.2.9 What percentage of programmes offered by the university follow:

* Annual system - 0%
* Semester system - 100%
* Trimester system - 0%

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

The Institute has started 5 year trans-disciplinary programmes in 2010

(a) BTech in Computer Science and MS by Research in Computational Natural Sciences;
(b) BTech in Computer Science and MS by Research in Computational Linguistics; and
(c) B.Tech in Computer Science and MS by Research in Exact Humanities.

Following number of students have graduated from the batch of 2010.

CND - 3
CLD - 4
EHD - 3

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?

The institute undergoes major curriculum revision process once in ten years, and fairly extensive incremental changes in between. The institute has academic council that oversees the curriculum development process.

The institute prepares the students to take up a job, and industry specific skills that are needed will be acquired by the student as and when needed. The students are sufficiently trained in their ability to how to learn new concepts and apply them. The institute aims to train students not only for their first job but also for their last job.
The institute takes feedback from all the stakeholders in deciding the curriculum.

1.3.2 During the last four years, how many new programmes at UG and PG levels were introduced? Give details.
* Inter-disciplinary
Nil
* programmes in emerging areas

Duel degree programme BTech in Civil Engineering and Master of Science in Building Science and Engineering by Research

The program aims at educating engineers and conduct research to build an environmentally sustainable habitat by integrating environment, materials, services, science and engineering while making use of latest technology in computer science and electronics. Given the multi-disciplinary nature of the proposed program, the program will address two broad areas; R&D gaps and Knowledge gaps and would collaborate with other institutions to address the skill gaps.

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

- Strategy adopted for the revision of existing programmes is to keep watching the latest development in the industry and their requirement
- Institute has academic boards for UG and PG programmes. Each respective boards will take into consideration institutional vision and mission while preparing curriculum and subsequent revisions and put up before Academic Council which consists of Institute members and external subject experts. Their inputs will be taken for further revision.
- 10–15% of the syllabus in every elective course will be revised based on the latest development in the field
- Once in 5 years, major revision of curriculum will be taken up.

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?

Institute’s UG curriculum is designed to make the students highly skilled in their area of study in IT (both CSE and ECE), and the students are highly sought after by higher-end IT industry. Institute has taken several steps in making students more responsible. A unique aspect of the curriculum is the introduction of Human Values courses which connect the student to their own self and family, society and nature as described below.

Today's technical education, in its widely prevalent form, is not able to adequately empower students to think independently. Consequently, being driven by peer pressure, it is leading to a blind race for jobs that are intellectually and mentally unfulfilling, and wealth that breeds chaos in family and in society. However, education is not just about learning skills (how to) but also about developing the ability to decide on what (what to do?) and why (why to do?). It should lead to the development of critical ability in students towards distinguishing between essence and form, or between what is of value and what is superficial, in life. It should develop their understanding which is a prerequisite for a movement from rule based society to a relationship based society. In this regard, IIIT Hyderabad has introduced a compulsory course on Human Values in the undergraduate core curriculum. Rather than aiming at 'teaching' values, the course is structured to encourage students to discover what are of value for them and for the society.
Thus the aim of the course is to enable students to discriminate between the valuable and the superficial in real situations in their life.

The course is conducted through discussions in small groups each mentored by a faculty member. There are no formal lectures in the course. During every class the faculty mentor introduces a topic and initiates the discussion. While analysing and discussing the topic, the faculty mentor’s role is in pointing to essential elements to help in sorting them out from the surface elements. In other words, help the students understand the important or critical elements. For the above topics, scenarios are used to initiate discussion. Depending on the nature of topics, worksheets, home assignment and/or activities are included. What makes it challenging is the fact that the ability is to be developed not for a narrow area or field of study, but for everyday situations in life. Therefore, one week long intense workshop on Jeevan Vidya is conducted which allows students to reflect on questions pertaining to life.

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?

Effective communication is a primary skill for any graduating student. Language should not become a barrier in the natural progress of a deserving student. Thus a course on English as a skill is offered for those students who may find it difficult to communicate. The purpose of the course is to train the student so that they are able to understand and participate in technical sessions effortlessly. This course is offered in the first semester of B.Tech programme.

Also, undergraduate students have courses which cover areas such as fine arts, dance etc.

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?

- University has feedback for every course and the student feedback will be conveyed to faculty and Dean (Acad.) after releasing of grades.
- Curriculum feedback is also obtained during meeting Faculty-student interaction sessions.
- Alumni feedback on curriculum will also be taken on how the overall programme was useful to them.

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.

Institute collects feedback from national and international faculty members during their visit to the Institute.

The Institute proactively asks any comparison or similarities in the existing curricula of their respective universities.

This feedback will be used in the curricula revision during subsequent years.

1.4.3 Specify the mechanism through which affiliated institutions give feedback on curriculum enrichment and the extent to which it is made use of.
1.4.4 What are the quality sustenance and quality enhancement measures undertaken by the university in ensuring the effective development of the curricula?

After eliciting the feedback from students/FSIS sessions and alumni, the same will be put up before the Academic Council for information and for their suggestion on how best the curriculum will be designed and developed in an effective manner.

The industry feedback is taken during placement time and during formal meetings and implement the changes in the curricula as per industry requirements.

Also the Academic peer feedback will be during their presence in Academic Council and informally when they visit for MS and PhD viva.

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?

Till the academic year 2009-10, UG admissions to the Institute are through Central counselling Board (CCB)/AIEEE conducted by MHRD, GoI. And for the academic years 2010-11, 2011-12 and 2012-13, the admissions are through “Institute Counseling” using the ranks of AIEEE.

From the Academic year 2013 onwards, the UG admissions to the Institute are mainly using JEE (Main) marks.

For PG admissions and trans-disciplinary programmes, the Institute conducts its own entrance test followed by interview. Advertisements are released in leading news papers in the country to give wide publicity to the programmes and to attract students from all parts of the country. In addition, the Institute sends the programme details, admission procedures etc. To engineering colleges of the country to give wide publicity of the programmes.

2.1.2 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 (v) other criteria followed by the university (please specify).

(A) Undergraduate programmes including dual degree programmes:

For admission into 4 year undergraduate and 5 year dual degree programmes, the criteria for admission is by (i) merit and (ii) entrance examination and interview (iii) only interview. Following are the different modes of admissions:

- Admission through JEE Main marks
- Admission under DASA through SAT score
- Admission under NTSE/KVPY and Olympiad
- Lateral entry

(B) Post graduate programmes viz: MTech/MS/PhD, the admission is through All India entrance examination followed by personal interview.
(C) Post Graduate Student Status Programme for industry personnel to enhance their skills, the admission is through formal application forwarded by the employer

(D) Standing Committee Admissions for MS/PhD programmes, the admission is through formal application followed by personal interview by a Committee with experts in the field.

2.1.3 Provide details of admission process in the affiliated 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?

The Institute has mechanisms in place for review. The Institute has a full fledged Admissions wing with Dean (Acad.) as Chair with members of UG Chair and PG Chair. In addition to that, 3 staff members are continuously working only on admission process.

Students Help Cell is in place to help the new students. Feedback from the students in admission process is reviewed periodically and incorporated in the subsequent years admission process.

(i) For example, initially the Institute used to collect Demand Drafts for application fee and for tuition fee. Subsequently, the Institute has switched to online payment to avoid cumbersome procedure in the process and delay in making payment.

(ii) Applying of programme preferences, Selection and intimation process and seat confirmation through web portal developed by the Institute

(iii) Submission of testimonials through online well in advance, verification of documents with originals and returning the original documents to the students on the day of student registration.

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

All the offices, library are accessible to all students of the Institute without any discrimination.

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

<table>
<thead>
<tr>
<th>Categories</th>
<th>Year 1 Male</th>
<th>Year 1 Female</th>
<th>Year 2 Male</th>
<th>Year 2 Female</th>
<th>Year 3 Male</th>
<th>Year 3 Female</th>
<th>Year 4 Male</th>
<th>Year 4 Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC</td>
<td>01</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>01</td>
<td>0</td>
<td>0</td>
<td>01</td>
</tr>
<tr>
<td>ST</td>
<td>01</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>01</td>
<td>0</td>
<td>0</td>
<td>01</td>
</tr>
<tr>
<td>OBC</td>
<td>25</td>
<td>09</td>
<td>22</td>
<td>13</td>
<td>13</td>
<td>02</td>
<td>17</td>
<td>10</td>
</tr>
<tr>
<td>General</td>
<td>314</td>
<td>78</td>
<td>314</td>
<td>98</td>
<td>273</td>
<td>91</td>
<td>285</td>
<td>81</td>
</tr>
<tr>
<td>Others</td>
<td>04</td>
<td>02</td>
<td>04</td>
<td>0</td>
<td>04</td>
<td>0</td>
<td>04</td>
<td>01</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Programmes</th>
<th>Through</th>
<th>Number of applications</th>
<th>Number of students admitted</th>
<th>Demand Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>UG</td>
<td>JEE Main</td>
<td>3684</td>
<td>184</td>
<td>1:20</td>
</tr>
<tr>
<td></td>
<td>DASA Mode</td>
<td>138</td>
<td>30</td>
<td>1:5</td>
</tr>
<tr>
<td>PG Including PhD</td>
<td>PGEE</td>
<td>4093</td>
<td>175</td>
<td>1:23</td>
</tr>
<tr>
<td>Integrated Masters</td>
<td>DDEE</td>
<td>976</td>
<td>33</td>
<td>1:30</td>
</tr>
</tbody>
</table>

There are no affiliated colleges under this University.

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

M.Tech (VLSI) & MTech (CL).

The programme has suspended for time being. The same will be continued after re modelling of the following.

1. Need for the programme in the present scenario.
2. Curriculum and its objectives
3. Expected intake.

2.2 Catering to Student Diversity

2.2.1 Does the university organize 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. The Institute organises orientation programme for new UG and PG students separately on the first day of the admission. Subsequently, student councillors will form the new students into groups and take them round in the campus and in surrounding areas to acquaint with the facilities available in and around the campus.

On second day, an interaction and question and answer session will be held with the parents of UG students.

The institute will try to meet in the best possible manner the observations/suggestions given by the parents in the interactive session.

2.2.2 Does the university have a 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?

All the UG students undergo English diagnostic test specially designed to understand their strengths and weaknesses in language proficiency and communication skills. Feedback of the same is taken into consideration while designing the student groups. The groups formed with
students of low proficiency in communication skills will be given extra care and attention, to improvise their skills.

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?

The Institute has a mechanism for admission in undergraduate dual degree programmes through Lateral entry. Students who passed 2nd year engineering in other engineering colleges are admitted through this scheme. These students will be offered bridge courses to fill the gap.

List of the additional Courses for CSD


List the additional Courses ECD.


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?

The Student Academic Council in consultation with Dean (Acad.) constitutes a mentoring group for students whose learning capabilities are low. During this interaction, the weak students takes help from mentors and gain confidence in writing subsequent exams.

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

In every subject, faculty ensures continuous learning process to students. Assignments and quizzes are divided in such a manner that at least 20% of the questions throw a greater challenge to students. Usually from our experience, it was found that advanced learners who pick up such questions, will engage with faculty members while solving such questions.

2.3 Teaching-Learning Process

2.3.1 How does the university plan and organise the teaching, learning and evaluation schedules (academic calendar, teaching plan, evaluation blue print, etc.)?

The university announces its academic calendar well in advance every year. The calendar is prepared taking into account the following considerations:

* Each course should have roughly 42 hours of lectures in a semester.
* The university follows national and state government holidays.
* There is provision for two mid-semester exams and one end semester examination.
* There should be scope for academic and cultural events such as R&D Showcase, Excitement of Research Workshop, Felicity, Sports meet, etc.
The academic calendar is prepared by the co-ordinator of the almanac committee and is discussed in the Academic Affairs Committee (AAC). The AAC consist of the Director, Dean(Academics), Dean (R&D), the Student Life Committee Chair, and UG and PG Program chairs.

Once discussed in the AAC in detail, the calendar is presented at the faculty meeting for discussion and finalization.

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?

Yes. Before start of each semester Academic office will ensure that list of courses, syllabus and time table are prepared and announced to students.

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.

The Institute will follow its academic schedule strictly to meet the Almanac for the year and make the time table accordingly to meet the number of class hours for each course per semester. However, if there is a shortfall in the number of class hours for a particular course, the Institute meets the requirement by swapping the time table.

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.

Every course has a project component which enhances the learning capabilities of students with hands on experience. While participating in projects in teams, students will get rich experience of subject as well as new answers in implementation of basic concepts. Some of these concepts will be used by students in their long term carrier development.

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

The Institute conducts an annual R&D showcase to present the research done at all levels to the outside world. During this period, industry experts will be invited to address the gathering and deliver a talk. A large number of students /faculty from the Institute and from various institutions, industry will attend.

The Institute also hosts Distinguished lecture series and Institute lecture series by inviting eminent scientists to give a talk.

The policy of the Institute is to expose to the outside world the research being held at the Institute as well as to expose our students to the outside world and create an awareness to the new policies and technologies.

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

Few of the courses are run in this model using e-learning courses, where NPTEL lectures are used. And later faculty encourages interaction with students in clearing the doubts.

2.3.7 What are the technologies and facilities such as virtual laboratories, e-learning, open educational resources and mobile education used by the faculty for effective teaching?
Institute has participated in virtual lab projects supported by MHRD’s National Mission on Education through Information and Communication Technology (NMEICT). We have developed around 40 virtual labs in house. These include labs in Computer Science and ECE as well as several labs in Sciences and Civil Engineering and the same has been tested while teaching courses in the Institute. A team from IIIT is additionally providing the platform and engineering support for virtual labs developed by other institutions.

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 Institute has a faculty committee on Open Source learning. Faculty contribute in the local area community towards development of Open Source learning.

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

Institute has a strong course portal managed by TAs with the help of faculty. Lessons taught will be uploaded in the portal for ready reference of students. Some times video recording lectures are also uploaded for the benefit of revision. This will enhance 24x7 learning of student.

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.

Institute has a student life committee and student academic council in place. Academic curriculum has “Human Values” course which is essential component in first year. The course is conducted through discussions in small groups mentored by a faculty member. During every class the faculty mentor introduces a topic and initiates the discussion. While analyzing and discussing the topic, the faculty mentor’s role is in pointing to essential elements to help in sorting them out from the surface elements. In other words, help the students focus on important or critical elements.

The mentor encourages the student to connect with one’s own self and do self observation. The student is encouraged to take up ‘ordinary’ situations rather than “extra-ordinary” situations. If any student is performing below the acceptable limits or if observed under severe pressure, then the student will be mentored by a faculty and a senior student.

Student councillor is in place to counsel and provide psycho-social guidance to the needy students.

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?

Variations of flipped classrooms and similar pedagogical models were tried in various courses in the past. Experiments on teaching models include use of external resources, online videos, personalized questions etc. These were tried for scaling the model with maintaining the rigor, quality and academic honesty.

Institute recognises the faculty in annual appraisal. Faculty will be commended informally in
faculty meetings.

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

The two day event consists of a showcase of select exhibits and demonstration of research projects, which represent some of IIIT-H's most recent developments in research and technology innovation. Last year, the event featured over 300 exhibits and demonstrations and received overwhelming response from all sections of the targeted audience.

Objectives

The R&D Showcase is organized annually to meet the following three key objectives.

Provide visitors an opportunity to learn firsthand about IIIT-H's cutting-edge research and technology developments

Excite research interest in college and University students and faculty

Help industry discover IIIT-H's innovative research and transformational technologies and identify areas for research collaboration with the institute

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?

Yes. 50% of the programmes are having mandatory projects.

* Number of projects executed within the university

250 projects in the Academic year 2015-16

* Names of external institutions associated with the university for student project work

Compulsory internship for MTech 2nd year students of Computer Aided Structural Engineering and VLSI programmes, where the students will undertake their projects in various industries.

* Role of faculty in facilitating such projects

The respective programme coordinators will help the students to get internships in industry to undertake the projects.

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. The Institute had good number of faculty to meet the requirements of curriculum. Further the recruitment of faculty in the Institute is continuous on-going process. However, the institute also appoints guest faculty for Humanities and Social Science courses from academia and industry to meet the requirements, if a shortfall is noticed in a semester.

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?

All faculty are well qualified and everyone use the audio visual aids, computer aided package and internet in their teaching in the class rooms.
2.3.16 Does the university have a mechanism for the evaluation of teachers by the students / alumni? If yes, how is the evaluation feedback used to improve the quality of the teaching-learning process?

The student feedback is taken every semester on every course that is taught. The feedback is analyzed and appropriate guidance is provided to faculty to improve the course conduct. The course content and examinations are also evaluated. This evaluation forms the basis of annual increment in salary.

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?

In every semester, depending on the demand, the Institute offer different elective courses. And allot the course depending on the availability of subject experts in house. If in house faculty are not available, the Institute take the help of other universities like HCU, JNTU, Osmania (or) from Industry, and appoint them as guest faculty

2.4.2 Furnish details of the faculty

<table>
<thead>
<tr>
<th>Highest Qualification</th>
<th>Professors</th>
<th>Associate Professors</th>
<th>Assistant Professors</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Permanent Teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.Sc./D.Litt</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>19</td>
<td>02</td>
<td>14</td>
<td>01</td>
</tr>
<tr>
<td>M.Phil</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PG</td>
<td>01</td>
<td>-</td>
<td>01</td>
<td>-</td>
</tr>
<tr>
<td>Temporary Teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ph.D.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>M.Phil</td>
<td>-</td>
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<tr>
<td>PG</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Part-time teachers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ph.D.</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>M.Phil</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PG</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

2.4.3 Does the university encourage diversity in its faculty recruitment? Provide the following details (department / school-wise). Yes. (The criteria taken is PhD)

<table>
<thead>
<tr>
<th>Department/School</th>
<th>% of faculty from the same University</th>
<th>% of faculty from other Universities within the state</th>
<th>% of faculty from Universities outside the state</th>
<th>% of faculty from other Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institute</td>
<td>01</td>
<td>09</td>
<td>42</td>
<td>28</td>
</tr>
</tbody>
</table>

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?

The Institute appoints the faculty on regular basis depending upon the need in the respective
programmes/research areas. 23 members were appointed during last 4 years. The Institute will
take the services of faculty of repute from other universities or industry as Guest faculty to offer
latest technology courses and Humanities, Social and Science courses

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

Emeritus Professor: 08
Adjunct Faculty: 10
Part time Visiting Professors:03
Foreign Professor: 01
Distinguished Professors:09

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 Institute has 18 Research Centres and 5 Research labs on campus. The Institute provides
initially seed money to each Research Centre as research grant.

The Institute has a policy of supporting faculty to attend national and international conferences
and present research papers. The Institute supports an amount of Rs. 7000/- per faculty per year
towards registration fee, travel and stay for attending conferences held within India and Rs. 1.50
lakhs during the entire period of service towards registration fee, travel and stay for conferences
held outside India.

Besides these, each faculty has professional development account which can be used to attend
international conferences etc. Similarly, each centre has a Standing A/c which can be used for
travel to attend conferences in India or abroad.

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?

- Prof. Nand Kishore Acharya has been awarded Maharana Kumbha Samman 2012 for
  outstanding contributions to Hindi literature.
- Dr. Neelima Satyam received the Young Engineers Award 2011-12 conferred by Institution of
  Engineers.
- Dr. Shubhajit Roy Chowdhary was selected as the Fellow of Society of Applied
  Biotechnology.
- Mr Jayadev, Head of Placement at IIIT-H was awarded Best Placement & Brand Marketing
  Officer at World Education Congress, 2012.
- Prof. B Yegnanarayana became a Fellow of the IEEE for contributions to digital signal
  processing research and education.
- Prof. Rajeev Sangal became a Fellow of the Computer Society of India.
- Dr, Suril Shah received the prestigious Inspire Faculty award from the Department of Science
  and Technology.
- Dr. Deva Priyakumar, was selected as a Young Associate of the Indian Academy of Sciences.
- Dr. Shubhajit Roy Chowdhury received the Young Engineer Award from the Institution of
  Engineers India.
- Prof. B Yegnanarayana received the Distinguished Alumnus Award of the Indian Institution
  of Science, Bangalore.
- Prof P J Narayanan received a Presidential Award from ACM for service to the company
  community.
• Shri Vijaya Sekhar received the CSI Service Award for his significant contribution in the eGovernance domain
• Prof. B Yegnanarayana was elected as ISCA (International Speech Communication Association) Fellow "For his outstanding contributions to research and education in processing of speech."
• Dr. K S Rajan, was awarded the Indian National Geospatial Award 2013 of the Indian Society of Remote Sensing. This award is towards recognition of significant contribution in the field of Geo-spatial science, technology and applications for work done in India.
• Prof. B Yegnanarayana was awarded "The Syed Hussain Zaheer Medal (2014)" by the Indian National Science Academy.
• R Pradeep Kumar was a member of Expert Committees constituted to study the impact of Hud Hud Cyclone on infrastructure facilities in Visakhapatnam and the 2015 Earthquake in Nepal. He also visited Sydney, Australia as part of Indian delegation for attending ISO Plenary Meeting on Cement & Concrete Structures.
• Shaik Rehana, was awarded Prof. N.S. Govinda Rao Gold Medal for Best PhD thesis award, 2015, in the Department of Civil Engineering, IISc, Bangalore.
• Nand Kishore Acharya, Professor of Eminence, Center for Exact Humanities (CEH), was awarded Pandit Vidyaniwas Mishra Smriti Samman by Vidyashri Nyasa of Varanasi. This award is given in recognition of his literary achievements.
• Kishore Kothapalli, Associate Professor, Center for Security, Theory & Algorithmic Research (CSTAR), has been nominated as Executive Committee Member for IEEE TCPP, Indian Subcontinent.
• Kishore Kothapalli, Associate Professor, Center for Security, Theory & Algorithmic Research (CSTAR), has been nominated as Council member for Indian Association for Research in Computing Science (IARCS).

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

All faculty usually attend national and international conferences and workshops in their research area frequently. They usually do not attend refresher courses / Orientation programmes.

<table>
<thead>
<tr>
<th>Academic Staff Development Programmes</th>
<th>Number of faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refresher courses</td>
<td>250</td>
</tr>
<tr>
<td>HRD programmes</td>
<td>4</td>
</tr>
<tr>
<td>Orientation programmes</td>
<td>29</td>
</tr>
<tr>
<td>Staff training conducted by the university</td>
<td>4</td>
</tr>
<tr>
<td>Staff training conducted by other institutions</td>
<td>0</td>
</tr>
<tr>
<td>Summer / Winter schools, workshops, etc.</td>
<td>8</td>
</tr>
</tbody>
</table>

2.4.9 What percentage of the faculty have

* been invited as resource persons in Workshops / Seminars / Conferences organized by external professional agencies? – **11.25%**

* participated in external Workshops / Seminars / Conferences recognized by national / international professional bodies? – **23.75%**

* presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies? – **433%**

* teaching experience in other universities / national institutions and other institutions? - **NA**
industrial engagement? – 33.75%

international experience in teaching? – 1.25%

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?

Annual retreat for the faculty will be held where the faculty discuss for improvement of academic and research activity within the Institute regarding curriculum development, examination reforms, research at different centres and labs. Faculty will have an opportunity to present and share their research work in the Centre.

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?

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

Institute has a facility for allowing faculty member to go on sabbatical. And also, on a short term for summer/winter fellowships, our faculty spends time in world renowned research organizations.

After coming back from these visits, faculty have introduced new courses by using their enhanced knowledge.

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?

Yes. 4 level evaluation process is in place for the faculty of the Institute in (i) teaching (ii) research (iii) tech transfer and (iv) service. All faculty are aware of this process.

Similarly Self Evaluation process is in place for staff members on their role and responsibilities in the current position and challenging tasks faced in fulfilling these responsibilities.

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.

- The Institute has 2 mid examinations and 1 end semester examination for Spring and Monsoon semesters respectively.
- Faculty will have a choice to conduct any one mid sem out of the 2 mid exams and finally 1 end sem examination in a semester. However, the faculty has to justify for this scheme to Dean (Academics).
- Banning of Cell phones strictly in the examination hall.
- Open book examination and allowing laptop for certain examinations
- Conduct of make-up examination for the absentees of end semester on medical grounds
- Exam seating is arranged with a coding number instead of student roll number and provide adequate distance.

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
The results declared after 10 working days from the last date of the examination. Results will be declared in the Institute portals.

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?

Evaluation will be made in a central pool under the supervision of Controller of Examinations. Evaluated papers will be shown to the students well before finalising the grades. After finalising the grades, they will be announced in Grades portal which facilitates the students to view their own respective grade.

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.

Yes. All the above process is in place.

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

The Institute has recently introduced reforms in PhD evaluation process. A PhD student has to clear the 4 steps viz: (1) Clearing Breadth Qualifier Courses (2) Clearing of Depth Courses (3) Comprehensive Exam (4) Thesis proposal defense (5) Final Thesis defense.

For Sl no. (3), (4) and (5) above, pre-defined format is designed which is available on intranet. Student can submit the form through on line as well as hard copy for further evaluation process.

The thesis evaluation request should contain the following in hardcopy:

1. The essential details about the thesis, such as name, roll no., advisor(s), key contributions etc.
2. The synopsis or detailed summary of the thesis. This is expected to be 2-3 pages long and can give a bit of background into the thesis as well as key references, if necessary.
3. A research resume of the student, highlighting the research experience, contributions, publications in the standard citation format in reverse chronological order, short abstract of the thesis and other details.
4. The expert reviews received from conferences or journals for the key publications and submissions related to the thesis work.

The student should maintain a CGPA of 7.0 in the coursework to become a Ph.D graduate.

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?

In the interest of transparency, the teachers are encouraged to show answer papers of all exams and quizzes to the students, before awarding grade. They are encouraged to make suitable announcements regarding date and time for showing answer papers.
After finalization of the grades, the letter grades awarded will be announced. In case any student feels aggrieved, he/she can contact the faculty concerned. If the faculty feels that the case is genuine, he may re-examine the case and forward a revised grade to the Academic wing with justification for the revision.

However, Institute provides enough freedom to its faculty members to decide on right evaluation scheme for the courses. Not all of them are examination oriented.

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 examination section of the Institute is functioning under the control of Controller of Examinations. All the operations of the examination wing, like maintaining confidentiality, conduct of examinations on time and announcing the results within the stipulated time are in place. Grades portal is available to the students to enable them to view the grades for their respective courses.

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?

Competence, care and creativity.

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. They are available on the Institute portal and accessible to all students and staff.

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

These things are structured in Academic Almanac. Every course has been given due weightage in terms of number of contact hours, examination strategy, reading assignments and quizzes.

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

Interim feedback is collected on all the core courses especially for UG 1 and 2 students. Analysing such data gives information on academically weak students which facilitates the institute to give additional support to such kind of students.

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?

Course information, lecture notes, assignments and solutions are uploaded on the courses portal from time to time. Such information will enable the student to enhance real learning.

**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.

The research at the institute is facilitated and monitored by the Dean (R&D) with suitable committees. The coordination with external research is handled by Dean (R&D) along with the heads of concerned research laboratories or centres and the principal investigators. Industry liaison for research and consultancy is overseen by an industry liaison committee and the industry outreach section. Coordination and alignment between academic research towards thesis and sponsored research from government and industry is important for the overall research to prosper. With this end, the Dean (R&D) also sets up committees and monitors the progress of students of the doctoral and research-based masters programmes.

Faculty members are encouraged to travel to conferences especially younger faculty members. Can be used to students to travel national and international conferences to present their research work.

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?

* advancing funds for sanctioned projects
* providing seed money
* simplification of procedures related to sanctions / purchases to be made by the investigators
* autonomy to the principal investigator/coordinator for utilizing overhead charges
* timely release of grants
* timely auditing
* submission of utilization certificate to the funding authorities

All the mechanisms stated above are being implemented for smooth running of research schemes/projects.

In addition to the above, the Institute takes care to provide physical infrastructure such that the faculty and students involved with research are physically proximate. This enhances interactions that is very critical to research. Facilities required for research in the IT area is computers, servers etc., will be provided to faculty members and to every research student. Centralised facilities include library with a rich collection of physical and electronic subscription to journals, abundant bandwidth and internet facilities etc.

3.1.4 How is interdisciplinary research promoted?

* between/among different departments /schools of the university and
* collaboration with national/international institutes / industries.

Wide range of elective courses are offered for various disciplines. Student is encouraged to take at least two courses by using their free elective slots.

Collaborative research projects with national/international institutes

Collaborative Projects (Completed)
1. Theoretical Investigations of photochemistry and photophysics of DNA using metal nanoparticles (2008-2011) (DST, GoI) With Prof Biman Bagchi, IISc, Bengaluru, as co-investigator

2. In Silico understanding of Structures, stability and dynamics of RNA riboswitches-energetics and MD simulations using QM and MM methods (2010-2013) (DBT, GoI) with Dhananjay Bhattacharyya SINP Kolkata

3. Electronic structure theory based investigation of conformational behavior and secondary structures of substituted B-proline based peptides, conformational studies and biological evaluation (2011-2014) (DST, GoI) With Dr Tushar Kanti Chakraborty, CDRI, Lucknow

4. Similarity Measures and Their Optimization for Video Analysis and Editing – in collaboration with DST, GoI

5. Large Scale Image and Video Retrieval – in collaboration with UKIERI

**Collaborative projects with National / International Institutes (Running)**

1. Computational Core for Plant Metabolomics (2011-2016) (DBT,GoI) with Indira Ghosh JNU
3. Canopy Spectral biochemical analysis of forest species using hyperspectral remote sensing – a case study from Eastern Ghats forest ecosystems” (2016-2019) In collaboration with IIST Trivandrum
7. United States India Joint Center for Building Energy Research and Development (CBERD), Oct’2012
8. Controlled experiment for estimating the energy saving potential and indoor thermal comfort improvement by use of high albedo surfaces on pitched concrete roofs”(CEFIPRA), March 2015
10. Assessment of Vulnerability of Installations near Gujarat Coast vis-à-vis seismic distrubance (VCAI-ISR) in collaboration with ISR (2009-13)
11. Vulnerability Assessment of Nanded City (VANC) – in collaboration with SRTMU, NGRI (2011-12)
13. Safety of Historical Constructions (SHC) with NGRI, IITM (2012)
14. MTMO with IITD (2013)
15. HVRA - Himachal Pradesh – with NITH, NITK (2013-14)
17. Earthquake Disaster Risk Indexing (EDRI) of Important Cities in Seismic Zones IV and with NDMA, (2016-17)
18. Basal Ganglia at Large (2014-16)
19. The representation and acquisition of actions (2015-17)
20. Assessment of 360 Degree Local Area Awareness Visual Interface (2016-19)
21. Virtual Labs (2009-12)
23. Earthquake Disaster Risk Indexing (EDRI) of Important Cities in Seismic Zones IV and V, 2016-17 – NDMA
24. Performance Assessment of Dominant Building Typologies in Gandhinagar/Ahmedabad, 2016-18 – ISR
25. HVRA - Himachal Pradesh, 2013-14 – NITH, NITK
26. MTMO, 2013 - IITD
27. Safety of Historical Constructions (SHC), 2012 – NGRI, IITM
28. Building Materials & Technology Promotion Council (BMPTC), 2012 - IITM
29. Vulnerability Assessment of Nanded City (VANC), 2011-12 – SRTMU, NGRI
31. Assessment of Vulnerability of Installations near Gujarat Coast vis-à-vis seismic distrubance (VCAI-ISR), 2000-13 – ISR
32. Virtual labs phase I &II Project - MHRD (National) (2014-17)
33. large-scale distributed model checking - Hitachi (National) (2014-16)
34. Design Innovation Center - MHRD (National) (2016-19)
35. A Research Project namely, Technology Foresight Study on ‘Individual & Societal Security and Infrastructure & Physical Security’ from Technology Information, Forecasting and Assessment Council (TIFAC), DST, GoI (2016)

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

Workshops Organized: (International)
In the year 2011

1. Workshop on Hybrid Multi-core Computing Held in conjunction with HiPC 2011 Goa, December 18, 2011
2. Workshop on Open Source Geospatial Tools in Integrated Water Resource Management (IWRM)”, at IIIT-H
3. Conducted a workshop on Energy Simulation of Buildings for Lead and ECBC
4. Work shop on Virtual Labs
5. NICEE Seminar on Earthquake Protection of Buildings in India

In the year 2012

1. 1st Annual Symposium on "Current Trends in Computational Natural Sciences" (CTCNS-2012)
2. National workshops on Computational Core for Plant Metabolomics CCPM-1
3. First National FOSS4G-India Conference
4. Conducted a workshop on Energy Simulation of Buildings for Lead and ECBC
5. Work shop on Virtual Labs
6. One day Workshop on “RF and Microwave Characterization Laboratory & Electromagnetic Theory and VLSI Laboratory” held on 25-02-2012, conducted by Dr.Azeemuddin Syed; Funder: MHRD, IIT-Kanpur.

In the year 2013

1. 2nd Annual Symposium on "Current Trends in Computational Natural Sciences" (CTCNS-
2013)
2. National workshop on Computational Core for Plant Metabolomics CCPM-2
3. Workshop on Virtual Labs
5. One day “Workshop on Photonics and Lasers” held on 18-06-2013, conducted by Dr.Azeemuddin Syed; Funder: IEEE Photonic Society, Hyderabad & AIMIL Limited.
6. One day “AWR Training Workshop” held on 21-01-2013, conducted by Dr.Syed Azeemuddin; Funder: National Instruments (AWR).

In the year 2014

1. NRDMS Winter School at IIIT-H
2. First Indian Symposium on Computer Systems (Indosys 2014), Bengaluru
3. National workshop on Computational Core for Plant Metabolomics CCPM (DBT)
4. One day “Workshop on Virtual Labs” Funder: MHRD.
5. World Habitat Day: “Helping India Build Its Own Houses”
6. World Heritage Day: ”Engineering Heritage of Ancient India: Historical Overview”

In the year 2015

1. Computer Research Day- (Institutional)
2. National workshops on Computational Core for Plant Metabolomics CCPM (DBT)
4. Strategic Road Map for Big Data Analytics” 3rd Interactive Meeting by Consultancy Development Centre
5. EEG Demonstration cum Workshop.
6. National Symposium on Earthquake Safety of Tall Buildings
7. Technical Lecture on “In the aftermath of the great Nepal earthquake”
9. Building Energy Simulation workshops funded Bureau of Energy Efficiency: Conducted Seven workshops
10. Second National FOSS4G-INDIA Conference 2015 at Dehradun
11. APN Workshop at IIIT-H
12. DST-SERB Winter School on Modeling Chemical and Biological (Re)Activity and Symposium on Chemistry with Computers. Link: http://oldwww.iiit.ac.in/mcbr/
13. 3rd Annual Symposium on “Current Trends in Computational Natural Sciences” (CTCNS-2015)

In the year 2016

1. APN Workshop at IIIT-H
2. 5 day workshop on "Modern and Quantum Information Security - WMQIS 2016“
3. 5th Workshop on Computational Core for Plant Metabolomics (IIIT Hyderabad) (DBT)
4. ACS on Campus Meeting (organized by the American Chemical Society, hosted by IIIT)
5. Conference cum Workshop on Structure-Based Drug Design (organized jointly by University of Hyderabad and IIIT Hyderabad).
6. 4th Annual Symposium on "Current Trends in Computational Natural Sciences" (CTCNS-
3.1.6 How does the university facilitate researchers of eminence to visit the campus as adjunct professors? What is the impact of such efforts on the research activities of the university?

Institute invites Eminent faculty from other reputed institutes to spend some time. Such an interaction has helped the younger faculty to get the guidance on long term plan.

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

We allocate seed fund to support the new faculty to start their research activity with an allocation of Rs. 5.00 lakhs for each new faculty.

3.1.8 In its budget, does the university earmark funds 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 Fellowships/Research Associate ships? If yes, provide details like number of students registered, funding by the university and other sources.

Yes.

3.1.10 What percentage 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?

8% of the faculty have utilised the sabbatical leave. On completion of their study leave period, they submit a detailed research report to the university on their achievements.

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.

IIIT-H has been a host, as well as professional organizer of major International conferences. To name a few :

- International Building Performance Simulation Association's 14th International Building Simulation (BS-2015)
- 3rd International Conference on Mining Intelligence and Knowledge Exploration (MIKE-2015) in December 2015.
- 29th IEEE International Parallel and Distributed Processing Symposium (IPDPS) in May 2015
- 20th International Conference Management of Data (COMAD-2014) in December 2014
- 36th International Conference on Software Engineering (ICSE) in June 2014
- 20th International Joint Conference on Artificial Intelligence (IJCAI)
- 3rd International Joint Conference on Natural Language Processing (IJCNLP);
- 1st International Conference on Software Engineering (ISEC);
- 10th International Conference on Distributed Computing and Networking (ICDCN);
- 22nd IEEE-CS Conference on Software Engineering and Education Training (CSEET);
- Role of Apex Institutions (RAI) in Higher Education;
- 14th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD); International Conference on Natural Language Processing (ICON)
- 20th World Wide Web (W3C); International Conference on Human Values in Higher Education (HVHE);
- 4th National Conference on Technology for Education (T4E), 1st National Conference on Agro-Informatics and Precision Agriculture (AIPA);
- 1st Free and Open Source Software for Geo-Informatics (FOSS-4G)
- 32nd IARCS Annual Conference on Foundations of Software Technology and Theoretical Computer Science (FSTTCS-2012)

The key speakers are:

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution/Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Richard Stalman, CEO, Open Source Software</td>
<td>American software freedom activist and programmer.</td>
</tr>
<tr>
<td>Dr. Rajiv Khosla</td>
<td>Professor of Precision Agriculture &amp; Extension Specialist</td>
</tr>
<tr>
<td>Dr. Kamal Alameh</td>
<td>Professor, Director of the Electron Science Research Institute, Edith Cowan University, Australia.</td>
</tr>
<tr>
<td>Dr. V.K. Dhadwal</td>
<td>Director, National Remote Sensing Centre, Indian Space Research Organisation (ISRO), INDIA</td>
</tr>
<tr>
<td>Dr. Nick Sigrimis</td>
<td>PhD, Professor, Agricultural University of Athens, Athens, Greece</td>
</tr>
<tr>
<td>Alex X Liu</td>
<td>Michigan State University</td>
</tr>
<tr>
<td>Prof Ganesh Devy, DAIICT</td>
<td>Gujarat</td>
</tr>
<tr>
<td>Dr V K Saraswat</td>
<td>SA to RM, DRDO</td>
</tr>
<tr>
<td>Vinton G. Cerf</td>
<td>Vice President and Chief Internet Evangelist for Google</td>
</tr>
<tr>
<td>Udayan Vajpayee</td>
<td>Hindi poet, essayist, short fiction and script writer</td>
</tr>
<tr>
<td>Ram D Sriram</td>
<td>Chief, Software and Systems Division, NIST, USA (founding chair of the Department of Aerospace Engineering)</td>
</tr>
<tr>
<td>Sridhara Rao Dasu</td>
<td>‘Discovery of the Higgs Boson’ [University of Wisconsin]</td>
</tr>
<tr>
<td>Prof Madhav Gadgil</td>
<td>Distinguished Lecture</td>
</tr>
<tr>
<td>Prof V N Padmanabhan</td>
<td>Microsoft, Bangalore</td>
</tr>
<tr>
<td>Prof Sumit Roy</td>
<td>University of Washington</td>
</tr>
<tr>
<td>Shri Avinash Chandra, DRDO</td>
<td>Director General of Defence Research and Development Organisation (DRDO), and Secretary, Department of Defence Research and Development.</td>
</tr>
<tr>
<td>Prof D Krishna Reddy</td>
<td>Professor in Political Science, OU, Hyderabad</td>
</tr>
<tr>
<td>Professor Godfried Augenbroe</td>
<td>PhD and MS programs in High Performance Building in the School of Architecture at Georgia Tech</td>
</tr>
<tr>
<td>Mr. Padu S. Padmanabhan</td>
<td>Program Director of the South Asia Regional Initiative for Energy</td>
</tr>
</tbody>
</table>
### 3.2 Resource Mobilization for Research

#### 3.2.1 What are the financial provisions made in the university budget for supporting students’ research projects?
The institute will make any provision in the budget. However, the research centers or the institute will provide to the student from the funds received by government/industry for doing research projects.

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?

Yes. We have a policy for filing patents.

The details of patents granted to the Institute so far are given below:

<table>
<thead>
<tr>
<th>Patent No</th>
<th>Title</th>
<th>Applicant</th>
</tr>
</thead>
<tbody>
<tr>
<td>3939/CHE/2010</td>
<td>A System for Generation of Generalized Moment Patterns</td>
<td>IIIT-H</td>
</tr>
<tr>
<td>2307/CHE/2010</td>
<td>Method To Assess Voltage Stability Margin OF A Power System Using Single Machine Equivalent At A Load Bus</td>
<td>Prof. M Ramamoorthy, Dr. Amit Jain, Mr. Sivaramakrishnan Raman</td>
</tr>
<tr>
<td>163/CHE/2013</td>
<td>Auto-Control, Dual-Function, Hybrid Stone Cutting, Scrubbing, Polishing Machine</td>
<td>Mr. Thomson Joseph David, Mr. Sandeep Asawa</td>
</tr>
<tr>
<td>2726/CHE/2009</td>
<td>Percolated Moist Air Cooler</td>
<td>Thumswamy Joseph David</td>
</tr>
<tr>
<td>2728/CHE/2009</td>
<td>Loom Works With Gravity</td>
<td>Thumswamy Joseph David</td>
</tr>
<tr>
<td>2730/CHE/2009</td>
<td>Multi Pistons Hybrid -Hydro- Pneumatic Pump</td>
<td>Thumswamy Joseph David</td>
</tr>
<tr>
<td>2739/CHE/2009</td>
<td>Combined Advantage Prime Mover</td>
<td>Thumswamy Joseph David</td>
</tr>
<tr>
<td>2741/CHE/2009</td>
<td>Anchored Forming/Earth Work Machine</td>
<td>Thumswamy Joseph David</td>
</tr>
</tbody>
</table>

The Institute has filed 3 patents recently. The details are:

1. Patent Application Number: 201641021124

   Title: "An Optical System and Processing Method for Human-Viewable Panoramic Stereo Videos using a Single Camera"
   Applicant: "International Institute of Information Technology, Hyderabad"
   Inventors: Anoop M. Namboodiri, Rajat Aggarwal, Amrisha Vohra.


   Title: "Methods, Systems and Computer readable media for providing a query layer for cloud database"
   Applicant: "Infosys Technologies Ltd, Bangalore"
   Inventors: Kamalakar Karlapalem, V. Bharath, V.R. Satyanarayana, Radha Krishna Pisipati.


   Title: "A method and system to determine a key frame for annotating a video"
   Applicant: "International Institute of Information Technology, Hyderabad"
   Inventors: C.V. Jawahar, Priyam Bakliwal, M.H. Guruprasad

3.2.3 Provide the following details of ongoing research projects of faculty:
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Project</th>
<th>Name of funding Agency</th>
<th>Receipt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Investigation of the determinants of high stability of proteins and the genome of hyperthermophilic organisms at elevated temperatures using computational biology approaches</td>
<td>Department of Science &amp; Technology, New Delhi</td>
<td>595000</td>
</tr>
<tr>
<td>2</td>
<td>Insight into the structure function relationship of chemically modified nucleic acids a molecular dynamics simulations study</td>
<td>Department of Atomic Energy</td>
<td>1486625</td>
</tr>
<tr>
<td>3</td>
<td>The representation and acquisition of actions</td>
<td>Department of Science &amp; Technology, New Delhi</td>
<td>1225000</td>
</tr>
<tr>
<td>4</td>
<td>Numeric Analysis of Monopile for offshore wind turbines considering dynamic soil structure interaction.</td>
<td>Ministry of earth Science, Govt of India</td>
<td>624000</td>
</tr>
<tr>
<td>5</td>
<td>Developing translators workbench and enhancing language resources of samprak MT system for user organisation</td>
<td>IIT-BHU</td>
<td>780000</td>
</tr>
<tr>
<td>6</td>
<td>Engineering Anusaaraka MT system for scalable deployment</td>
<td>IIT-BHU</td>
<td>880000</td>
</tr>
<tr>
<td>7</td>
<td>Multi Robot autonomus exploration,lokalization and mapping</td>
<td>Research &amp; development establishment(Engineers) ,DRDO</td>
<td>3000000</td>
</tr>
<tr>
<td>8</td>
<td>Technology foresight study on security technology in the combined thematic areas of Individual and social security and physical and infrastructure security</td>
<td>TIFAC</td>
<td>2800000</td>
</tr>
<tr>
<td>9</td>
<td>Language idendification in practical environments</td>
<td>Science and engineering research board(SERB),DST</td>
<td>955933</td>
</tr>
<tr>
<td>10</td>
<td>ASIC-Chip Tapeout of reconfigurable multiple radix parellel turbo decoder for next generation wireless communication systems</td>
<td>Science and engineering research board(SERB),DST</td>
<td>826000</td>
</tr>
<tr>
<td>11</td>
<td>Computational design of protease inhibitous based on HIV-I Protease subtype</td>
<td>Science and engineering research board(SERB),DST</td>
<td>2050000</td>
</tr>
<tr>
<td>12</td>
<td>Investigation of the physio chemical basis of stacking interactions in Nuclic acid architectures</td>
<td>Indian National Science Academy</td>
<td>500000</td>
</tr>
<tr>
<td>13</td>
<td>Separation quatitative study of protein bound circulating Mirna in diabetes mellitus</td>
<td>Science and engineering research board(SERB),DST</td>
<td>1950000</td>
</tr>
<tr>
<td>14</td>
<td>Performance assessment of Dominant building typologies in gandhinagar/Ahmedabad</td>
<td>Institute of Seismological research,DST,Hovt of Gujarat</td>
<td>500000</td>
</tr>
</tbody>
</table>
31

The details of Major/Minor projects for the years 2011-12, 2012-13, 2013-14 and 2014-15 are given in respective AQAR reports.

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.

INDUSTRY PROJECTS 2015-16

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Project</th>
<th>Name of funding Agency</th>
<th>Receipt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The development of statistical natural language processing technique for information extraction from clinical text</td>
<td>Htachi India p ltd</td>
<td>1000000</td>
</tr>
<tr>
<td>2</td>
<td>Amazon address verification</td>
<td>Amazon development centre(I) P ltd</td>
<td>625000</td>
</tr>
<tr>
<td>3</td>
<td>Statistical natural language processing: information extraction from clinical text</td>
<td>Hitachi India R&amp;D</td>
<td>500000</td>
</tr>
<tr>
<td>4</td>
<td>Mobile content retrieval</td>
<td>Cube 26</td>
<td>600000</td>
</tr>
</tbody>
</table>

CONSULTANCY PROJECTS 2015-16

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Project</th>
<th>Name of funding Agency</th>
<th>Receipt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Crowd management system for godavari pushkaralu</td>
<td>IT &amp; C dept of govt of andhra pradesh</td>
<td>3981000</td>
</tr>
<tr>
<td>2</td>
<td>MEIL</td>
<td>Megha engineering and Infrastructures ltd</td>
<td>90000</td>
</tr>
</tbody>
</table>
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.

Instead of conventional departments, the Institute is having Research centres in its place. All Research centres of the Institute are recognised and receiving the projects from National and International agencies.

3.2.6 List details of

a. Research projects completed and grants received during the last four years (funded by National/International agencies).

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Project Name</th>
<th>Funding Agency</th>
<th>Grant Received Amt in Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Development of Cross lingual information access(CLIA) system</td>
<td>Dept of Information Technology,MCIT Govt of India</td>
<td>11,860,495.00</td>
</tr>
<tr>
<td>2</td>
<td>LED solar/renewable energy</td>
<td>AP state council of science &amp; Technology(APCOST)</td>
<td>360,000.00</td>
</tr>
<tr>
<td>3</td>
<td>Electronic structure and properties based analysis of the effects of the Alternating backbone configuration on the secondary structure of furanoid sugar amino acids and related building blocks</td>
<td>DST(Dept of Science &amp; Technology),New Delhi</td>
<td>2,100,000.00</td>
</tr>
<tr>
<td>4</td>
<td>Efficient representation of speech from throat microphone for transmission and storage of speech information</td>
<td>Defence Research &amp; Development Organisation</td>
<td>1,467,000.00</td>
</tr>
<tr>
<td>5</td>
<td>Cross cultural personality perception</td>
<td>Dept of science &amp; Technology</td>
<td>323,000.00</td>
</tr>
<tr>
<td>6</td>
<td>A platform for implementing intelligent classrooms</td>
<td>Nokia</td>
<td>651,470.00</td>
</tr>
<tr>
<td>7</td>
<td>Development and Implementation of Simultaneous localization and Mapping(SLAM) Algorithms for Truly Autonomous Mobile Robotics</td>
<td>Dept of Atomic Energy</td>
<td>3,149,297.00</td>
</tr>
<tr>
<td>8</td>
<td>Design, Fabrication and Deployment of Snake Robots for Outdoor Applications</td>
<td>DRDO,Directorate of Extremural Research &amp; Intellectual Property Rights(ER&amp;IPR),Govt. of India,Ministry of Defence.</td>
<td>1,495,800.00</td>
</tr>
<tr>
<td></td>
<td>Project Description</td>
<td>Organisation</td>
<td>Amount</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>9</td>
<td>Secure access to launch computer using multimodal Biometrics</td>
<td>Research Centre Imarat</td>
<td>500,000.00</td>
</tr>
<tr>
<td>10</td>
<td>Mapcode: Teaching programming as a mathematical subject</td>
<td>Tata Consultancy services</td>
<td>2,200,000.00</td>
</tr>
<tr>
<td>11</td>
<td>Autonomous Navigation Algorithms for outdoor Environment</td>
<td>CAIR(DRDO), Ministry of Defence, Government of India, Bangalore</td>
<td>995,000.00</td>
</tr>
<tr>
<td>12</td>
<td>Object detection, recognition and scene classification for automated analysis of images and videos.</td>
<td>Defence Research &amp; Development Organisation</td>
<td>1,242,000.00</td>
</tr>
<tr>
<td>13</td>
<td>Second National communication on inventory of greenhouse gases - National land use, land use change and forestry (LULUCF) assessment using satellite data - 3 states</td>
<td>National Remote sensing centre, ISRO</td>
<td>441,000.00</td>
</tr>
<tr>
<td>14</td>
<td>Computer aided tools for 77As</td>
<td>Lions International</td>
<td>900,000.00</td>
</tr>
<tr>
<td>15</td>
<td>Feasibility of ultra low bit rate coding for transmission of speech</td>
<td>Defence Research &amp; Development Organisation</td>
<td>1,423,000.00</td>
</tr>
<tr>
<td>16</td>
<td>Blind modulation classification in the presence of timing and frequency offsets</td>
<td>CABS, DRDO lab in Bangalore</td>
<td>648,000.00</td>
</tr>
<tr>
<td>17</td>
<td>Study of source features for speech systems and speaker recognition</td>
<td>UK India education and Research Initiative</td>
<td>5,323,419.00</td>
</tr>
<tr>
<td>18</td>
<td>Accessing Unstrutured, semi structured Information in Enterprise Environment</td>
<td>Tata Consultancy services</td>
<td>4,200,000.00</td>
</tr>
<tr>
<td>19</td>
<td>Address validation services</td>
<td>Amazon development centre</td>
<td>450,000.00</td>
</tr>
<tr>
<td>20</td>
<td>Geotechnical site characterisation and ground response states for Vijayawada city</td>
<td>Ministry of Earth Sciences</td>
<td>450,000.00</td>
</tr>
<tr>
<td>21</td>
<td>Information Extraction</td>
<td>Satyam Computer Services</td>
<td>475,000.00</td>
</tr>
<tr>
<td>22</td>
<td>Infosys Nurture on Area Project</td>
<td>Infosys</td>
<td>3,900,000.00</td>
</tr>
<tr>
<td>23</td>
<td>Learning by doing(LBD) based course content development</td>
<td>Ministry of Human Resource Development, Dept of Higher Education, Distance Learning Division, New Delhi</td>
<td>3,000,000.00</td>
</tr>
<tr>
<td>24</td>
<td>Deploying esagu at Gramin Gyan Kendra (GGK)</td>
<td>Media lab Asia</td>
<td>800,000.00</td>
</tr>
<tr>
<td>25</td>
<td>Development of methods for interesting graphics into soccer field images</td>
<td>Beehives Systems Pvt Ltd</td>
<td>600,000.00</td>
</tr>
<tr>
<td>26</td>
<td>A platform for implementing intelligent classrooms</td>
<td>Nokia</td>
<td>651,470.00</td>
</tr>
<tr>
<td>27</td>
<td>Dialog Management</td>
<td>Tata Consultancy Services</td>
<td>3,000,000.00</td>
</tr>
<tr>
<td>No.</td>
<td>Description</td>
<td>Implementor</td>
<td>Amount</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>28</td>
<td>Handloom dev. Project</td>
<td>Dr.Reddys lab</td>
<td>435,000.00</td>
</tr>
<tr>
<td>29</td>
<td>National Programme on Perception Engineering</td>
<td>Dept of Information Technology,MCIT Govt of India</td>
<td>12,434,000.00</td>
</tr>
<tr>
<td>30</td>
<td>Organisational network analysis</td>
<td>Broadridge financial solutions (India) P Ltd</td>
<td>150,000.00</td>
</tr>
<tr>
<td>31</td>
<td>Eye tracking</td>
<td>Rediff.com</td>
<td>5,852,000.00</td>
</tr>
<tr>
<td>32</td>
<td>Text inputs methods for Indian languages on meego platform</td>
<td>Nokia India pvt ltd</td>
<td>1,883,190.00</td>
</tr>
<tr>
<td>33</td>
<td>Automated Image Analysis for Glaucoma detection</td>
<td>DST(Dept of Science &amp; Technology)</td>
<td>1,976,000.00</td>
</tr>
<tr>
<td>34</td>
<td>Visual enhancement, manipulation and retargeting of videos</td>
<td>Naval Research board</td>
<td>840,000.00</td>
</tr>
<tr>
<td>35</td>
<td>Designing effective problem-setting gestalts to optimize the performance of crowd workers</td>
<td>Xerox Innovation group,Xerox corporation,USA</td>
<td>2,103,474.00</td>
</tr>
<tr>
<td>36</td>
<td>Multi agent system based simulation driven data generation and visual analytics.</td>
<td>Hitachi system development lab</td>
<td>4,589,479.00</td>
</tr>
<tr>
<td>37</td>
<td>Evaluation of SOA &amp; Multi-lingual portals</td>
<td>Satyam computer services</td>
<td>845,000.00</td>
</tr>
<tr>
<td>38</td>
<td>Development of software for tracking the position of moving objects using image/video</td>
<td>National agricultural improvement and program IIT-DELHI</td>
<td>910,000.00</td>
</tr>
<tr>
<td>39</td>
<td>Seismic site characterisation of vijayawada city using microtremor testing</td>
<td>Department of Science &amp; Technology</td>
<td>1,718,000.00</td>
</tr>
<tr>
<td>40</td>
<td>Dashboard development environment for NLP applicatons</td>
<td>Ministry of communications &amp; Information technology</td>
<td>4,945,000.00</td>
</tr>
<tr>
<td>41</td>
<td>Village level esagu-A Prototype</td>
<td>Centre for good governance</td>
<td>1,775,000.00</td>
</tr>
<tr>
<td>42</td>
<td>Study and Design of Low Power and High Efficiency SRAM for Memories</td>
<td>Dept of science &amp; Technology</td>
<td>897,000.00</td>
</tr>
<tr>
<td>43</td>
<td>Exploration on analysis of images for object detection an country</td>
<td>Amazon development centre(India) Pvt ltd.</td>
<td>960,000.00</td>
</tr>
<tr>
<td>44</td>
<td>Object based attribution &amp; classification - object based change detection and image fusion(CDF-OB)</td>
<td>Defence electronics application lab(DEAL),DRDO</td>
<td>1,246,000.00</td>
</tr>
<tr>
<td>45</td>
<td>Object based segmentation-object creation &amp; Attribution in high resolution images for object based image analysis</td>
<td>Defence electronics application lab(DEAL),DRDO</td>
<td>1,452,000.00</td>
</tr>
<tr>
<td>46</td>
<td>Implementation of human values course in degree college in AP</td>
<td>Commissionate collegiate education</td>
<td>260,660.00</td>
</tr>
<tr>
<td>47</td>
<td>Speech based access for agricultural commodity prices in six indian languages</td>
<td>MCIT-DIT</td>
<td>7,992,000.00</td>
</tr>
<tr>
<td>No.</td>
<td>Project Description</td>
<td>Implementor</td>
<td>Budget (INR)</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------------------------------------------------------------</td>
<td>--------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>48</td>
<td>Emotion Recognition from acoustic cues</td>
<td>Samsung India software operations p ltd., Bangalore</td>
<td>7,850,000.00</td>
</tr>
<tr>
<td>49</td>
<td>Information Security Education and Awareness Project</td>
<td>Dept of Information Technology, MCIT Govt of India</td>
<td>20,442,488.00</td>
</tr>
<tr>
<td>50</td>
<td>Improving the accuracy of TF-IDF score and document ranking using co-reference resolution</td>
<td>AOL-Online india pvt ltd., Bangalore</td>
<td>700,000.00</td>
</tr>
<tr>
<td>51</td>
<td>Kesar Phase I Monitoring</td>
<td>Winbuild, Inc.</td>
<td>398,046.00</td>
</tr>
<tr>
<td>52</td>
<td>Development of prototype software for rendering voxel data on monoscopic and stereoscopic tiled display on a scalable hybrid CPU-GPU Cluster</td>
<td>Anurag, DRDO</td>
<td>996,000.00</td>
</tr>
<tr>
<td>53</td>
<td>Similarity measures and their optimization for video analysis and editing</td>
<td>Dept of science &amp; technology</td>
<td>580,000.00</td>
</tr>
<tr>
<td>54</td>
<td>Distributed and simplified Graphics Library routines</td>
<td>Rockwell Collins</td>
<td>922,790.00</td>
</tr>
<tr>
<td>55</td>
<td>Security and privacy in multimedia databases</td>
<td>Naval Research board</td>
<td>1,393,889.00</td>
</tr>
<tr>
<td>56</td>
<td>Vulnerability Assessment of Nanded city</td>
<td>Govt of Maharashtra, Nanded</td>
<td>1,466,000.00</td>
</tr>
<tr>
<td>57</td>
<td>British council UK award</td>
<td>UK India education and Research Initiative</td>
<td>4,585,597.00</td>
</tr>
<tr>
<td>58</td>
<td>Web with community sourcing of local content</td>
<td>Department of Information Technology, MCIT</td>
<td>9,856,000.00</td>
</tr>
<tr>
<td>59</td>
<td>Specialised Manpower Development in Language Technology-Masters Programme in Computational Linguistics</td>
<td>Dept of Information Technology, MCIT, Govt of India</td>
<td>11,050,000.00</td>
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<tr>
<td>60</td>
<td>Development of Sanskrit computational toolkit and sanskrit to Hindi machine transaction system</td>
<td>Dept of Information Technology, MCIT, Govt of India</td>
<td>5,775,300.00</td>
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<tr>
<td>61</td>
<td>Project work on collection of 1500 hours of speech data in 3 Indian languages</td>
<td>Central Institute of Indian languages, Mysore</td>
<td>1,081,200.00</td>
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<tr>
<td>62</td>
<td>Development of Text to Speech System in Indian Languages</td>
<td>Dept of Information Technology, MCIT, Govt of India</td>
<td>4,702,000.00</td>
</tr>
<tr>
<td>63</td>
<td>Design &amp; optimization of image registration and fusion algorithm</td>
<td>Instruments Research and Development Establishment</td>
<td>2,105,315.00</td>
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<tr>
<td>64</td>
<td>Theoretical Investigations of Photophysics and Photo Chemistry of DNA using metal nano particles</td>
<td>Dept of Science &amp; Technology</td>
<td>2,692,259.00</td>
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<td>65</td>
<td>Assistive Robotics</td>
<td>Insight Foundation</td>
<td>447,128.00</td>
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<tr>
<td>66</td>
<td>Research on usability measurement and analysis tool</td>
<td>Intel, India</td>
<td>1,000,000.00</td>
</tr>
<tr>
<td>No.</td>
<td>Project Title</td>
<td>Funding Agency/Institution</td>
<td>Amount</td>
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<td>67</td>
<td>Multimodal integration of emotional cues by users: Towards a framework for generating multimodal feedback</td>
<td>Samsung Advanced Institute of Technology</td>
<td>4,607,965.00</td>
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<tr>
<td>68</td>
<td>Mission project for virtual labs</td>
<td>Ministry of Human Resource Development</td>
<td>20,000,000.00</td>
</tr>
<tr>
<td>69</td>
<td>“Design and Implementation of Analysis Functionality for Cloud Storage Test-bed”</td>
<td>Hitachi Asia, Singapore</td>
<td>4,998,178.00</td>
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<tr>
<td>70</td>
<td>Enhancement of Quality of IT education in Engg. College</td>
<td>Dept of Information Technology, MCIT</td>
<td>17,082,914.00</td>
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<td>71</td>
<td>e-Agromet: ICT enabled Integrated Agro-Meteorological Advisory system</td>
<td>Govt of India Ministry of Earth Sciences</td>
<td>5,083,167.00</td>
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<tr>
<td>72</td>
<td>Reading Aid Software for Visually impaired</td>
<td>Ministry of Social Justice and Empowerment, Govt of India</td>
<td>2,240,000.00</td>
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<td>73</td>
<td>Entrepreneurship development cell</td>
<td>All India Council for Technical Education</td>
<td>800,000.00</td>
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<tr>
<td>74</td>
<td>Centre for excellence in grid/computing</td>
<td>Yahoo</td>
<td>2,000,000.00</td>
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<tr>
<td>75</td>
<td>E-Governance</td>
<td>AP Government</td>
<td>25,000,000.00</td>
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<tr>
<td>76</td>
<td>Visiting scholars programme at centre for computational approach to Indian Analytic Traditions at IIT, Hyderabad</td>
<td>Rashtriya Sanskrit Sansthan</td>
<td>4,543,130.00</td>
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<td>77</td>
<td>Big data analysis algorithm and implementation</td>
<td>Hitachi India Pvt Ltd</td>
<td>2,270,000.00</td>
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<tr>
<td>78</td>
<td>IO protection strategies in multi-voltage signaling environment in Ics’</td>
<td>Directorate of Extramural Research and Intellectual Property Rights (ER&amp;IPR), DRDO</td>
<td>1,415,196.00</td>
</tr>
<tr>
<td>79</td>
<td>Electronic structure theory based investigation of conformational behavior and secondary structures of substituted B-proline based peptides, conformational studies and biological evaluation</td>
<td>Department of Science &amp; Technology</td>
<td>3,083,963.00</td>
</tr>
<tr>
<td>80</td>
<td>Statistical Natural Language processing technique for facts extraction</td>
<td>Hitachi India Pvt Ltd</td>
<td>1,000,000.00</td>
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<tr>
<td>81</td>
<td>Liquefaction modelling and estimation of dynamic properties of granular materials using discrete element approach</td>
<td>Department of Atomic Energy</td>
<td>2,160,609.00</td>
</tr>
<tr>
<td>82</td>
<td>Numerical modelling study dynamics</td>
<td>AICTE, GOI</td>
<td>391,745.00</td>
</tr>
<tr>
<td>83</td>
<td>Grid computing under nurture an area</td>
<td>24X7 Customer (p) Ltd</td>
<td>1,200,000.00</td>
</tr>
<tr>
<td>84</td>
<td>ASIC Chip development of a high performance digital fuzzy processor</td>
<td>Science and Engineering Research Board (SERB), DST</td>
<td>560,500.00</td>
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<tr>
<td>85</td>
<td>Mobile and static cognitive wireless sensor networks</td>
<td>DIT (Dept of Information Technology)</td>
<td>7,315,000.00</td>
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<tr>
<td>No.</td>
<td>Project Title</td>
<td>Implementing Agency</td>
<td>Budget</td>
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<tr>
<td>-----</td>
<td>------------------------------------------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>86</td>
<td>Preprocessing and Analysis of POC data</td>
<td>Unique indentification authority of India</td>
<td>750,000.00</td>
</tr>
<tr>
<td>87</td>
<td>Development of speech recognition algorithm for airborne control system</td>
<td>Hindustan aeronautics ltd</td>
<td>696,000.00</td>
</tr>
<tr>
<td>88</td>
<td>CRD collaborative research: A multi representational and multi-layered tree bank for hindi/urdu</td>
<td>University of Colorado</td>
<td>16,139,399.00</td>
</tr>
<tr>
<td>89</td>
<td>Evaluation and customization of the sampark system for yahoo use.</td>
<td>Yahoo</td>
<td>974,860.00</td>
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<tr>
<td>90</td>
<td>Halo 2010 development project</td>
<td>Standford Research Institute International</td>
<td>1,463,733.00</td>
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<tr>
<td>91</td>
<td>Road marking recognition</td>
<td>Renault nissan technology and business centre india p ltd</td>
<td>2,000,000.00</td>
</tr>
<tr>
<td>92</td>
<td>Parallelized segmentation for monocular cameras with temporal coherence</td>
<td>Renault nissan technology and business centre india</td>
<td>1,850,000.00</td>
</tr>
<tr>
<td>93</td>
<td>Indian language input method</td>
<td>Nokia university research grant</td>
<td>782,004.00</td>
</tr>
<tr>
<td>94</td>
<td>Integrated indoor navigation system</td>
<td>UURMI systems</td>
<td>385,000.00</td>
</tr>
<tr>
<td>95</td>
<td>Singularity-free reactionless manipulation of a satellite mounted dual arm</td>
<td>Science and engineering research board(SERB),DST</td>
<td>2,116,000.00</td>
</tr>
<tr>
<td>96</td>
<td>Innovation in science pursuit for inspired research(INSPRIRE)</td>
<td>Dept. of Science &amp; Technology</td>
<td>1,373,722.00</td>
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<td>97</td>
<td>HP summer 2005</td>
<td>HP Labs Pvt Ltd.</td>
<td>125,000.00</td>
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<tr>
<td>98</td>
<td>LTRC NLP Training</td>
<td>Ministry of Information Technology</td>
<td>600,000.00</td>
</tr>
<tr>
<td>99</td>
<td>UK India intercultural knowledge transfer in technology enhanced school and home support for autism spectrum conditions</td>
<td>London knowledge lab,University college,London</td>
<td>157,641.00</td>
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<tr>
<td>100</td>
<td>Generativity in cognitive networks</td>
<td>Dept of science &amp; Technology</td>
<td>1,656,000.00</td>
</tr>
<tr>
<td>101</td>
<td>Independent motion detection/segmentation for moving monocular cameras</td>
<td>Renault Nissan Technology</td>
<td>440,000.00</td>
</tr>
<tr>
<td>102</td>
<td>Vision based algorithms for outdoor navigation</td>
<td>Department of Science &amp; Technology</td>
<td>3,090,583.00</td>
</tr>
<tr>
<td>103</td>
<td>Solar powered quarry machine</td>
<td>Green oorja solutions pvt ltd</td>
<td>1,000,000.00</td>
</tr>
</tbody>
</table>

b. Inter-institutional collaborative projects and grants received

i) All India collaboration - 33
ii) International - 27

We collaborate with several dozen top international institutions including the Carnegie Mellon University, University of Pennsylvania, INRIA, UC Berkeley, Hebrew University, Bauhaus University,
University of the Aegean, University of Dundee, Dublin City University, University of Colorado, Ecolecentrale Paris, and Oak Ridge National Laboratory, Aalto University, University of Cambridge, University of Quebec, Tampere University of Technology, Vrije Universiteit, National University of Rosario, University of Burgundy, Uppsala University, University of Mainz, University of Paris-Sud, Michigan State University, University of Maryland, University of Shanghai, University of Leiden, Mälardalen University.

3.3 Research Facilities

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?

- IIITH is organized as research centers (RCs) and not as departments and each RC starts with certain seed grant and is autonomous. RCs write proposals and obtain funds which can be spent on improving the centre's facilities
- IIIT-H centrally provides very high end computing infrastructure and licenses to software that is needed for conducting research in niche areas
- IIIT-H also provides special grants to RCs for their special needs such as buying equipment
- Strategy followed is to decentralize and empower the research centres and faculty members, while taking care of many common needs

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.

The Dean R&D office has a portal that provides required information for faculty members to conduct research. This includes information on funding agencies, help in writing proposals, help in managing research projects etc. Research faculty handbook, Research Centre Handbook are published and updated in regular intervals. This portal can be accessed at [http://rnd.iiit.ac.in/](http://rnd.iiit.ac.in/) - special login is required to access the facilities provides for faculty members.

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?

Yes - the Science Instrumentation lab is available and any research student can access these facilities. The budget allotted for this is Rs. 4.0 lakhs for the year 2016-17.

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

Yes - the campus is completely residential. All the faculty quarters and student hostels have internet facilities and ALL students, including visitors and interns have access to internet and lab facilities 24 hours a day.

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?

IIIT-H is organised as Research Centres. All RCs are inside the campus (no off-campus facilities or extensions) - this is single-campus University. Many research centres address the special challenges specific to a domain and conduct research.
3.3.6 Does the university have centres of national and international recognition/repute? Give a brief description of how these facilities are made use of by researchers from other laboratories.

IIIT-H has about 25 research centres of national and international repute and recognition. Many research students and faculty members from other institutions across the country and several from outside India visit and participate in our collaborative research efforts. For example: Our virtual lab project engages several hundred colleges and their students and faculty members. Similarly, there are many international collaborative projects where researchers from European Union, Americas and Asia come and spend time with our faculty and research students in our research labs.

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.

Not yet - we are planning to start soon.

3.4.2 Give details of publications by the faculty:

* Number of papers published in peer reviewed journals (national / international)

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>International</td>
<td>43</td>
<td>51</td>
<td>63</td>
<td>57</td>
</tr>
<tr>
<td>National</td>
<td></td>
<td>3</td>
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<td>8</td>
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</table>

* Chapters Edited

* Books with/without ISBN

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<thead>
<tr>
<th></th>
<th>With ISBN No</th>
<th>Without ISBN No</th>
<th>Chapters Edited</th>
</tr>
</thead>
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<td>3</td>
<td>12</td>
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<tr>
<td>2012-2013</td>
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<td></td>
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<tr>
<td>2013-2014</td>
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<td></td>
<td></td>
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<tr>
<td>2014-2015</td>
<td>3</td>
<td>2</td>
<td>5</td>
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<tr>
<td>2015-2016</td>
<td>1</td>
<td></td>
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* Number listed in International Database (For e.g. Web of Science, Scopus, Humanities International Complete, EBSCO host, etc.)
<table>
<thead>
<tr>
<th>Year</th>
<th>Range</th>
<th>Average</th>
<th>h-index</th>
<th>Nos. in Scopus</th>
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<td>0</td>
<td>185</td>
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<tr>
<td>2012-2013</td>
<td>1-47</td>
<td>7.32</td>
<td>0</td>
<td>148</td>
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<td>2013-2014</td>
<td>1-55</td>
<td>5.2</td>
<td>11</td>
<td>183</td>
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<td>2014-2015</td>
<td>1-29</td>
<td>3.75</td>
<td>0</td>
<td>156</td>
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<tr>
<td>2015-2016</td>
<td>1-16</td>
<td>2.35</td>
<td>5</td>
<td>174</td>
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</table>

3.4.3 Give details of

* faculty serving on the editorial boards of national and international journals

<table>
<thead>
<tr>
<th>Name</th>
<th>Editorial board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Vasudeva Varma</td>
<td>Member of editorial board of international Journal called: Journal of Software Engineering Research and Development</td>
</tr>
<tr>
<td>Prof. P J Narayanan</td>
<td>Assoc Editor of JPDC</td>
</tr>
<tr>
<td>Prof. Jawahar</td>
<td>editor of IEEE T-PAMI and CVIU,</td>
</tr>
</tbody>
</table>

* faculty serving as members of steering committees of international conferences recognized by reputed organizations / societies

<table>
<thead>
<tr>
<th>Name</th>
<th>Steering committees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. P K Reddy</td>
<td>Pacific-Asia Knowledge Discovery and Data mining (PAKDD) (<a href="http://pakdd.togaware.com/scmembers.html">http://pakdd.togaware.com/scmembers.html</a>).</td>
</tr>
</tbody>
</table>

3.4.4 Provide details of

* research awards received by the faculty and students
* national and international recognition received by the faculty from reputed professional bodies and agencies

Faculty achievements for the past year include:

- Prof. Nand Kishore Acharya, Professor of eminence in CEH was honoured by the prestigious Kendriya Sangeet Natak Academy award for his contribution to play-writing. He will receive the award from the President of India on 4th October in Rastrapati Bhavan, New Delhi.
- Prof. P Krishna Reddy, Professor, Center for Data Engineering (CDE), has been appointed as a member of the sub-group of the Task Force on the Use of Technology in IT/ ICT in Insurance by NITI Aayog.
- Prof. C V Jawahar, Professor, Center for Visual Information Technology (CVIT) was appointed as Associate Editor of IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI).
- Prof. C V Jawahar, was also elected as an “Outstanding Reviewer” for the prestigious conference on Computer Vision and Pattern Recognition (CVPR).
- Dr. Ashok Kumar Das, Assistant Professor, Center for Security, Theory & Algorithmic Research (CSTAR), was appointed as an Editor for the KSII Transactions on Internet and Information Systems.
- Dr. Ubaidulla P, Assistant Professor, Signal Processing and Communications Research Center (SPCRC), was elected to IEEE Senior Member grade.
• Dr. Ubaidulla P, Assistant Professor, Signal Processing and Communications Research Center (SPCRC), was awarded Young Faculty Award as part of Vivesvaraya PhD scheme supported by DietY.
• Prof. Jayanthi Sivaswamy, Professor, Center for Visual Information Technology (CVIT) was appointed a member of Research Advisory council of Sree Chitra Tirunal Institute of Medical Sciences and Technology.
• Dr. Supriya Mohanty, Dr. Sachin Chaudhari, Dr. Vinod Palakkad Dr. Prasad Krishnan, and Dr. Rahul Shrestha have received the "Early Career Research Award" from the Science and Engineering Research Board, Department of Science and Technology.
• Dr. Anil Kumar Vuppala and Dr. Sheikh Rehana won Young Scientist Research Award, Science and Engineering Research Board (SERB), DST.
• Dr. U Deva Priyakumar, Associate Professor, Center for Computational Natural Sciences and Bioinformatics (CCNSB), was awarded the JSPS Invitation fellowship by Institute of Molecular Science, Okazaki, Japan.
• Dr. Vishal Garg, Associate Professor, Center for IT in Building Science is a member of the panel introducing a new chapter “Part 11-Approach to Sustainability” in the National Building Code of India, by BIS.

Our researchers have done well in national and international technical conferences and competitions their special achievements include:

• PhD student, Aniket Singh under guidance of Dr. Anoop Namboodiri from Center for Visual Information Technology (CVIT), was awarded best paper award for the paper titled “Laplacin Pyramids for Deep Feature Inversion” at 3rd IAPR Asian Conference on Pattern Recognition (ACPR 2015).
• MS by Research student, Sunil Kumar Maddigatla and Dr. Srivatsava Jandhyala from Center for VLSI and Embedded Systems Technology (CVEST), were awarded best paper award for the paper title “An Accurate CMOS Integrated Temperature Sensor for IOT Applications” at IEEE Computer Society Annual Symposium on VLSI (ISVLSI) which was held in Pittsburg, Pennsylvania, USA.
• Dr. Vineet Gandhi, Senior Research Scientist, Center for Visual Information Technology (CVIT), was awarded the best paper award for the paper titled “Capturing and Indexing Rehearsals: The Design and Usage of a Digital Archive of Performing Arts” at Digital Heritage, 2015.
• MS by Research student, Sumit Gautam under guidance of Dr. P Ubaidulla from Signal Processing and Communication Research Center (SPCRC), was awarded best paper award for the paper titled “Simultaneous Transmission of Information and Energy in OFDM Systems” at Proc. IEEE Wireless Personal Multimedia Communications (WPNC2015).
• MS by Research student, Chandan Pradhan under guidance of Dr. G Rama Murthy from Signal Processing and Communication Research Center (SPCRC), was awarded best paper award for the paper titled “Full-Duplex Transceiver for Future Cellular Network: A Smart Antenna Approach” at International Conference on Advanced Networks and Telecommunications Systems (ANTS 2015).
• Dual Degree student, Nishith Maheshwari under guidance of Dr. K S Rajan from Lab for Spatial Informatics (LSI), was awarded best poster award for the paper titled “A semantic model to define indoor space in context of emergency evacuation” at International Society for Photogrammetry and Remote Sensing congress (ISPRS) 2016 which was held in Prague. This is an 100 year old conference which holds the once conference once in 4 years.
• PhD student, Sandhya Rai under guidance of Dr. U Deva Priyakumar from Center for Computational Natural Sciences and Bioinformatics (CCNSB), was awarded best poster award at Theoretical Chemistry Symposium 2015
• PhD student, Siladitya Padhi under guidance of Dr. U Deva Priyakumar from Center for Computational Natural Sciences and Bioinformatics (CCNSB), was awarded best poster award at Theoretical Chemistry Symposium 2015
• Dual Degree student, Abhinav Mittal under guidance of Prof. Abhijit Mitra from Center for Computational Natural Sciences and Bioinformatics (CCNSB), has topped in BINC 2016
• PhD student, Broto Chakrabarty under guidance of Dr. Nita Parekh from Center for Computational Natural Sciences and Bioinformatics (CCNSB), secured All India 1st Rank in Bioinformatics National Certification (BINC) – 2015 organized by Department of Biotechnology (DBT)
• Aviruch Bhatia, PhD student in Center for IT in Building Science is selected for “Building Energy Efficiency Higher & Advanced Network (BAHAVAN) internship program supported by DST, Govt. of India and the Indo-U.S. Science and Technology Forum (IUSSTIF). As part of the internship, he will be working with Lawrence Berkeley National Laboratory, USA to contribute his expertise in “Building Technology Urban Systems Division”.
• PhD student, Swetha Bikkina under the guidance of Dr. U. Deva Priyakumar from Center for Computational Natural Sciences and Bioinformatics (CCNSB) was awarded DST Women Scientist Fellowship
• Sridhar Chimalakonda, PhD student in Software Engineering Research Center was Co-Editor for two international standards (ISO/IEC 26551, 26555) in the area of software product lines. His PhD work was appreciated by Director General, National Literacy Mission Authority, Government of India and is slated to be experimented across India.
• Lalit Mohan, PhD student in Software Engineering Research Center was chosen as Panel Speaker @ CII National Cloud Summit.
• Padmalata Nistala, PhD student in Software Engineering Research Center conducted a 60 minute Session @ American Society for Quality (ASQ) titled ‘A Synthesis Approach to Achieving Product Quality’ in Milwaukee, USA, May 2016.

3.4.5 Indicate the average number of successful M.Phil. and Ph.D. scholars guided per faculty during the last four years. Does the university participate in Shodhganga by depositing the Ph.D. theses with INFLIBNET for electronic dissemination through open access?

35 students have successfully graduated in M.Phil and PhD programmes for the last 4 years. Yes. The Institute participates in Shodhganga.

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.

We are implementing a process where research students check their papers and theses on an open source plagiarism detection tool and report the results. Once this step is cleared, the Dean R&D staff will use a licensed version of the tool and alert the faculty/students if they find any violations.

We have found handful of cases (less than ten) in the past five years and these cases were reported to Disciplinary Committee (DC) and the action recommended by the DC were implemented.

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 endeavours?

Interdisciplinary research is one of the most important characteristics of IIIT-H. Most research centres in IIIT-H are engaged in interdisciplinary research. However, the following research centres that are exclusively focused on inter-disciplinary research:

Centre for IT in Education
Centre for IT in Agriculture
Centre for Exact Humanities
Centre for Computational Natural Sciences  
Centre for Building Sciences  
Earthquake Engineering Research Centre  
Lab for Spatial Informatics  
Centre for Education Technologies and Learning Sciences  
Cognitive Science  
Language Technologies Research Centre

There are more than 100 projects undertaken which are interdisciplinary in nature.

3.4.8 Has the university instituted any research awards? If yes, list the awards.

Yes. To recognize students of the non-research programmes who do recognized research and those who publish papers in recognized forums by placing them in a “Research List”, along the lines of honouring students for academic performance.

3.4.9 What are the incentives given to the faculty for receiving state, national and international recognition for research contributions?

Visibility within the institute by providing wide publicity. Visibility in larger society by engaging a public relations firm for wider media coverage. Providing additional Faculty Development Grant (planned from current academic year).

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.

Policy of the Institute

A consultancy task is taken up when a client, generally, an industry or an institution approaches – IIIT-H with a specific problem for advice. There might be very little direct research produced by carrying out the task, however it is based on high end expertise of the faculty not easily available outside.

At this point two types of consultancy tasks are recognized: individual and institute-supported consultancy tasks.

A) Individual Consultancy Tasks

These would typically be expert advice by the individual faculty to the sponsoring organizations. Nominal usage of institute resources like telephone, Internet etc, is allowed.

- Availing of external assistance and subcontracting are permitted.
- One in seven day week is allowed for consultancy.
- Any know-how developed as a part of the consultancy assignment might be the property of the client, depending on the agreement. An IPR generated, can be taken jointly with the client.
- Wherever necessary, a Memorandum of Understanding can be signed between the Institute and the client in which the terms and conditions for the award and execution of the task can be explicitly stated. The institute will neither be liable for the terms & conditions of the agreement nor will the institute give any Bank guarantee or Indemnity Bond for the money
received from the clients.

- 85% of the consultancy charges are given to the faculty. There is a cap of 2 times the gross salary/annum for the total income from all consultancy tasks.

Some examples of such types of consultancy tasks are: technical evaluation of projects from government agencies, member of a government initiated committees, from industry, academic institutions, etc.

B) Institute-Supported Consultancy Tasks

These are consultancy assignments carried out at the institute mainly utilizing the existing facilities, knowledge or expertise of the consultant(s). Such tasks are not the norm but an exception, and are to be approved on a case to case basis, weighted against the social need and novelty of the area/project. All such projects should be submitted to an evaluation committee for discussion and are approved in only those areas where there is little or no expertise or industrial capacity available in the country.

The following are the applicable features of the specified types of consultancy.

- Facilities of the Institute can be utilized for the assignments. Budget provisions must be given in the task proposal towards charges for using such facilities. There will be a 25% overhead upfront to cover any indirect costs.
- Purchase of materials and employment of staff specifically for the task and travel under the assignment are permitted.
- Availing of external assistance and subcontracting are permitted.
- Students and others can be employed on a part-time or full-time basis with remuneration as per norms & type of work.
- Wherever necessary, a Memorandum of Understanding can be signed between the Institute and the client in which the terms and conditions for the award and execution of the task can be explicitly stated. The institute will neither be liable for the terms & conditions of the agreement nor will the institute give any Bank guarantee or Indemnity Bond for the money received from the clients.
- A task that requires more than 1 day a week of effort from the faculty has to be mentioned in the initial proposal to the committee and approved.
- Faculty members can draw additional remuneration up to 20% of the cost of the task, which should be part of the approved budget.
- There is a cap of 2 times the gross salary/annum for the total income from all consultancy tasks.
- The institute should have a non-exclusive rights to any IPR generated to be used for research purposes.

Some examples of tasks that fall under this criterion are: tasks from government, industry or academic institutions in niche areas that IIIT-H is one of the few where such expertise exists, like spatial informatics, bio-robotics, green buildings, earthquake engineering, etc.

Consultancy projects

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Project</th>
<th>Name of funding Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cool roof calculator enhancement</td>
<td>Winbuild technologies</td>
</tr>
<tr>
<td>2.</td>
<td>Karnataka ECEC Training 2</td>
<td>KECBC</td>
</tr>
<tr>
<td>3.</td>
<td>Web portal for ECBC information sharing</td>
<td>Climate works foundation</td>
</tr>
<tr>
<td>4.</td>
<td>Lazarus 2</td>
<td>Lazarus hospitals ltd</td>
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<td>-------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>5.</td>
<td>Development of indian building energy code-2</td>
<td>Shakti energy sustainable energy foundation</td>
</tr>
<tr>
<td>6.</td>
<td>Panthnagar</td>
<td>Global cool cities alliance</td>
</tr>
<tr>
<td>7.</td>
<td>Net zero house design in ahmedabad</td>
<td>Winbuild Inc.</td>
</tr>
<tr>
<td>8.</td>
<td>Coofroof project on low cost housing with metal roof in ahmedabad</td>
<td>Winbuild Inc.</td>
</tr>
<tr>
<td>9.</td>
<td>LIG cool roof</td>
<td>GCCCA</td>
</tr>
<tr>
<td>10.</td>
<td>coolroots for rural :Saving energy Beating the heat affordably</td>
<td>World bank</td>
</tr>
<tr>
<td>11.</td>
<td>Crowd management system for godavari pushkaralu</td>
<td>IT &amp; C dept of govt of andhra pradesh</td>
</tr>
<tr>
<td>12.</td>
<td>MEIL</td>
<td>Megha engineering and Infrastructures ltd</td>
</tr>
<tr>
<td>13.</td>
<td>Measuring building indoor environment using aerial vehicles</td>
<td>Saint-gobain research india p ltd</td>
</tr>
<tr>
<td>14.</td>
<td>Lake management and monitoring system for mission kakatiya</td>
<td>Irrigation &amp; CAD Dept.,Govt of Telangana</td>
</tr>
</tbody>
</table>

3.5.2 Does the university have a university-industry cell? If yes, what is its scope and range of activities?

Yes. It is Banyan Intellectual Initiatives has established centers of excellence in education, training and research in the field of Information Technology in order to sustain and complement the strategies to create high quality infrastructure with the following objectives.

i) To take up Incubation Projects to develop new technologies such as Information Technology, Bio informatics, Life Sciences etc., or such sciences which have an interface with Information technology or in any other related areas of science & technology, either on its own or in partnership with one or more entities located within or outside India.

ii) To undertake productization and/or engineering of prototypes developed at the INSTITUTE or outside.

iii) To provide services to Incubation Projects such as mentorship, infrastructure support, investments, technology transfer and others at a price, particularly for social, governmental or NGO sectors.

iv) To hold Intellectual Property that can be licensed, transferred or used to build products.

v) To hold shares, debentures, warrants or any securities in companies registered under The Companies Act, 1956 developed by the students, alumni and/or staff of INSTITUTE, or outside technologies entrusted to the SOCIETY, transferred to such companies as part of joint venture, technical collaboration, investment, advisory services, infrastructure support or technology transfer agreements.

vi) To charge money in the form of rent or interest or fees in exchange for the services, infrastructure support, technology transfer, investments and others.

vii) To provide funds to Incubation Projects as grants, loans, or investment for equity stake.

viii) To take up consultancy projects, assignments from any person within or outside India.

ix) To enter into technical and financial collaboration with foreign or Indian collaborators for consideration in cash or in exchange of shares.

x) To sponsor research at INSTITUTE that can be applied as real-world technologies.

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?
Typically, through our website, Industry interaction sessions (like Confluence Hyderabad event). Currently Computer Science, ECE, eGovernance and Civil Engineering faculty members are sought after for consultancy services.

3.5.4 How does the university utilize the expertise of its faculty with regard to consultancy services?

When Institute receives requests for consultancy or bids on its own, relevant faculty members are informed and given a choice to participate in the consultancy activity. Individual consultancy projects highly incentivise the faculty members.

3.5.5 List the broad areas of consultancy services provided by the university and the revenue generated during the last four years.

- Building automation
- Energy efficiency
- Ground improvement
- Earthquake safety of buildings, dams

3.6 Extension Activities and Institutional Social Responsibility (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.

Our students visited orphanages to celebrate important festivals, such as Rakshabandhan, Holi and Diwali, with the inmates. A major drive on collection of used clothes has been carried out by Suraksha, successfully. NSS is supporting these and other service activities.

Two of our students were selected for Spic Macay Gurukul programme for the summer of 2012. One of them spent one month at H. H. Dalai Lama’s monastery in Dharamsala and the other student spent one month with Smt. Aruna Roy and the Mazdoor Kisan Shakti Sangathan, in Rajasthan getting first hand experience of the spiritual and the social reality respectively.

The institute is involved with the development of over 30 virtual labs under MHRD’s National Mission on Education through Information and Communication Technology (NMEICT). These includes labs in Computer Science and ECE as well as several labs in Sciences and Civil Engineering. A team from IIIT is additionally providing the platform and engineering support for virtual labs developed by other institutions.

IIIT-H helped to train teachers of engineering colleges in AP and is also providing them digital courseware to train their students.

The Human Value cell has conducted several workshops, training programmes, and guest lectures all over the country. A major Faculty Development Program for teaching Foundation Course on Human Values & Professional Ethics (HVPE) to the teachers of all Govt. Degree Colleges in the State is underway.

MHRD, GoI has initiated setting up of 20 IIIT’s under the N-PPP model through out the country. These are being setup in the IIIT-H Model as a partnership among the central government through MHRD, the state government, and private partners. IIIT-H has played a key role in developing the academic programmes and faculty of IIIT at Sricity.
The Center for Innovation & Entrepreneurship (CIE) spearheads this activity under the Banyan Intellectual Initiatives, a IIIT Hyderabad Foundation. We today have the largest academic incubator in the country. The institute worked closely with the Telangana Government to set up the country’s biggest and the best incubation and start-up ecosystem in Hyderabad.

The institute has signed an MoU with TASK (Telangana Academy for Skill and Knowledge). As per the MoU, TASK will help in the outreach activities of Virtual Labs across 100 engineering colleges in Telangana.

HV Cell has played a major role in introducing "A Foundation Course on Human Values & Professional Ethics (HVPE)" as a subject in degree colleges of Telangana and Andhra Pradesh. Presently the course is running in nearly 3000 colleges under 17 universities. A total of around 5 lakh students are studying this course.

Asha Kiran (a ray of Hope) is a school run by IIIT students for kids who come from nearby slums. We teach them Telugu, Maths, English and Hindi. Age group of these kids range from 6-15yrs. Apart from the normal teaching methodology we also adopt various other means such as learning through videos and games. These children also participate in few of the cultural activities of the college. The classes are held 6 days a week in the evening and after the classes snacks are also been served to the kids. Moreover it is about spreading education among the masses and fun at the same time, becoming children with the kids.

3.6.2 How does the university promote university-neighbourhood network and student engagement, contributing to the holistic development of students and sustained community development?

IIIT-H is part of the knowledge hub in Gachibowli, with active association with University of Hyderabad, Indian School of Business and various industry R&D centres including CMC, TCS, Infosys, Wipro and Microsoft. For various activities, all neighboring institutions are regularly invited to share the various activities and thereby contribute sustained community development. IIIT-H students are regular participants to various training and community activities being organized by all neighboring institutions forming part of Gachibowli Knowledge Hub.

Under Humanities projects a few students have also undertaken studies on nearby villages.

Asha Kiran, a school for the children of workers is run at IIIT-H, by student volunteers.

A strong program in Human Values at IIIT-H promotes thoughtfulness and contemplation among students regarding their own thoughts and feelings, sensitivity in their relationships, societal awareness and concern for nature. It is also offered to faculty from other colleges, NGOs, common folk, etc.

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?

With the vibrant student population of over 1200, the students are encouraged thru Students Life Committee (SLC) to take part in various community extension activities in collaboration with NGOs and other organizations. For example, during the elections student community worked with professionals in software industry to promote awareness for exercising the citizen right of franchise. During calamities like floods, earthquakes, IIIT-H student community has visited the affecting areas and contributed in helping the affected population. With the current issue of global warming and climate change, necessary efforts are being made by IIIT-H student and
faculty to ensure that much needed awareness is created in and around IIIT-H campus including the software industry. Measures are of course taken within the campus to curb waste of electricity, water and food and reduce plastic.

NSS activities include Swachh Bharat, Tree plantation, organising blood donation camp, visiting orphanage centres and celebrating festivals with children, collection of old clothes and distribution through Goonj, an NGO, helping organic farms inside the campus.

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?

- Training faculty and students from rural engineering colleges as part of “Enhancing quality of IT education in engineering colleges”
- Conducting workshops on open source tools in order to improve the productivity of the faculty and students of engineering colleges.
- Involving orphan children from SOS village during the time of R&D show cases. They enjoyed the visit and looking at learning Math and English through interesting games and activities and visiting the Robotics lab.
- Training mentors for Rajiv Gandhi University of Knowledge Technologies (RGUKT)
- EERC has developed a CD for disaster preparedness related to earthquake disasters. It has developed several models keeping school education as focus. Many programmes have been conducted regarding awareness in schools.
- Conducting “Jeevan Vidya” shivirs and short workshops periodically and a major Faculty Development Programme for teaching Foundation Course on Human Values & Professional Ethics (HVPOE) to the teachers of all Govt. Degree colleges in the State
- Development of over 40 virtual labs under MHRD’s National Mission on Education through Information and Communication Technology (NMEICT)
- The Institute has an active programme to promote entrepreneurship to take its research to the Society. The Centre for Innovation & Entrepreneurship (CIE) spearheads this activity under the Banyan Intellectual Initiatives.
- The Institute worked closely with the Govt. Of Telangana to set up country’s biggest and the best incubation and start-up ecosystem in the Campus.
- IIIT-H has been identified by MHRD as the model for their New scheme on setting up 20 new IIITs in select States.
- We run a STEP programme over the summer to familiarize school children to Computational Thinking and Problem Solving.
- A Women Entrepreneurship Programme (WEP) was organised over a 2 week period by EEG & CIE for women undergrad students of IIIT-H and IIIT-S.
- Several Hackathons were conducted in the Institute
3.6.5 Does the university have a mechanism to track the students’ involvement in various social movements / activities which promote citizenship roles?

Yes. The Institute has constituted Committees called (a) ‘Students Life Committee’ chaired by a Senior Faculty, (b) NSS Committee chaired by a Faculty member. The students are encouraged thru these committees to take part in various community extension activities in collaboration with NGOs and other organizations, and (c) Human Values cell Chaired by in house faculty, conducts Jeevan vidya shivirs and short workshops which help in increasing awareness of reaching social justice through harmony in self, family, society and nature.

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.

The Institute organises R&D Showcase and Distinguished lectures and lectures by eminent people from academic and industry.

Outcome :

- Enhanced learning
- Student discipline
- Exposure to the outside world the research projects undertaken by the students and,
- setting long term goals

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.

Faculty, staff and students participate enthusiastically in all outreach activities of the Institute in:

- Human values
- Asha Kiran
- Blood donation camp
- NSS
- Disaster relief activities

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 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?

Attracted talented research students to work on collaborative research projects in the Institute

Benefits:

- Collaboration with internationally recognised research organisations and institutions has
added value to the Institute research,

- Students have been greater exposure on the frontiers of their respective areas

3.7.2 Mention specific examples of how these linkages promote

* Curriculum development

Collaboration with other universities helps in updating the curriculum with latest developments in the subjects. Eminent people from academia and industry are part of our Academic Council who are playing vital role in development of curriculum

* Internship & On-the-job training

The visits of the students to the institutions/ Industry with linkages as a part of curriculum for project work provide admittance to advanced technologies and to improve their technical skills. Students are encouraged to go for field visits for practical exposure. Students participate in summer internship programmes in reputed academic institute and industries in India and abroad.

* Faculty exchange and development

At least a dozen of our faculty members in the past have gone for summer / winter for collaborative research work in top quality academic / research organizations in the world.

* Research

At least 30 research projects are running out of which 10 are multi-institute collaborative research projects. These projects are cutting edge research areas results of which are directly applicable to societal benefit. For example, Machine Transaction work, automatic car navigation, disaster risk assessment of cities, vision etc.,

* Publication

Institute is publishing over 350+ publications every year in peer reviewed journals/conferences. Our UG and M.Tech students are also part of these publications.

* Consultancy

Institute is providing consultancy in specialised areas like building energy efficiency/ LEED rating.

* Extension

Institute has NSS wing which conducts blood donation, swatch bharat and tree plantation and etc., Institute has established a Human Value cell which offers an essential course on Human Values for the UG students for 2 semesters. HV Cell also offers an outreach program to degree colleges in Andhra Pradesh and Telangana State.

* Student placement

Placement Department certainly help the students in guiding about the various corporate Profile and Job Profiles to them. If anyone interested to become entrepreneur, they can approach to CIE
(Center for Innovation and entrepreneurship) for further assistance.

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?

The Institute has signed MoUs with several educational/industry counterparts in the country to enhance its education and research activity. The details of the MoUs entered are given below:

In the year 2016
1. MoU with KAIINOS Geospatial Technologies Pvt Ltd.

In the year 2015
1. MoU with Footprint Global Communication
2. MoU with TCS Ltd. and TCS Foundation
3. MoU with Prof. Jayashankar Telangana State Agricultural University

In the year 2013
1. MoU with Kyungpook National University
2. Letter of Intent with ASTU, Ethiopia

In the year 2012
1. Collaboration agreement with CA (India) Technologies Pvt Ltd.
2. Sponsored Research Agreement with Green Oorja Solutions
3. MoU with AIZYC Technology Pvt Ltd

In the year 2011
1. MoU with Cranes Software International Ltd., Bangalore
2. Corporate Non-Disclosure Agreement with Intel Corporation
3. MoU with JNTU – CMU & IIIT-H through CETLS

3.7.4 Have the university-industry interactions resulted in the establishment / creation of highly specialized laboratories / facilities?

Yes. TCS has supported the Institute to the tune of Rs. 20 Crores to establish the FC Kohli Centre on Intelligent Systems to synergize research in these areas at the Institute.

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1 Physical Facilities

4.1.1 How does the university plan and ensure adequate availability of physical infrastructure and ensure its optimal utilization?

IIIT-H sits on 66-acre lush green campus with all infrastructure facilities with 1.0 lakh Sqm of built up area to cater the needs in the campus.

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.

Lecture Halls named as Bhodh Bhavan in Academic building are built in eco friendly with natural lighting and ventilation with a built up area 45,000 sft in three floors to accommodate 6 class rooms of 60 capacity, 6 class rooms of 100 capacity and 2 lecture halls of 230 capacity.

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?

Research centres named as Shodh Bhavan in Academic building are built in four floors with a built up area 69000 sft aesthetically designed with natural lighting and ventilation to suit for research environment

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, all the departments have independent facilities and separate rest rooms for women students and staff as per NBC standard norms.

4.1.5 How does the university ensure that the infrastructure facilities are disabled-friendly?

For disable–friendly the university provided entrance ramps, lifts and rest rooms in all buildings in campus.

4.1.6 How does the university cater to the requirements of residential students? Give details of

Separate hostels are provided for girls and boys with all facilities in the campus with a total built up area 5.10 lakh sft.

* Capacity of the hostels and occupancy (to be given separately for men and women)

- **Palash Nivas (Old Boys Hostel)**
  
  There are 384 Nos. of single rooms and 224 Nos. of double rooms to accommodate 832 students. It is 4 storied building with 6 stair cases, common toilets and other facilities like reading rooms, TV room, indoor game, 2 messes and dining halls. The plinth area of this building is 2.15 Lakh Sft.

- **Kadamba Nivas (New Boys Hostel)**

  There 264 single rooms with common toilets, reading rooms, TV room, indoor game, 2 messes and dining halls etc. The plinth area of this building is 80,000 Sft. in 4 floors with 2 stair cases.

- **Parijaat Nivas (Girls Hostel)**

  There are 240 single rooms with attached/common toilets, TV room, reading room, indoor game etc. The plinth area of this building is 58,000 Sft. in 4 floors with 2 staircases.

- **Bakul (Boys Hostel)**

  There are 320 double rooms with common toilets and interactive common spaces to accommodate 640 students. The plinth area of this building is 93,265 sft in 5 floors with 2 stair cases and 1 lift.
• **Women’s Hostel**

There are 164 Nos. double rooms to accommodate 328 students in 3 blocks of 4 storied buildings with separate staircase, lift, common toilets and other facilities like reading rooms, TV room and indoor game. The plinth area of this building is 63,500 sft.

* Recreational facilities in hostel/s like gymnasium, yoga centre, etc.

a) **Sports**

<table>
<thead>
<tr>
<th>Facility</th>
<th>Area (sqm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foot Ball Ground</td>
<td>Ac.2.13</td>
</tr>
<tr>
<td>Kalakshetra</td>
<td>2.05</td>
</tr>
<tr>
<td>Volley Ball court</td>
<td>0.33</td>
</tr>
<tr>
<td>Basket Ball court</td>
<td>0.33</td>
</tr>
<tr>
<td>Badminton courts (2)</td>
<td>0.34</td>
</tr>
</tbody>
</table>

b) **Indoor games**

<table>
<thead>
<tr>
<th>Facility</th>
<th>Area (sqm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zym. (Basement floor of NBH)</td>
<td>340</td>
</tr>
<tr>
<td>Table tennis room (OBH)</td>
<td>20</td>
</tr>
<tr>
<td>Table tennis room (NBH)</td>
<td>50</td>
</tr>
<tr>
<td>Table tennis room (GH)</td>
<td>50</td>
</tr>
</tbody>
</table>

Physical Education Center developed various sports infrastructure to the students to use them in their free time.

a) We developed excellent Football field.
b) Open Cricket field and Cricket Nets
c) Flood light Volley Ball court to play even in the night.
d) Flood Light Basket Ball court
e) Provided Indoor Games facilities like Table Tennis, Chess and Caroms in all the hostels.
f) Developed Jogging track beside Football field.
g) Exercise equipment like cross bars, parallel bars and roman rings and ropes for climbing were arranged in three places for natural free hand exercise purpose.
h) Gym with multi stations and other fitness equipment made available from morning 5:30 to 8:30 and evening 5:00 to 8:30.
i) Badminton courts in three hostels with lightings
j) Developed short court Hockey field

In our Yoga classes Yoga Sutras of Patanjali are authoritative, a basis for determining what constitutes yoga and all other views on yoga or forms of practices, whether from traditional literature or otherwise, are interpreted in the light of the Yoga Sutras.

A series of advanced techniques of yoga are there to work at Annamaya, Pranamaya, Manomaya, Vijnanamaya and Anandamaya koshas – the five layers of consciousness of human beings called Panca Kosas. It is a part of the IAYT (Integrated Approach of Yoga Therapy).

The institute also conducts International Yoga day every year where in all faculty/staff and students will participate.

* Broadband connectivity / wi-fi facility in hostels.

LAN facility is available in the hostels and wi-fi facility in the common areas of the campus.
4.1.7 Does the university offer medical facilities for its students and teaching and non-teaching staff living on campus?

The Institute is having an Aarogya centre. 3 doctors from Alopaty, homeopathy and ayurveda are visiting this centre and all faculty/staff/students are availing this facility whenever they need medical care.

A female nurse is available from 10 am to 5 pm on all the working days.

An ambulance is available in the campus on 24 x 7. All speciality hospitals are available in and around 3 kms radius of the campus.

In emergency, resident hostel caretakers are available to take care of the needy students

4.1.8 What special facilities are available on campus to promote students’ interest in sports and cultural events/activities?

a) Parking facility
   i) Main gate entrance: 0.5-acre parking lot for 300 two-wheelers for visitors and campus residents
   ii) Near ENTICE: (0.35 acres) 4 Wheeler parking for 50 cars
   iii) West of Vindhya (0.20 acres) 4 wheeler parking for 35 cars
   iv) East of Nilgiri: (Road area) parking for 100 two-wheelers
   v) East of Himalaya (0.50 acres) for 40 four-wheelers.
   vi) Faculty & Staff Quarters: 0.45-acre space for 40 four-wheelers.
   vii) Opp.Nilgiri: (0.70 acres) for 100 four wheelers.

b) Open cafeteria
   i)Near Basket Ball court.
   ii)West of Vindhya near Pump Room.
   iii)Near Guest House.

c) Banking:
   i)S.B.H.Branch in Vindhya C7-101
   ii) S.B.H. ATM at main entrance gate.

d) Stationery & General Store
   i)Palash Nivas .. Ground floor
   ii) Kadamba Nivas: Basement floor.

e) Photocopier Facility
   Kadamba Nivas: Basement floor.
   Vindhya A6-101.

f) Yoga Hall: Kadamba Nivas 2nd floor

g) Solar Water: 46,000 litres capacity solar hot water supply systems are provided for bathing at all hostels- Palash, Kadamba, Parijaat & Bakul and for cooking and utensils cleaning at messes in Palash & Kadamba.

h) Fire Fighting Equipment: Co2 Fire extinguishers are provided in all the buildings as per norms.

j) Fire Hydrant System provided for Himalaya Building, Faculty & Staff Quarters, Bakul Hostel as per statutory requirements.
4.2  Library as a Learning Resource

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

Yes. We have the Library Committee

Dr. Tapan Kumar Sau - Chairman
Prof. R. Govindarajulu – Member
Dr. K. Madhava Krishna – Member
Dr. G. Rams Murthy – Member

Library committee finalizes recommended books and Print/e-journals subscriptions by faculty and students. It also involves developmental activities of Library.

4.2.2  Provide details of the following:

* Total area of the library (in Sq. Mts.) – 10934 sq. meters
* Total seating capacity - 250
* Working hours (on working days, on holidays, before examination, during examination, during vacation)
  
  Working days 09.00AM to 12.00 Midnight
  Holidays 10.00AM to 05.00 PM
  One Week before End Semester Examinations 09.00AM to 01.00AM
  During Vacation 10.00AM to 10.00PM

* Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources)

  Library area – 6563 Sft
  Reading area – 4210 Sft
  Store room – 161 Sft

  * Clear and prominent display of floor plan – Yes
  * Adequate sign boards - Yes;
  * Fire alarm - NA
  * Access to differently-abled users and mode of access to collection - yes

4.2.3  Give details of the library holdings:

a)  Print (books, back volumes and theses)

  Print books : 30650
  Back volumes: 1220
  Theses : 763

b)  Average number of books added during the last three years

  2013-14 : 766
c) Non Print (Microfiche, AV)

Book-CD’s 1341

d) Electronic (e-books, e-journals)

DELNET World e-book Library

e) E-journals


f) Special collections (e.g. text books, reference books, standards, patents)

Text books – 28874
Reference books - 1896
Book Banks - No
Question Banks - No

4.2.4 What tools does the library deploy to provide access to the collection?

* OPAC - 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 is ICT deployed in the library? Give details with regard to

* Library automation - Yes
* Total number of computers for general access – 10
* Total numbers of printers for general access - 2
* Internet band width speed - 80 mbps NKN
* Institutional Repository - Yes
* Content management system for e-learning - Yes
* Participation in resource sharing networks/consortia (like INFLIBNET)

Previously we are the member of INDEST Consortia Now we are subscribing e-journals through Aggregator/Agent. and also member of DELNET Consortia for World e-book Library.

4.2.6 Provide details (per month) with regard to

* Average number of walk-ins - 2800
* Average number of books issued/returned - 2100
* Ratio of library books to students enrolled – 1: 19
* Average number of books added during the last four years

2012-13 :1054
2013-14 :766
2014-15 :757
2015-16 :900
* Average number of login to OPAC - 1200
* Average number of login to e-resources – 600 (approx) per month logins
* Average number of e-resources downloaded/printed – 5400 approx per month
* Number of IT (Information Technology) literacy trainings organized - Yes

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 DELNET

All the above services are in place in the Library

4.2.8 Provide details of the annual library budget and the amount spent for purchasing new books and journals.

The library will prepare the budget as per the requirement and procurement of books and e-journals. Library Budget for the year 2016-17 is Rs.82.20 Lakhs approved by the institute where Rs.50.00 Lakhs are allocated for e-journals.

4.2.9 What initiatives has the university taken to make the library a ‘happening place’ on campus?

The University try to make the library a hub for Information Storage and distribution for the students/scholars/faculty. The library conduct regularly Book exhibition for selection and procurement of balanced collection of documents for potential users. The university also encourage creating awareness about the availability of Information among the members to provide access to the information resources. Here our students recommend books and magazines like Professors and they take active part in library procurements.

4.2.10 What are the strategies used by the library to collect feedback from its users? How is the feedback analysed and used for the improvement of the library services?

We get both online and offline feedback from the library users. We consolidate all the suggestion made by the users of the library we discuss and analyse in our library committee and improve our infrastructure and reading materials to meet the users’ expectations.

4.2.11 List the efforts made towards the infrastructural development of the library in the last four years.

We procured latest Configuration Desktop systems for library and Installed CC Cameras in the library reading place. An up-stair reading room has been added. Fixing of ceiling fans and

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repairing of ACs have been done. We extended our stack area fixing of additional racks in the library.

4.3 IT Infrastructure

4.3.1 Does the university have a comprehensive IT policy with regard to

- IT Service Management

IIIT-H is having ticketing systems for call registration & AMC contract with third party service provider for maintain servers, desktops & peripherals. All the repairs & replacement of defective components will be taken care under the AMC contract.

- Information Security

Following IT policies is in place:
  - Email usage policies
  - Email moderation
  - Email attachment size
  - Email access
  - Internet usage policy
  - Facilities policy
  - Web space on Webservers
  - Policy on Pirated software
  - Network policies
  - radius authentication
  - authentication in student hostels & faculty / staff quarters

- Network Security

We are using RADWARE Intrusion prevention systems & ASA Cisco 5200 firewall at gateway level.

- Risk Management

  - Backup policy, DR plans for IT infra, corrective actions (controls), Business Processes
  - Incident cause analysis
  - Overall risk determination
  - Recommendations

- Software Asset Management

  - Asset management is being implemented through Institute management software (IMS)

- Open Source Resources

  - We use the following open source software’s:
    - Centos, fedora on servers
    - Ubuntu on desktops
    - Octave

- Green Computing

  - All the CRT monitor are removed & replaced by LCD displays. Old & unused IT hardware is disposed of through vendors who reuse the hardware in training institutes. All the high end
computing servers shut down automatically when not in use for more than 10 minutes, and wakes up automatically when a request by a user is made. These initiatives reduce the power consumption for cooling the space, and in terms of electricity used for running these machines

4.3.2 Give details of the university’s computing facilities i.e., hardware and software.

- Number of systems with individual configurations

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Machine Details</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dell OptiPlex Desktop: Intel Core 2 Duo, 1Gb Ram, 160Gb HDD, DVDRW, 17” LCD monitor, Keyboard and mouse</td>
<td>200</td>
</tr>
<tr>
<td>2</td>
<td>Zenith Desktop: Intel Core 2 Duo, 1Gb Ram, 160Gb HDD, DVDRW, 17” LCD monitor, Keyboard and mouse</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>Zenith Business PC Atom: Integrated Intel ATOM D410@1.66 GHZ, Intel Original desktop board with NM10, 2GB DDR2@800 MHz RAM, 160 GB SATA-II HDD@7200 RPM, 18.5” Wide LCD Monitor, Integrated Onboard GMA 3150 Graphics, 10/100 LAN, Keyboard, optical keyboard, 160-180 Watts SMPS</td>
<td>140</td>
</tr>
<tr>
<td>4</td>
<td>Zenith Desktop: Intel Core 2 Duo <a href="mailto:E7400@2.8GHz">E7400@2.8GHz</a>, Intel G32 Chipset, 2Gb DDR@667MHz, 320Gb SATA II, 10/100/1000LAN, DVD Writer, 1 Serial, 1 Parallel, 2 PS/2, 6 USB, 2 PCI Slots, 1 PCI Express*16, USB Mouse, USB K/B, 250 Watts SMPS, 18.5” LCD Monitor</td>
<td>70</td>
</tr>
<tr>
<td>5</td>
<td>Zenith Desktop: Intel Core 2 Duo <a href="mailto:E7400@2.93GHz">E7400@2.93GHz</a>, Intel G32 Chipset, 2Gb DDR@667MHz, 320Gb SATA II, 10/100/1000LAN, DVD Writer, 1 Serial, 1 Parallel, 2 PS/2, 6 USB, 2 PCI Slots, 1 PCI Express<em>16, 1</em>PCIExpress16, USB B Mouse, USB K/B, 250 Watts SMPS, Preloaded Linux, 17” LCD Monitor</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>Zenith Smart style LED PC Intel atom CPU 1.6Ghz, 133MHz FSB Mobile Intel945 chipset, 2GB DDR2 RAM, 320Gb ATA-2, 18.5” LED FullHD monitor</td>
<td>210</td>
</tr>
<tr>
<td>7</td>
<td>Zenith GA-H61M-S2P PC, Intel Core i3-2120@3.3 GHZ, 4GB DDR3 RAM, 500GB SATA-2 HDD, 18.5 Wide LCD Display, 10/100/1000 Gig LAN, DVD RW, TVS Keyboard, Mouse</td>
<td>120</td>
</tr>
<tr>
<td>8</td>
<td>LENOVO Think Centre M72e Desktop: Intel(R) Pentium(R) CPU G2020 @ 2.90GHz, HDD: 465Gb (500GB), RAM SIZE: 2GB, USB Keyboards Mouse &amp; 18.5 LCD Monitor</td>
<td>185</td>
</tr>
<tr>
<td>9</td>
<td>LENOVO Think Centre Desktop: Intel Dual core <a href="mailto:3220@3.0GHz">3220@3.0GHz</a>, Intel H81 Chipset, RAM 2GB DDR3 @ 1333MHz, HDD: 500GB SATA, USB Keyboards Mouse &amp; 18.5 LCD Monitor</td>
<td>200</td>
</tr>
<tr>
<td>10</td>
<td>LENOVO Think Centre Desktop: Intel Dual core <a href="mailto:3240@3.1GHz">3240@3.1GHz</a>, Intel H81 Chipset, RAM 4GB DDR3 @ 1333MHz, HDD: 500GB SATA, USB Keyboard, Mouse &amp; 18.5 LCD Monitor</td>
<td>70</td>
</tr>
<tr>
<td>11</td>
<td>IBM X 3650 M3 (2U rack server) Intel Xeon Quad Core 2.8GHz, dual CPU support, 12 GB RAM, 6 x 300 GB SAS 15 K RPM HOT Swap HDD,</td>
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<tr>
<td>No.</td>
<td>Description</td>
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<tr>
<td>12</td>
<td>IBM X 3650 M3 (2U rack server) Intel Xeon Quad Core 2.8GHz, dual CPU support, 32 GB RAM, 6 x 300 GB SAS 15 K RPM Hot Swap HDD, DVD ROM, keyboard, mouse etc., Raid 8K SAS controller - IBM-2</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>IBM X 3650 M3 (2U rack server) Intel Xeon Quad Core 2.8GHz, dual CPU support, 32 GB RAM, 6 x 1 TB 7.5 K RPM Hot Swap HDD, DVD ROM, keyboard, mouse etc., Raid 8K SAS controller - IBM-2</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>IBM X 3650 M3 (2U rack server) Intel Xeon Quad Core <a href="mailto:E5620@2.8GHz">E5620@2.8GHz</a>, dual CPU support, 48 GB RAM (4x12 GB) ECC DDR3 RAM 1333 MHz, 16 x 600 GB 10 K RPM Hot Swap SAS HDD, DVD ROM, keyboard, mouse etc., Raid 5-10 SAS controller - IBM-1</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>IBM X 3530 M4 (2U rack server) Intel Xeon Six Core E2420@1.9 GHz, dual CPU support, 32(4x8GB) GB RAM(4x12 GB) ECC DDR3 RAM 1333 MHz, 4x 2 TB 10 K RPM Hot Swap SAS HDD, DVD ROM, keyboard, mouse etc., Raid 5-10 SAS controller - IBM-7</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>HP ProLiant DL120 G6 Server Intel X3430(2.4GHz), 2X2 GB DDR-3 RAM, 3x1 TB SATA HDD etc. S. No.SSGH024XRT1</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>IBM X 3400 server(Part No.7973F2A) Single Quad Core Intel Xeon E5335 2.0 GHz CPU, 2x4 MB L2 Cache, Dual CPU, 4 GB RAM (2x2 GB – 39M5791) PC2 – 5300 ECC DDR2, 4x500 GB (39M4514) SS SATA HDD, Server Raid 8k adapter, DVD Writer, Giga bit Ethernet, keyboard, mouse etc. S/No.99A4935 – Library Server</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>IBM Series 225 e-server Intel Xeon CPU 2.8GHz (Single Processor), 2 GB RAM, 1x36.4 GB SCSI, 2x73.4 GB SCSI, 320 x2 GB IDE HDD, CDROM, keyboard, mouse etc.</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Dell Power Edge 1900 server with Dual Core Xeon 5110 1.6 GH /4 MB Cache/1066 MHz FSB/65 W /8GB(4x2GB) DDR2 RAM@667 MHz ECC Memory/ 2x500 GB SATA II HDD/Gigabit Network/DVD Combo Drive, mouse etc. - Alumni</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>HCL Infiniti Xcel Line Server(AMD) 2xAMD Opteron 280 Dual Core @2.4GHz, Dual CPU, 8X1 GB DDR RAM NVidiaenforce Chipset, 2x400 GB SATA HDD, PCI Express x 16 FG6200 TC 128 MB Graphics, CDROM etc. - Mirage</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Abacus master: HP Server: Dual Intel Xeon E5-2640, 32 GB ECC memory, 3 TB RAID 5 storage, 44 TB RAID 6 storage, quad-port Gigabit NIC, dual-port 10 Gigabit NIC, dual-port 4X QDR InfiniBand.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Lustre Storage nodes: HP Servers: Dual Intel Xeon X5675, 24 GB ECC memory, 7 x 2 TB SATA HDD, dual-port Gigabit NIC, dual-port 4X QDR InfiniBand.</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Abacus Compute nodes: HP Servers: Dual Intel Xeon E5-2640, 48 GB ECC memory, 2 TB SATA</td>
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<tr>
<td>HDD, dual-port Gigabit NIC, dual-port 4X QDR InfiniBand</td>
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<td>1</td>
</tr>
<tr>
<td>25</td>
<td>Adhi master: Dell Servers: Dual AMD Opteron 2378, 32 GB ECC memory, 3 TB RAID 5 storage, dual-port Gigabit NIC</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Adhi Compute nodes: Dell Servers: Dual AMD Opteron 2427, 32 GB ECC memory, 500 GB SATA HDD, Gigabit NIC.</td>
<td>56</td>
</tr>
<tr>
<td>27</td>
<td>Compute nodes (6) Dual AMD Opteron 2427, 32 GB ECC memory, 500 GB SATA HDD, Gigabit NIC.</td>
<td>56</td>
</tr>
<tr>
<td>28</td>
<td>GPU workstation Intel Core i7-5930K, 16 GB memory, 3 TB SANTA HDD, Gigabit NIC, NVIDIA TITAN 980 Ti GPU</td>
<td>7</td>
</tr>
<tr>
<td>29</td>
<td>Hitachi Storage server-HUS 110: Hitachi Unified Storage HUS 110 SAN with 600GB SAS 10K RPM HDD SFF for CBSS/DBS-Base - 7Nos. HUS110 2TB SAS 7.2K RPM HDD LFF for CBSL/DBL-Base - 12 Nos. 8 FC &amp; 4 iSCSI ports etc.</td>
<td>1</td>
</tr>
<tr>
<td>30</td>
<td>Hitachi Storage server-HUS 110: Hitachi Unified Storage HUS 110 SAN with 7*2TB 2TB SAS 7.2K RPM HDD Drives -7 Nos. and 8 FC &amp; 4 iSCSI ports etc.</td>
<td>1</td>
</tr>
<tr>
<td>31</td>
<td>Hitachi Storage server-HUS 110: Hitachi Unified Storage HUS 110 SAN with 24*1TB NL-SAS drives, on NL SAS and 24x600 GB NL-SAS drives. 8 FC &amp; 4 iSCSI ports.</td>
<td>1</td>
</tr>
<tr>
<td>32</td>
<td>IBM PureFlex blade server IBM flex x240 compute nodes Xeon 8c E5-2680 / 20 MB, 2 x 16 GB, 10 x 900 GB SFF 10 K RPM SAS HDD.</td>
<td>8</td>
</tr>
</tbody>
</table>

**Computer-student ratio**

1. UG students **Desktop machines are 1:2**
2. PG students **Desktop machines are 1:2**
3. MS/PhD students **Desktop machines are 1:1**

**Dedicated computing facilities**

Research centres, Library, HPC, open labs etc.

**LAN facility**

Wired and Wi-Fi in Labs, Research Centres, Hostels, Classrooms & open areas

**Proprietary software**
Microsoft Campus license for MS products, Cadence, Mat lab etc.

- Number of nodes/ computers with internet facility

All the computers in the campus have internet facility.

4.3.3 What are the institutional plans and strategies for deploying and upgrading the IT infrastructure and associated facilities?

IT infrastructure gets upgraded regularly based on the need or when the existing equipment gets obsolete.

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.

Video recorded lectures are available to students.

4.3.5 What are the new technologies deployed by the university in enhancing student learning and evaluation during the last four years and how do they meet new / future challenges?

- The university has planned well in advance to enhance the student learning and evaluation by enabling the campus with Wi-Fi connectivity with 1GBPS.
- Necessary measures have been taken to provide the departments with buildings establishing labs and planning to provide IT enabled teaching aids in addition to the already existing ones.

4.3.6 What are the IT facilities available to individual teachers for effective teaching and quality research?

All teachers are provided with desktop / laptop. Class rooms are equipped with LCD projectors & computers with interactive monitors.

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?

All class rooms, conference rooms, teaching labs are ICT enabled.

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 are provided Teaching Assistants who will help in preparing Computer-aided teaching learning materials. All faculty are using Moodle (Modular object-oriented dynamic learning environment) which is a free and open-source software learning management system

4.3.9 How are the computers and their accessories maintained?

In house IT team maintains the equipment along with a third party team.

4.3.10 Does the university avail of the National Knowledge Network connectivity? If so, what are the services availed of?

Yes, IIIT -H uses NKN connectivity. Only internet bandwidth is being utilised.
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?

Yes.

4.3.12 Provide details on the provision made in the annual budget for the update, deployment and maintenance of computers in the university.

IIIT-H allocates Annual IT budget for procurement and maintenance of all the IT infrastructure.

4.3.13 What plans have been envisioned for the gradual transfer of teaching and learning from closed university information network to open environment?

Course management is carried out using Moodle software system. Tutorial classes were held for all courses. Senior students were recruited as TAs to clear the doubts and manage the course projects. Each TA manages about 25 students which improves the focus. Access to Labs is available 24/7. Library is open from 9:00AM to 12:00 Midnight including on holidays. Library has a dedicated study room.

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.

The University established with civil engineering department to oversee the new constructions and maintenance of buildings, class-rooms and labs. Dept. headed by University engineer with supportive staff one Dy.Executive Engineer (Civil), one Dy.Executive Engineer (Elect) and two Asst.Executive Engineers to execute day to day maintenance works in campus.

4.4.2 How are the infrastructure facilities, services and equipments maintained? Give details.

**Non Building Infrastructure**

1. **Road Network**
   Black topped internal roads of 50 feet wide as per Master Plan for a total length of 2.75 KMs in the campus were formed with kerb stone and foot paths on either side with suitable cross drainage works.

2. **Water supply system**
   The total demand of water for the campus is 550 KL per day. To meet this demand 180 KLD of Manjeera water is drawn for drinking purposes and the remaining 370 KLD is drawn from ground water through 8 Nos. of bore wells in the campus. The established water supply distribution network contains 8 Nos. of under ground water storage sumps of total 982 KL storage capacity, 25 Nos. of Over Head Tanks with 781 KL capacity on buildings (Separate tanks for drinking water & bore water), 5.38 KMs of pumping mains and 15.24KMs of distribution lines, 3 Nos. of pump houses with 6 Nos. of pump operators.

3. **Drainage system**
   The waste water from bath rooms, toilets, kitchen, wash areas etc., from all the institutional and residential buildings are carried through under ground sewers covering a total length of 6.60 KMs and connected to 3 Nos. of septic tanks of 520 KL capacity at various locations for treatment and the treated water is used for gardening and flushing of toilets.
4. **Power**
   An Electric Sub Station with 33/11 KV is established in the campus from which IIIT is drawing a sanctioned HT load of 1480 KVA through independent feeder. The generator backup available is 760 KVA. There are 86 Nos. street light poles with 40 W LED lamps along the internal roads in the campus. 500 KVA solar energy is proposed on the roof tops of existing buildings to save energy.

5. **Telephones & Network**

6. **Avenue Plantation**
   All the internal roads are covered with avenue plantation on both sides.

**Building Infrastructure**

1. **Vindhya**
   This is a 3 storied building with 7 stair cases and one lift, fully developed with all amenities in a total plinth area of 2.22 Lakh Sft. All the Research Centres are located in this building including library and reading rooms.

2. **Nilgiri**
   This is a 3 storied building with 4 stair cases, fully developed with all amenities in a total plinth area of 1.00 Lakh Sft. The entire administrative wing, computer teaching labs, server rooms, electronic labs are located in this building.

3. **Himalaya**
   Block ‘A’: Administrative Block: This block in 4 floors with a plinth area of 20,000 Sft. is developed with all amenities.

   Block ‘B’: Research centre Block: This block with a plinth area of 69,000 sft in 4 floors with one stair case and lift is developed with all amenities.

   Block ‘C’: Lecture Halls Block: This block is developed with total plinth area of 45,000 Sft. in 3 floors with 2 stair cases is developed for accommodating 6 class rooms of 60 capacity, 6 class rooms of 100 capacity and 2 Lecture Halls of 230 capacity each with fully air conditioning is to accommodate a total student strength of 1420.

4. **Sahana Atithi Nivas (Guest House)**
   There are 4 Nos. of developed suits with an attached canteen. The plinth area of this building is 12000 Sft. in 2 floors with one stair case.

5. **Aarogya (Health Centre)**
   A health centre is developed in an independent building with a plinth area of 2500 Sft.

6. **Srujana (Cultural Centre)**
   Cultural centre with all amenities and equipment is established in this building with a plinth area of 2000 sft.

7. **Sanskar School**
   A kinder garden school – cum – crèche is located in this building in a plinth area of 2000 Sft.

8. **Staff Quarters**
   4 Nos. of 2 bed room apartments each 1226 Sft. are made available for staff.
9. **Anand Nivas & Budha Nivas (Faculty & Staff Qrs.)**
   40 Nos. of residential flats in two blocks (20 Nos. 2 Bed Room and 20 Nos. 3 Bed Room) were constructed with a total plinth area of 90,000 Sft. in 5 floors with one stair case and lift for each block.

10. **Student Hostels**

   - **Palash Nivas (Old Boys Hostel)**
     There are 384 Nos. of single rooms and 224 Nos. of double rooms to accommodate 832 students. It is 4 storied building with 6 stair cases, common toilets and other facilities like reading rooms, TV room, indoor game, 2 messes and dining halls. The plinth area of this building is 2.15 Lakh Sft.

   - **Kadamba Nivas (New Boys Hostel)**
     There 264 single rooms with common toilets, reading rooms, TV room, indoor game, 2 messes and dining halls etc. The plinth area of this building is 80,000 Sft. in 4 floors with 2 stair cases.

   - **Parijaat Nivas (Girls Hostel)**
     There are 240 single rooms with attached/common toilets, TV room, reading room, indoor game etc. The plinth area of this building is 58,000 Sft. in 4 floors with 2 stair cases.

   - **Bakul (Boys Hostel)**
     There are 320 double rooms with common toilets and interactive common spaces to accommodate 640 students. The plinth area of this building is 93,265 sft in 5 floors with 2 stair cases and 1 lift.

**Other On-campus Facilities**

a) **Sports**
   - Foot Ball Ground .. Ac.2.13
   - Kalakshetra. ..  2.05
   - Volley Ball court .. 0.33
   - Basket Ball court. 0.33
   - Badminton courts (2) 0.34

b) **Indoor games**
   - Zym. (Basement floor of NBH) .. 340 Sqmts.
   - Table tennis room (OBH) .. 20 Sqmts.
   - Table tennis room (NBH) .. 50 Sqmts.
   - Table tennis room (GH) .. 50 Sqmts

c) **Parking facility**
   1. Main gate entrance: 0.5-acre parking lot for 300 two-wheelers for visitors and campus residents
   2. Near ENTICE: (0.35 acres) 4 Wheeler parking for 50 cars
   3. West of Vindhya (0.20 acres) 4 wheeler parking for 35 cars
   4. East of Nilgiri: (Road area) parking for 100 two-wheelers
   5. East of Himalaya (0.50 acres) for 40 four-wheelers.
   6. Faculty & Staff Quarters: 0.45-acre space for 40 four-wheelers
   7. Opp.Nilgiri: (0.70 acres) for 100 four wheelers.

d) **Open cafeteria**
1. Near Basketball court.
2. West of Vindhya near Pump Room.

e) Banking:
   1. S.B.H. Branch in Vindhya C7-101 with ATM
   2. S.B.H. ATM at main entrance gate.

f) Stationery & General Store
   Palash Nivas .. Ground floor
   Kadamba Nivas: Basement floor.

g) Photocopying Facility
   Kadamba Nivas: Basement floor.
   Vindhya A6-101.

h) Yoga Hall: Kadamba Nivas 2nd floor

i) Solar Water: 46,000 litres capacity solar hot water supply systems are provided for bathing at
   all hostels- Palash, Kadamba, Parijaat & Bakul and for cooking and utensils cleaning at
   messes in Palash & Kadamba.

j) Fire Fighting Equipment: Co2 Fire extinguishers are provided in all the buildings as per norms.

k) Fire Hydrant System provided for Himalaya Building, Faculty & Staff Quarters, Bakul Hostel
   as per statutory requirements.

Proposed Projects

1. Women’s Hostel

2. Proposed with 164 Nos. double rooms to accommodate 328 students in 3 blocks of 4
   storied buildings with separate staircase, lift, common toilets and other facilities like
   reading rooms, TV room and indoor game. The plinth area of this building is 63,500 sft.

3. Waste water treatment plants of 270, 200 and 50 KL capacity for recycling to use for
   gardening, toilets flushing and irrigation in the campus.

4. Amphitheatre and students interaction spaces.

5. Girls Hostel behind Kadamba & Parijaat Hostels

6. Expansion of Existing electric substation.

7. One block of Staff Quarters with 30 apartments.

8. 4000-seat auditorium

Physical Infrastructure – Space Allocation

IIIT-H was established in an extent of 66 acres of land in Survey No.25 (Part) of Kancha
Gachibowli village in Serilingampally Mandal of Ranga Reddy District within GHMC limits.
Following is the land use analysis of 66 acres.

1. Institutional Buildings: .. Ac. 5.40 8.18%
   a) Nilgiri .. Ac. 1.50
   b) Vindhya .. Ac. 2.40
   c) Himalaya .. Ac. 1.50

2. Residential: Ac. 11.20 16.97%
   a) Palash Nivas. Ac. 2.00
   b) Kadamba Nivas. Ac. 0.60
   c) Parijaat Nivas. Ac. 0.60
   d) Staff Qrs. Ac. 0.50
   e) New FSQ Ac. 6.00
   f) New Hostel Bldg. Ac. 1.50
   g) Guest House. Ac. 0.20
3. Aarogya (Health Center). Ac. 0.50  0.76%
4. Srujana (Cultural Center). Ac. 0.25  0.37%
5. Sanskar (School) Ac. 0.25  0.37%
6. Roads. Ac. 11.03  16.71%
7. Parking areas. Ac. 2.70  4.09%
8. Open spaces (Lawns) Ac. 6.80  10.30%
9. Sports (Play grounds.) Ac. 5.18  7.85%
10. Common utilities Ac. 2.50  3.79% (sumps, STs, Sub Stn., etc)
11. Forest area inclu. undeveloped land Ac. 16.77  5.41%
12. Agricultural Farm. Ac. 3.42  5.20%

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Ac. 66.00  100.00%
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CRITERION V: STUDENT SUPPORT AND PROGRESSION

5.1 Student Mentoring and Support

5.1.1 Does the university have a system for student support and mentoring? If yes, what are its structural and functional characteristics?

Yes. For the past several years, we have been addressing this goal by utilising both curricular as well as extracurricular space.

(a) In the circular space we have designed Humanities courses. Through these we are making constant efforts to draw student attention towards human values and participation in the process of building within one own family and community.

(b) Under extra curricular space, we are ensuring participation of students in sports and cultural activities round the year.

(c) Every year under the guidance of Student Life committee, the student parliament trying to reach the goal of Zero-ragging in the campus

(d) Large number of activity clubs exp. Dance, music, magazine, literacy, campus green, Robotics programme, photography, films and film appreciation etc., are being set up to ensure all round education of the students

(e) Batch trips every year, sponsored by the Institute to different places of interest

(f) Participation of students in day-to-day running of hostel, canteen and mess.

5.1.2 Apart from classroom interaction, what are the provisions available for academic mentoring?

a) The Institute appoint Teaching Assistants in core courses, who helps the junior students in their course work, completing assignments, solving quizzes, and lab assignments;

b) The 1st year students are made into small groups and each faculty of the Institute takes care of one group of students to advise and counsel them in their academic as well as life in general.

5.1.3 Does the university have any personal enhancement and development schemes such as career counselling, soft skill development, career-path-identification, and orientation to well-being for
its students? Give details of such schemes.

Yes. The placement wing of the Institute headed by a faculty will take care all the above and guide the students to choose their career path.

The Institute also organizes distinguished lecture series and invited talks by notable persons from academia and industry and students are encouraged to participate in such talks to know the best opportunities open in outside world and industry.

Students are encouraged to write research papers along with faculty and present papers in national and international conferences for better exposure. The Institute provide monitory support to these students.

5.1.4 Does the university provide assistance to students for obtaining educational loans from banks and other financial institutions?

Yes. The Institute provides all necessary support by encouraging various banks to open their desks on the day of new admissions, so that the student and parent will interact directly with banks for availing loans.

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?

Yes. Institute gives academic regulations, curricula, hostel rules, student support etc. to all 1st year students. This information is also kept on the intranet website. Moreover, the brochure contains information about faculty, academic programmes, research centres and campus life.

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).

<table>
<thead>
<tr>
<th>Category</th>
<th>Type of scholarships</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>UG</td>
<td>State govt, NTSE</td>
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</tr>
<tr>
<td>PG (MTech)</td>
<td>GATE</td>
<td>331</td>
</tr>
<tr>
<td>PhD</td>
<td>JRF/SRF</td>
<td>37</td>
</tr>
<tr>
<td>MS/PhD</td>
<td>Freeships (Institute support)</td>
<td>1512</td>
</tr>
</tbody>
</table>

5.1.7 What percentage of students receive financial assistance from state government, central government and other national agencies (Kishore Vaigyanik Protsahan Yojana (KVPY), SN Bose Fellow, etc.)?

UG – 5%  PG (MTech) – 33%  PhD – 7%

5.1.8 Does the university have an International Student Cell to attract foreign students and cater to their needs?

We do not have a separate cell. However, Admissions wing will take care of in attracting foreign students.

5.1.9 Does the university provide assistance to students for obtaining educational loans from banks and other financial institutions?

Yes. The Institute provides all necessary support by encouraging various banks to open their
desks on the day of new admissions, so that the student and parent will interact directly with banks for availing loans.

5.1.10 What types of support services are available for

* overseas students

The institute has a faculty member in charge of the international students, and conducts programs to learn about the social life and culture in other countries.

* physically challenged / differently-abled students

The Institute does not have any special support services for physically challenged/differently-abled students. However, we have provided ramps for physical handicapped students, arranging a ‘scribe’ to the blind students to write examinations.

* SC/ST, OBC and economically weaker sections

The alumni association help the economically weak students to provide educational loan from the alumni fund.

* students participating in various competitions/conferences in India and abroad

Institute provide travel support to such students

* health centre, health insurance etc.

- The Institute had a health centre where doctors of Unani, homeopathy and ayurveda are available.

- The Institute provide monitory support upto Rs.25,000/- per student to meet medical emergency

* skill development (spoken English, computer literacy, etc.)

- As part of academic curricula, for UG1 students who are weak in language, English proficiency course will be provided to improve their writing and spoken skills.

- All UG1 students will do as part of the curricula, IT Workshop course in their first semester

* performance enhancement for slow learners

Help from TAs, and Faculty groups

* exposure of students to other institutions of higher learning/ corporates/business houses, etc.

Interested students will write CAT/GATE as well as apply to foreign universities for higher studies.

Students will do internship in Corporates during their summer vacation

* publication of student magazines

Students’ magazine club will bring Institute monthly news letter.
5.1.11 Does the university provide 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?

No. The Students who ever interested, will proceed on their own.

5.1.12 Mention the policies of the university for enhancing student participation in sports and extracurricular activities through strategies / schemes

a) Institute is providing attendance to the students participating in the tournaments.

b) If it is examination period then Institute is organizing re-exam to the students participating in the tournaments.

c) Institute is providing travelling allowance and dearness allowance to the students participating in the tournaments.

d) Institute is also providing Institute’s sports uniform to all the participating students in the tournaments.

e) During Physical Training programme in the morning we are providing milk and banana after the class to all the participating students.

f) And also providing sports material for regular usage and encouraging them with new sports kits and sportswear.

g) Organizing regular Inter College Football tournaments in the campus and making two teams to take part and providing good sports exposure and enhancing sports culture in the campus.

h) Centre is planning to develop football grass field and synthetic lawn tennis court in the future years.

i) Also organizing sports workshops and seminars with the subject experts and inviting sports stars to the campus to interact with the students to learn about their hard work and achievements.

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?

In our institute, there is no such special CRT(Campus Recruitment Training) system for students appearing for campus recruitment. Placement Department certainly help the students in guiding about the various corporate Profile and Job Profiles to them. If anyone interested to become entrepreneur, they can approach to CIE (Center for Innovation and entrepreneurship) for further assistance.

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).

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</table>

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 Institute’s alumni group came into being in 2002 with the graduation of the first batch. Alumni are engaged with the Institute in a variety of ways. They visit the institute and interact with the current students; they contribute money for an alumni fund to support the education of needy students at the institute.

5.1.16 Does the university have a student grievance redressal cell? Give details of the nature of grievances reported. How were they redressed?

All student facilities, related to student life on campus, are administered in a transparent manner, with the active involvement of students at all levels. The students are thus involved both in framing policies as well as in implementing the logistics. All students involved in managing the facilities are also members of the Students' Parliament, constituted and run in a democratic fashion by the students.
Individual grievances, which are not resolved locally, or by the Students’ Parliament, can be routed through either the Chair, Council of Wardens or the Chair, Students Life Committee. Our students can also, at any point of time, directly take their grievances to the Director.

5.1.17 Does the university promote a gender-sensitive environment by (i) conducting gender related programmes (ii) establishing cell and mechanism to deal with issues related to sexual harassment? Give details.

The Committee on Gender Relations (CoGeR) is formed at IIIT-H with this vision in mind and has the mandate to promote healthy gender relations through sensitization using discussions and actions as well as to handle any grievances with respect to the conduct of the different constituents of the campus community. CoGeR has two cells, namely, the Gender sensitization cell (GSC) and the Gender Grievance Cell (GGC) and an apex committee to coordinate the activities.

The apex committee performs the overall coordination of gender-relations related activities on campus.

Gender Sensitization Cell (GSC) is to promote good relation by raising awareness and sensitizing the students, staff, and faculty of the institute, explaining and educating all parties on what constitutes a healthy interaction and what is sexual harassment.

The Gender Grievance Cell handles all gender-based grievances that are reported to it following the procedure laid out for this purpose. The composition of these committees include faculty, staff and students.

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?

Yes.

No instances are reported till as we have anti ragging squads are also operational, other than anti-ragging committee during the admission period consisting of faculty and senior students. These squads will go round in the campus and conduct sudden inspection in the hostels to see that no ragging activity takes place.

5.1.19 How does the university elicit the cooperation of all its stakeholders to ensure the overall development of its students?

Institute involves all the faculty members and industry in designing the curriculum as well as syllabi of courses. At the implementation and evaluation stage, students play an important role through informal as well as formal feedback. Industry feedback is taken thru placement office and informal means thru numerous interactions.

Institution elicits cooperation by empowering them, telling them about institutional goals and how their own goals relate to the larger goals of the institutions. This ensures that cooperation comes from inside.

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.

a) Inter House sports and games competitions for Boys and Girls
(In all the games – Cricket, Foot Ball, Basket Ball, Volley Ball, Throw Ball, Badminton, Table Tennis, Chess and Caroms) Sports – 100mts, 200mts, 400mts, 800mts, 1500mts, Long Jump, Triple Jump, Shot Put, Javelin Throw and Discus Throw).

b) Organizing Sports Meet after conducting the Inter House competitions and distributing
all the Prizes and Certificates.

c) Inter Batch Games competitions: Cricket, Foot Ball, Basket Ball, Volley Ball and Throw Ball.
d) Organizing Hockey Premier League for Boys and Girls and giving Prizes.
e) Organizing Sports Carnivals during the vacations and free time.
f) Organizing Foot Sal (Short court football) during Felicity
g) Organizing Inter College Tournaments at IIIT – Hyderabad.
h) Participating in Inter College Tournaments - External Tournaments within Hyderabad.
i) Organizing welcome sports for UG 1 Students.
j) Organizing Sports for Faculty and Staff and giving prizes.
k) Organizing 5k and 10k runs in one semester and giving prizes
l) Organizing 25 Km Cycling for the IIIT – H Family in one semester and giving prizes.
m) Organizing Sports during Festivals. (Tug of War during Onam Celebrations)
n) Organizing Foot Ball Premier Leagues
o) Organizing Badminton and Table Tennis Premier Leagues.
p) Participating in Martial Arts Competitions like Belt Tests.
q) Organizing Alumni Sports Meet.
r) Organizing STEP Summer School Sports Meet.
s) Organizing Sports for guests.
t) Organizing cricket tournament for girls.

5.2 Student Progression

5.2.1 What is the student strength of the university for the current academic year? Analyse the Programme-wise data and provide the trends for the last four years.

<table>
<thead>
<tr>
<th>Student Progression</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>UG to PG</td>
<td>0.4</td>
</tr>
<tr>
<td>MTech to MS</td>
<td>1.3</td>
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<tr>
<td>MS to Ph.D.</td>
<td>8</td>
</tr>
<tr>
<td>MTech to PhD</td>
<td>0.3</td>
</tr>
<tr>
<td>Employed</td>
<td>100</td>
</tr>
</tbody>
</table>

5.2.2 What is the programme-wise completion rate during the time span stipulated by the university?

The completion rate of all programmes is 99%

5.2.3 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.?

Since the students don’t apply for the above exams through the Institute, we don’t have any records.

5.2.4 Provide category-wise details regarding the number of Ph.D./D.Litt./D.Sc. theses submitted/accepted/resubmitted/rejected in the last four years.

<table>
<thead>
<tr>
<th>Academic year</th>
<th>Status of thesis</th>
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</thead>
<tbody>
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<td>2014-15</td>
<td>0</td>
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</tbody>
</table>
5.3  **Student Participation and Activities**

5.3.1 List the range of sports, cultural and extracurricular activities available to students. Furnish the programme calendar and provide details of students’ participation.

a) Welcome Sports like short court football, Volley Ball, Basket Ball, Badminton, Table Tennis, Cricket, Kho-Kho etc to UG1 Students.

b) Organizing Inter House games and Sports Competitions in Throw Ball, Football, Cricket, Hockey, Basket Ball, Volley Ball, Chess, Caroms, Table Tennis and Badminton.

c) Organizing Annual Sports Meet where all the sports events like 100 mts, 200 mts, 400 mts, 800 mts, Long Jump, Triple Jump, Shot Put, Discus Throw and Javelin will be conducted for both boys and girls.

d) Organizing 5km and 10 km runs regularly to increase endurance among the students.

e) Organizing long distance cycling in each semester.

f) Organizing Inter Batch games like Cricket, Foot Ball, Hockey, Throw Ball, Table Tennis, Badminton, Volley Ball and Basket Ball.

   g) Organizing premier leagues in different games.

h) Organizing sports carnivals during the semester breaks.

i) Organizing foottsal event every year during felicity programme.

j) Organizing Festival Sports like tug of war during Onam.

k) Organizing Inter College Foot Ball tournament every year where two IIIT –H teams take part.

l) Participating in Inter College Tournaments outside the campus.

m) Apart from above there will be 500 to 600 students regularly take part in sports.

   The institute encourages its students to actively participate in several curricular and extracurricular activities through clubs and regular events. On *Cultural side*, we have activities ranging from as small as Dumb-Charades and Antakshari to full fledged sketches and plays.

Apart from this, we have a generalised event, Two-to-Tango, in which people can perform anything ranging from singing to dancing, acting to stand-up comedy, etc. in groups of 2. In March, we have 2 grand events, one for Music and one for Dance.

   We also have events elocution, collage making and sketching. Apart from all the above mentioned Inter-house activities, we have November Jam which is a talent showcase by our college bands from Music Club. We also plan to conduct online coding events throughout the year and a week-long app-development workshop this August.

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.

**In the year 2012**

   Different clubs have been active round the year providing ample opportunities to the students to participate and improve their skills through classes and workshops.

   The literary club of IIIT-H published five editions of its flagship campus magazine called Ping!.

   The IIIT-H branch of the Model UN Society, MunSoc, organized and participated in debates on world issues from the perspective of different countries.

   The first major night program at the Felicity main stage was marked by 10 dance performances by our students as also a dance performed by the students of Ashakiran, a school run by the campus community for children from nearby slums.
Kalakshetra was the centre of attraction and was brimming with participants.

On the technical side, Felicity initiated new exciting techno events which drew international participation, including those from professionals.

In sports, Our teams won the Table Tennis Winners Trophy in the boys section and the Runner-up trophy in the girls section in BITS Hyderabad Inter College Tournament.

The Football team from our institute won the Winners Trophy in the inter-college tournament in MGIT, Hyderabad.

In the same tournament, our boys team also won the Runner-up trophy in Table Tennis.

Two of our students were selected for Spic Macay Gurukul programme for the summer of 2012. One of them spent one month at H. H. Dalai Lama’s monastery in Dharamsala and the other student spent one month with Smt. Aruna Roy and the Mazdoor Kisan Shakti Sangathan, in Rajasthan getting first hand experience of the spiritual and the social reality respectively.

The spirit of giving back to society is marked, by students visiting orphanages to celebrate important festivals, such as Rakshabandhan, Holi and Diwali, with the inmates.

A major drive on collection of used clothes has been carried out by Suraksha, successfully. NSS is supporting these and other service activities.

**In the year 2013**

The music club held its annual event ‘October Flakes’ where several student bands performed for the campus community.

The literary club of IIIT-H published several editions of its flagship campus magazine Ping. The IIIT-H branch of the Model UN Society, Munsoc, has been very active and organized the second chapter of Indian International MUN 2013 in May.

Four students of IIIT-H participated in the Spic Macay’s 1st International Convention, held at Kolkata in May 2013.

Five of our students were among the 400 participants of the Jagriti Yatra, a unique journey of discovery and transformation across the length and breadth of India.

Our students also organized concerts by top artists in their respective fields. A Spic Macay Hindustani concert with Saskia Rao De Haason the Cello was organized, with tabla accompaniment by Anuradha Pal. A musical evening in tribute to Late Pandit Ravi Shankar was also organized with Pandit Janardan Mitta on the sitar, accompanied by Nitin Mitta on the tabla.

In the sports area, IIIT-H football team was the winner of the inter college tournament in MGIT campus, with 40 participating teams.

IIIT-H also won the runner-up trophy in table tennis boys section. The men’s team was runner-up in table tennis in the state level inter-engineering college sportsfest organized by VJIT.

**In the year 2014**
Spic Macay events such as a Violin recital concert by Sri Ganesh Rajagopalan, and a Vocal Concert by Ragavan Manian and Tejaswinee Kelkar were part of these events. IIIT-H also held a Ghazal Concert by Ms. Rekha Surya in collaboration with HCU. Ms. Pujita Krishna Jyoti & our own Ms. Sonal Nimkar gave a classical dance performance.

Abhivyakti, the dramatics club of IIIT-H presented their first play on 27th Feb’14 to formally inaugurate Bodh-105 in Himalaya. Abhivyakti, also conducted a dramatics workshop in the session 2013-14. The workshop culminated in a performance on “World Theater Day” (27th of March).

Two of our students were among the 400 or so participants of the Jagriti Yatra, a unique journey of discovery and transformation across the length and breadth of India.

As part of the annual techno-cultural fest of IIIT-H the students painted the roads and walls of IIIT with beautiful themes and designs in various art forms including warli art form. Apart from student performances, several renowned artists such as The Raghu Dixit Project, Lagori, Kryptos, etc performed in the evenings.

In the sports area, IIIT-H participated 37th Senior Inter District Aquatics Championship 2013 organized by Ranga Reddy District Swimming Association and one of our student won 3rd Place in the 4x100mts medley relay.

Our team won the Runner – up trophy in the 3rd State Level Inter-Engineering College's Sports’ Fest – 2013 organized by Vidya Jyothi Institute of Technology.

Shiv Rahasya Trust organized 5Km run for good health in which 3 of our students received medals. In Friendly Foot Ball matches with BHEL and Microsoft Foot Ball Club our institute won by 5-3 and 4-0 respectively.

Apart from participating in events organized by other organizations, the Physical Education Centre of IIIT-H organized various events such as 10km run, 25km cycling race for the entire IIIT-H family which had large participation both from student and faculty.

IIIT-H students run a club Ashakiran where they conduct classes for underprivileged students around Gachibowli area thrice a week.

**In the year 2015**

National Novel Writing Month (NaNoWriMo), which is a platform that encourages people to start writing their stories as novels.

The dance club participated in the preliminary round of SpringFest 2015, the Cultural fest of IIT KGP and were selected to go for the final round.

Abhivyakti, the drama club, staged a play which went on to win the first prize for the same in the drama competition of BITS Hyderabad.

The outdoor theater Monkey King was presented by the students of IIIT H, directed by Mr. Kumarawamyin April 2015.

Thyagaraja Aradhana Festival was organized for the first time on campus in February 2015. A music concert by Tejaswinee Kelkar and Parikshit Sakurikar was organized in March 2015.
The annual techno-cultural fest of IIIT-H was held in February. Apart from student performances, several renowned artists performed in the evenings.

Noted actor and documentary maker Shri M. K. Raina, noted musicologist and Gandhian Economist Prof. Mark Lindley delivered talks in September and November respectively.

In the sports area, IIIT-H won the 4th State Level Inter Engineering College Sports Fest Trophy in Football organized by Vidya Jyothi Institute of Technology, Hyderabad

IIIT-H won the Runner-up Trophy in the 1st Telangana State level Inter Engineering College “8” a side Football Tournament organized by M.J college of Engineering and Technology of Sultan-ul-uloom Education Society

Apart from participating in inter-college sports event organized by other institute, IIIT-H Physical Education Center for the first time hosted the Telangana State Level Inter Engineering College Football Tournament.

IIIT-H students also won the Gold Medal in Chess Men and Bronze in chess women category.

5.3.3 Does the university conduct special drives / campaigns for students to promote heritage consciousness?

Yes.

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.

Yes. Students Literary Club is in place with students as members of the club, guided by a Faculty member of the Institute.

- During facility event, a theme will be evolved every year and basing on the theme, students are painting on the walls of hostels and students cultural centre
- From Literary club, Students are bringing monthly magazine “PING” which gives information on Institute activities such as student activities, events organised, talks and interviews with faculty etc.

5.3.5 Does the university have a Student Council or any other similar body? Give details on its constitution, activities and funding.

The institute has a Student Parliament which has elected members from each batch. The Parliament has a Speaker and a General Secretary. The Speaker conducts the parliament meetings and the General Secretary along with the Speaker represent/take up student related issues/views with other arms of the institute. There are other student bodies such as Mess Council, Student Academic Board etc. which not only represent student point views in the decision making processes of these aspects of student life on campus but also actively participate towards improving them. Apart from this, there are student bodies such as Cultural Council, Campus Life and Activities, Sports Council etc which actively organize various student activities through out the academic session.

5.3.6 Give details of various academic and administrative bodies that have student representatives on them. Also provide details of their activities.
Following are the details of Committees, where in student representatives are nominated in the composition.

(i) Student Life Committee
Student members bring in the student points of views to the discussions of this Committee.

(ii) Campus Security Committee
Student members bring the concerns of the students and represent their views on an issue under discussion.

(iii) Student Disciplinary Committee
Student members bring in the perspective of student community on the case under investigation.

(iv) Gender Sensitization cell
Student members actively participate in the discussions and decision making processes of the Committee. They also actively work towards implementation of the measures proposed by the Cell for increasing gender sensitivity on campus.

(v) Gender Grievance cell
Student members bring in the perspective of student community on the case under investigation.

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

6.1.1 State the vision and the mission of the university.

The vision of the Institute is

- To train and educate, at both undergraduate and postgraduate levels, engineers of outstanding ability who can become leaders in the IT industry and profession.
- To carry out advanced research and development in information and software technologies and their societal, scientific, industrial and financial applications
- To develop a larger humanistic vision of self and society within the institute and outside.

The mission of the Institute is

- To contribute to the transformation of industry and society, in India and the world over, by delivering world class research and education, and promoting innovation and human values.

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. Today’s society needs leaders in technology and science, beyond well trained workers. Research orientation is towards the long-term leadership and emphasis on human values is to produce leaders with understanding of the society.

6.1.3 How is the leadership involved

* in ensuring the organization’s management system development, implementation and continuous improvement?
The top leadership consisting of the senior faculty meet periodically to evaluate the policy implementation and fine tuning to the times and challenges faced each semester or year. There are annual retreats to discuss larger issues and directions of the institute.

* in interacting with its stakeholders?

Interactions with faculty happen at least once a month. Interaction with different sections of students happen periodically throughout the year to understand their issues. Interactions with parents happen at the start as well as over electronic channels regularly. Alumni are actively involved in several aspects periodically. Industry interaction happen through specific events as well as engagements.

* in reinforcing a culture of excellence?

Striving towards excellence in teaching, research, and outreach to various sections permeates the institution. Periodic reviews, annual retreats, as well as focus groups to address specific issues are the means for it.

* in identifying organizational needs and striving to fulfill them?

Evaluations, reviews, and planning efforts take place periodically to ensure organizational needs are understood and fulfilled.

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?

Yes

6.1.6 Does the university promote a culture of participative management? If yes, indicate the levels of participative management.

Yes. All faculty members are involved with some aspects of the governance of the institute through different committees that look at the academic and non-academic aspects. Administrative staff members are also involved with the process.

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

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.
Developing younger faculty members to be the leaders of tomorrow is a special concern at IIIT Hyderabad, given its unique model of governance. Assistant Professors are in important roles and often in critical positions. They participate in governance as members of committees to understand the long and short term issues better.

6.1.10 Has the university evolved a knowledge management strategy? If yes, give details.

Developing younger faculty members to be the leaders of tomorrow is a special concern at IIIT Hyderabad, given its unique model of governance. Assistant Professors are in important roles and often in critical positions. They participate in governance as members of committees to understand the long and short term issues better.

6.1.11 How are the following values reflected the functioning of the university?

* Contributing to national development
High quality teaching and research create the most essential building blocks for national development. The institute has done excellently in this aspect. Besides, a very active effort is constantly underway to take our research to the society through engagement with government agencies, laboratories in the strategic sector, as well as industry.

* Fostering global competencies among students
The academic and research outlook of the institute is truly global and students are reminded constantly that their arena is the global world of academia. This results in our students doing excellently in programming contests, research competitions, etc. Our students go to internships at several global organizations. Our research is seen at the best of conferences and journals.

* Inculcating a sound value system among students
IIIT, Hyderabad is a pioneer in incorporating value education into the curriculum from 2005. A conscious effort involving a large fraction of the faculty members aims at making each student question his or her own motivation, goals, and roles in life. Our method has been adopted and adapted by several institutions in the country including IIT BHU, JNTU, PTU, UPTU, etc.

* Promoting use of technology
Technology is put to maximum use in the institute, in classrooms, course management, fee payments, etc. An institute management system is currently under deployment to coordinate most operations of the institute under a single software system.

* Quest for excellence
Continuous quest for global excellence is the hallmark of IIIT, Hyderabad and permeates the faculty, research centers, students, staff, etc. Global presence and impact with a local flavour is our goal. This is achieved by benchmarking our courses against the best institutions in the world, publishing our research at the best forums, as well as having a steady stream of globally acclaimed visitors to the institute.

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?

Yes. The institute has set a strategic plan to be among the top 25 global institutions in our area by the year 2025.
* Vision and mission

The vision and the mission emphasize high impact and excellence.

* Teaching and learning

Yes, both the numbers and impact of the teaching are in our development plan, including impacting a wider section of the society through online education, virtual laboratories, etc.

* Research and development

Global recognition comes through top-class research. We want to have a few research groups counted among the top 10 in the world by the year 2025.

* Community engagement

Social impact by working with other colleges and schools, government agencies, etc., are part of our plan.

* Human resource planning and development

Yes, the number of faculty members and researchers is a critical component of the plan.

* Industry interaction

The institute has strong industry connections currently, but have plans to make them deeper in specific areas as computer science makes its biggest impact through products that are adapted quickly by several million users. We also want to produce several startups that do very well each year.

* Internationalisation

This is also a key component of our plans. We are in the process of recruiting faculty members, post-doctoral researchers, and PhD students from different parts of the world.

6.2.2 Describe the university’s internal organizational structure and decision making processes and their effectiveness.

Placed at Annexure 1.

6.2.3 Does the university have a formal policy to ensure quality? How is it designed, driven, deployed and reviewed?

Quality and excellence are constant endeavours at the institute. There are robust steps that ensure high quality in teaching, research, and governance at the institute. These are reviewed periodically by different bodies. Course feedback, annual appraisals, etc., are some of the formal mechanisms to ensure quality.

6.2.4 Does the university encourage its academic departments to function independently and autonomously and how does it ensure accountability?

IIIT, Hyderabad is organized as problem-focused research centers and not departments, for
effective research productivity. The research centers have a high degree of autonomy in all their matters. Their performance is reviewed collectively periodically.

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?

No

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?

The university has in place a well structured grievance redressal mechanism/ system. All efforts are made to ensure timely and internal redressal of grievances registered by various stakeholders. Any grievance is received by the respective sections and an attempt is made to address the same at that level depending on the matter that needs attention. In case of an issue that needs the attention of higher level authorities the representation is forwarded to the respective higher officials who handle either at their level or constitute a committee if need arises. Grievances reported are analysed to see if they are concentrated in one particular section/department, or relate to one particular issue.

6.2.7 Does the university have a mechanism for analyzing student feedback on institutional performance? If yes, what was the institutional response?

The AAC (Academic Affairs Committee) plays a key role in collecting student feedback on institutional performance. It uses structured formats or FSIS (Faculty Student Interaction Session) to obtain the feedback which is done during the academic year. The analysis of the feedback showed that the major concerns were with regard to infrastructure, amenities and timeliness of services and less on the academic matters of teaching and guidance which was helpful in planning for the future.

6.2.8 Does the university conduct performance audit of the various departments?

Teaching performance of each teacher is evaluated periodically. Research at each center is also evaluated often.

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.

IIT, Hyderabad does not have a CDC or a BCUD. However, the Governing Council, the industry advisory council, etc., plan and evaluate the performance of the institute.

6.3 Faculty Empowerment Strategies

6.3.1 What efforts have been made to enhance the professional development of teaching and non-teaching staff?

The Institute encourages faculty to attend conferences/workshops of National and International for their professional development. The Institute also encourages to conduct these
conferences/workshops within the Institute.

The Institute encourages the non-teaching staff to attend (i) the regular English course to improve their communication skills (ii) to attend regular IT workshop and programming courses as well as to attend IT certified courses by System admin. Staff and (iii) to depute the staff to attend workshops to aware the latest trends or rules and regulations which can be implemented in their day-to-day work.

6.3.2 What is the outcome of the review of various appraisal methods used by the university? List the important decisions.

(i) Annual self-appraisal by faculty to evaluate yearly performance in: (a)Teaching, (b)Research (c) Tech Transfer and (d) Service (to profession, society, and Institute)

(ii) Student teaching feedback.

The Institute will give a rating and inform the faculty with suggestions to improve their performance in the areas wherever they are found weak. The annual increments are tied up with their self-appraisal evaluation.

The self-appraisal of non-teaching staff is collected and reviewed by a Committee. They will be informed to improve in the areas wherever any deficiencies are noticed.

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.

a. Medical Insurance scheme – 100%
b. Health Centre in the Institute where doctors of Allopathi, Ayurveda and Homeopathy are available – 100%
c. Free Medical camp in the campus – 100%
d. Medical Emergency fund – Scheme was started in the year 2014-15. Few of the staff members availed this facility

6.3.4 What are the measures taken by the University for attracting and retaining eminent faculty?

Creating global visibility is the most critical element to attract top-quality individuals as faculty members to the institute. We achieve that through our research publications as well as participation in various global conferences and associations. Faculty are given clear independence and support to perform their research, which is most valuable in retaining them.

6.3.5 Has the university conducted a gender audit during the last four years? If yes, mention a few salient findings.

Yes. As per the mandate of the UGC, we are conducting a Gender audit to ensure the safety of women on campus and programmes for gender sensitization. Woman constitute 23.8% for the year 2015-16.

6.3.6 Does the university conduct any gender sensitization programmes for its faculty?

Institute organizes Human Values courses which emphasize viewing and relating to another human being independent of gender (or race or caste or wealth etc.)

6.3.7 What is the impact of the University’s Academic Staff College Programmes in enhancing the competencies of the university faculty?
IIIT, Hyderabad does not have an academic staff college. Our faculty are encouraged to and do take part in several top international conferences to both present their work and to upgrade their knowledge. An active scheme of lectures and talks by eminent individuals from the technical and social fields is in place.

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?

Annual budget at the beginning of the Financial Year will be prepared, the allocation of the budget for each wing or section will be intimated at the beginning of the Financial Year. The Finance section will monitor the availability of budget under each head of account and see that the expenditure should not cross the budget allocated for respective heads.

6.4.2 Does the university have a mechanism for internal and external audit? Give details.

Yes. The institute appointed qualified chartered accountants for internal and external audit. Internal Auditors: - M/s Ramanathan & Rao Co. Chartered Accountants, 302, Kala Mansion, SD Road, Sec’bad-500 003. External Auditors:-M/s Anandam & co. Chartered Accountants, 7-A, Surya Towers, SP Road, Sec’bad-500 003. Internal auditors do the audit once in six months, the external auditors will do the audit once in six months after the internal audit.

6.4.3 Are the institution’s accounts audited regularly? Have there been any major audit objections, if so, how were they addressed?

Any audit objection raised by the auditors during the process of audit will be brought to the notice of the concern and will be rectified in the same financial year or next Financial Year.

6.4.4 Provide the audited income and expenditure statement of academic and administrative activities of the last four years.

The audited income and expenditure statement for the last four years (2011-12, 2012-13, 2013-14, 2014-15) are enclosed at Annexure 2

6.4.5 Narrate the efforts taken by the University for Resource Mobilization.

(a) The institute will approach the industry for donations to develop the infrastructure of the institute.
(b) The institute collects placement fee from the companies.
(c) The institute renting the buildings within the campus to companies to establish their business.

6.4.6 Is there any provision for the university to create a corpus fund? If yes, give details.

Yes. The institute allocated Rs. 5.00 crores corpus fund as per the provisions of UGC.

6.5 Internal Quality Assurance System
6.5.1 Does the university conduct an academic audit of its departments? If yes, give details.

Yes. Dean (A) and Director conducts faculty meeting periodically to review the progress of students, completion of syllabus and students attendance etc. The Dean of Academics collects information from the respective programme coordinators on; completion of syllabus, students’ attendance and performance.

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 Dean of Academics take necessary measures to address the issues related to teaching, learning and evaluation. They also hold meeting with the Students in special cases, solve the problems in consultation with the other stake holders.

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?

The Dean of Academics is entrusted with this responsibility of reviewing the academic programme. The Dean (Academics), periodically conducts meetings with the respective programme coordinators and also with the faculty. They visit the research centers, check the staff and student attendance registers, time tables, laboratories, classrooms and also the results. The Dean (A) informally interact with the students and research scholars periodically to know their needs and problems.

6.5.4 How has IQAC contributed to institutionalizing quality assurance strategies and processes?

The IQAC collects feedback from students, Alumni, Parents on academic programme, facilities and services available on campus. The IQAC also collected information on availability of basic amenities; running and drinking water, washrooms etc…and communicated the same to the concerned administrators for action. The IQAC organized workshops to strengthen the capabilities of staff (Teaching and Non teaching) and to improve the functioning by creating awareness on guidelines, rules regulations and procedures followed at the administration level processing bills, requisitions and other proposals.

6.5.5 How many decisions of the IQAC have been placed before the statutory authorities of the university for implementation?

IQAC is providing the suggestions for the betterment of the Institute and all the suggestions are placed before the Academic Affairs committee headed by the Director.

6.5.6 Does the IQAC have external members on its committees? If so, mention any significant contribution made by such members.

Yes. The IQAC committee is constituted as per the UGC guidelines. The committee consists of Director as chairperson and 3 senior professors and registrar as Coordinator and 2 eminent members from Industry, one from the alumni. These members gave valuable suggestions on Constitution of Academic Council and Internships / Internships / Placement of students in Institutions / Industries / Laboratories to gain Work experience.

6.5.7 Has the IQAC conducted any study on the incremental academic growth of students from disadvantaged sections of society?
Yes, Institute provides sufficient help to academically deficient students. It will be done by faculty mentors, senior students through course wise help cells.

6.5.8 What policies are in place for the periodic review of administrative and academic departments, subject areas, research centres, etc.?

The Administrative activities are reviewed by the Registrar. The academic activities at the department level and at the research centre level are reviewed by the Heads and Deans respectively. The Head of Research Centre and PG Committee review the research programmes. The Chairpersons of UG/PG Academic Board organize review sessions on subject / course syllabi in their departments. Thus the policy of the university is to decentralize and entrust the responsibility of review / evaluation of activities at different levels.

CRITERIA VII: INNOVATIONS AND BEST PRACTICES

7.1 Environment Consciousness

7.1.1 Does the university conduct a Green Audit of its campus?

No, we don't do it formally.

7.1.2 What are the initiatives taken by the university to make the campus eco-friendly?

* Energy conservation - We have completely switched to LED lights in 3 out of 4 hostels. All street lights are now LED lights. All hostels are fitted with solar water heater system. During last 3 months, we have replaced about 700 old 75W fans with new BEE rated energy efficient fans of 43W. This has resulted into substantial energy saving in the campus.

* Use of renewable energy - Solar water heaters have been used in the hostels for several years. Solar power installation is under implementation now.

* Water harvesting - Extensive water harvesting and gray water reuse plans have been implemented and are being expanded.

* Check dam construction - Not applicable

* Efforts for Carbon neutrality - Waste coconuts incorporated into soil for moisture conservation - 100 tonns per year; Bio-degradable garden waste being composted - 10 tonns per year (total); Mess refuge and kitchen waste composted (total)

* Plantation - Organic farm (4 acres); Tree plantation - 400 saplings (2016); 200 saplings (2015); Bio-diversity park proposed (5 acres)

* Hazardous waste management - The institute does not generate specific hazardous wastes. Regular waste management efforts are active with participation of students.

* e-waste management - The institute is in the process of formulating an e-waste management strategy.

* any other (please specify) - The institute has a small farm on campus that affords opportunity for students, staff, and faculty to engage directly in organic farming and conservation.

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.

We have launched a new scheme for Ph.D. students wherein they are given very competitive monthly scholarships based on their performance. Every Ph.D. student gets a basic stipend and tuition waiver. In addition, we also pay a performance component by taking into account their grades in the courses, progress made in terms of quantity and quality of the research papers published, technologies developed and other contributions.

Scheme for new Faculty members to foster research culture: Every newly joined faculty member is given a generous start-up grant in terms of free tuition year points and stipend year points. Faculty members can use these points to support their research students even when they don't get any external project grants. In addition, upon graduating every research student, a few tuition points go to the faculty members' standing account.

International Travel Grants for research students: We have established travel grants for students who publish their research papers in high-quality conferences.

Dean (Research) awards for non-research students for publishing research papers: As IIIT-H is a research university, we encourage the culture of research and publishing when it is not mandatory (for regular B.Tech and M. Tech students, who are non-research students).

Education Extension Group to help in teaching activities for large classes: We have established a system where some of the teaching-related load is taken care centrally especially for large classrooms. This assistance includes taking attendance, managing TAs for evaluation and assignments, paper distribution, etc.

Setting up Institute Management System (IMS): We have established a new IMS for easy administration and management of the Institute

Industry Interaction Sessions to define problem areas: We conduct a special event called "Confluence Hyderabad" where we bring in major industry leaders, start-ups and investors in a specific domain to discuss the long-term problems faced by the industry. This discussion helps in identifying and prioritising the research problems that can be taken up by the Institute for long-term and short-term.

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.

Best Practice-1:

1. Title of the Practice
   Creating environment for under graduate students to carry out research

2. Objectives of the Practice
   Objective 1: Expose UG students the importance of research.
   Outcome 1: Intelligent students will be attracted towards the research and select research and development as a future carrier.
Objective 2: Involve UG students to collaborate with MS/PhD students in solving research problems.
Outcome 2: UG students will be exposed to the practice of solving research problems and writing research papers. They will also be exposed to the development of research prototypes and latest research trends.

Objective 3: Exposing the UG-students to the latest research trends through expert talks and seminars.
Outcome 3: Every UG student will get the opportunity to attend talks in diverse domains and come to know about the corresponding latest research trends. As a result, he/she will be able to select the interested research area for further exploration.

3. The Context

The institute should have eminent research faculty who carry cutting edge research. Also, the students who are getting admitted should be intelligent. There should be research environment with several MS and PhD students in diverse disciplines.

To implement the above practice, it is important that the management shows full commitment towards excellence. The commitment should be reflected in attracting eminent research faculty and visiting faculty. Also, the institute should have a robust research oriented curriculum.

4. The Practice

The number of research students in India are significantly less than China and USA. In order to solve research problems, we need human resource with research skills. As of now, several companies are operating their research labs in India. To get quality researchers, it is important that Indian universities should produce researchers with required research skills.

Also, to solve India’s economic problems and increase high GDP, it is important that we develop indigenous technologies. We can not expect foreign researcher to produce technologies to solve India’s problems. So it is very necessary to encourage thee current and next generation towards research by developing institutes which encourage high quality research.

In summary, it can be said that “India’s problems can only be solved by Indian researchers”. The main question is how? At IIIT Hyderabad, we are striving to create research environment to produce next generation researchers. At first, we have declared IIIT Hyderabad as “Research University”. As a result, any one who joins this University, either faculty or the student, has no confusion regarding expectations. Also, we are making efforts to create a research culture through various mechanisms such as attracting intelligent students, encouraging collaborative culture and providing avenues for getting exposure to latest research trends through guest lectures/seminars.

Like any new idea, the proposed mechanism also has constraints. There are several constraints.

- Indian education environment during intermediate education: There is a mushrooming of coaching classes for entrance exam has changed the mind-set of students towards learning. They come to college with the mind-set of coaching class: higher emphasis on grades than learning. As a result, it is becoming difficult for the institute to mould the students for carrying out research.
- Parents and peer pressure: The parents want their children to get the good job in the company. They do not understand the scope of research based education and therefore influencing the
students towards the high paid jobs like other peers rather than spending few years doing research with scholarship which is significantly less than the salary.

- Faculty: Also, since independence the faculty are not in the habit of doing cutting-edge research and gave importance in providing high quality education. Mostly, individuals are earning PhD taking faculty job as a settlement and doing research as a part-time activity. It is becoming difficult to get the committed high quality researchers as a faculty members.

5. Evidence of Success

Several UG students are collaborating with MS and PhD students in writing research papers. Several students have joined in research start-ups. 6 students joined MS/PhD programs in top graded universities in abroad with fellowships and scholarships.

The results indicate that students are liking the research environment at the institute. Also, due to high quality research, advanced electives in selected areas are being offered which provided opportunity to UG students to get exposed to latest research areas.

6. Problems Encountered and Resources Required

This university has started itself by declaring itself as a research university and the management has set clear-cut goals for the institute. Initially, it took few years to get top research faculty. After getting the threshold number of faculty members, things have proceeded smoothly.

The institute is self-managed, there are issues in getting funds. Things are being managed with optimal management of resources. At the same time, institute is striving to get more funds through research projects and donations.

Best Practice-2:

1. Title of the Practice

Project based learning

2. Objectives of the Practice

Objective 1: To improve the ability to apply theory to practice and vice versa
Outcome: By executing the projects, students will be able to see the applicability of the learned theories which results into enhanced understanding of the theory concepts. Also, the issues faced during the project execution enables to explore more theoretical concepts. As a result, students gain knowledge in an integrated manner due to mutual reinforcement of theory and practice.

Objective 2: To improve the practical skills of the student.
Outcome: Students will be able to get the training on using the latest tools and methodologies to develop applications and build systems.

Objective 3: To impart skills to identify research problems.
Outcome: Normally, projects are defined by faculty members with certain degree of unexpectedness or hypothesis testing. While doing the project, the student is forced to read the latest research papers related to that problem. As a result, the there is a high probability that the students will be able to identify new research problems.

3. The Context
The faculty members should be able to identify research projects. It is only possible if the faculty members carry out cutting edge research. Also, the students who are getting admitted should be innovative. The research environment with MS and PhD program will enable project based learning.

To implement the above practice, the university should be autonomous to modify the curriculum and enable project based learning. Also, the institute should have a robust research enabling curriculum.

4. The Practice

It is expected that the graduates produced from Indian universities should possess theoretical and practical skills. The theoretical knowledge includes fundamental concepts regarding subject. The practical skills include the ability to design systems, tools and develop applications.

In engineering education, the theoretical concepts are being imparted through class room lectures and the laboratory skills in the dedicated laboratories. Unfortunately, the enough practical knowledge is not gained due to limited time available to impart practical skills. The issue of imparting practical education becomes unmanageable due to diversity of the students. As a result, the students are not getting expected practical and system development skills. The industry also feels that the level of practical skills exposed to the students is not up to the desired level.

Human resources with sufficient system development and practical skills are imperative for accelerating India’s growth potential. As of now, several companies are operating their product and service industries in India. Also, to solve India’s economic problems and increase high GDP, it is important that we develop indigenous technologies. We cannot expect foreign skilled man power to produce technologies and build systems to solve India’s problems. So it is very necessary to impart skill based education to current and next generation students by developing institutes to impart skills.

At IIIT Hyderabad, we are striving to impart skills through project based training. Besides research, high quality teaching is the primary objective of the institute. As a result, anyone who joins this University, either faculty or the student, has no confusion regarding expectations with respect to teaching. Project based teaching is a part and parcel of the curriculum. The curriculum provides the flexibility for the faculty and teacher to opt of project based learning and allows them to build a prototype by integrating several different concepts. As a result, the learning becomes an enjoyable journey for both faculty and student.

Like any new idea, the proposed mechanism also has constraints. There are several constraints.

- If not implemented seriously, it will create a negative impact: The project based learning should be taken seriously by faculty and students. It should contain exploration and development part. The academic level should be defined properly.
- Unless faculty are interested, it is difficult to implement.
- The teaching should be of high quality, to encourage students for carrying project based learning.
- The institute should have a research environment.

5. Evidence of Success

Several UG and PG students have opted for project based learning. The research ideas identified through project based learning have lead to production of research papers. The project based learning has enabled UG students to work with MS/PhD students.
The leaning has enables them to participate in several competitions. The results indicate that students are liking the project based leaning system. During the year 200 students have opted for course projects.

Social applications of our research are also very important to us. Institute's Lab for Spatial Informatics has launched VRGeo, an open source software for geo-spatial information. In addition, there are the following achievements in technical contests: IIIT-H represented India in the ACM ICPC 2012 international contest and the team came in top 20. It represented India fourth year in a row. IIIT-H has been number 1 globally in Sphere Online Judge, a highly popular programming site with over 30,000 users.

6. Problems Encountered and Resources Required

Besides research, the university has set high quality teaching as the main goal for the institute. Initially, it took few years to set-up the curriculum. After making several adjustments based on the feedback from students and faculty, project based learning has implemented smoothly.

The project based learning increases academic load on the faculty. It requires more faculty members to manage the projects.
# Annexure 2

**International Institute of Information Technology, Hyderabad**

**Income and Expenditure Account for the year ended 31st March 2012**

<table>
<thead>
<tr>
<th>Schedule</th>
<th>2011-12</th>
<th>2010-11</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rs</td>
<td>Rs</td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fee from students and research scholars</td>
<td>144,733,354</td>
<td>133,026,121</td>
</tr>
<tr>
<td>Amounts received for research projects</td>
<td>164,254,112</td>
<td>276,123,930</td>
</tr>
<tr>
<td>Income from hostel accommodation</td>
<td>37,616,782</td>
<td>31,421,351</td>
</tr>
<tr>
<td>Other income</td>
<td>38,286,346</td>
<td>50,849,226</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>404,993,674</strong></td>
<td><strong>491,420,628</strong></td>
</tr>
<tr>
<td>Expenditure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expenditure on education courses</td>
<td>99,634,917</td>
<td>78,074,036</td>
</tr>
<tr>
<td>Expenditure on Research Projects</td>
<td>185,099,827</td>
<td>276,038,587</td>
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<tr>
<td>Expenditure on Hostel Accommodation</td>
<td>21,574,955</td>
<td>18,264,980</td>
</tr>
<tr>
<td>Other Administration charges and Expenses</td>
<td>61,430,186</td>
<td>51,423,493</td>
</tr>
<tr>
<td>Financial Charges</td>
<td>16,611,507</td>
<td>12,423,670</td>
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<tr>
<td>Depreciation on fixed assets</td>
<td>31,847,745</td>
<td>26,319,147</td>
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<td><strong>TOTAL</strong></td>
<td><strong>416,198,647</strong></td>
<td><strong>492,643,027</strong></td>
</tr>
<tr>
<td>Excess of Expenditure over Income</td>
<td>(11,204,974)</td>
<td>28,877,106</td>
</tr>
</tbody>
</table>

**APPROPRIATIONS:**

- Transfer to Standing A/c
- Transfer to Reserve for consultancy projects
- Balance Carried to Balance Sheet

**Notes on Accounts**

As per our report of even date

For M Anandam & Co.,
Chaired Accountants

R Sivaraman
Partner
M No: 23952

Place: Hyderabad
Date: 30.07.2012

For and on behalf of the Governing Council

Prof. M Venkateswarlu
Finance Officer

Prof. Rajeev Sengal
Director

Prof. P J Narayanan
Member (GC)
<table>
<thead>
<tr>
<th>Schedule</th>
<th>2012-13 Rs</th>
<th>2011-12 Rs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fee from Students and Research Scholars</td>
<td>11</td>
<td>196,545,877</td>
</tr>
<tr>
<td>Amounts Received for Research Projects</td>
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<td>176,390,806</td>
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<tr>
<td>Income from Hostel Accommodation</td>
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<td>45,985,110</td>
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<td>Other Income</td>
<td>13</td>
<td>42,645,065</td>
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<tr>
<td>TOTAL Expenditure</td>
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<td>463,766,877</td>
</tr>
<tr>
<td>Expenditure on Education Courses</td>
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<td>97,784,152</td>
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<tr>
<td>Expenditure on Research Projects</td>
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<td>178,065,206</td>
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<td>Expenditure on Hostel Accommodation</td>
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<td>37,697,542</td>
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<td>Administration Expenses</td>
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<td>61,845,727</td>
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<td>430,245,959</td>
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<tr>
<td>Excess of Income over Expenditure carried to B/S</td>
<td></td>
<td>33,520,918</td>
</tr>
<tr>
<td>APPROPRIATIONS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transferred to Building Reserve</td>
<td></td>
<td>30,000,000</td>
</tr>
<tr>
<td>Balance Carried to Balance Sheet</td>
<td></td>
<td>3,520,918</td>
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<tr>
<td>Notes on Accounts</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

As per our report of even date
For M.Anadam & Co.,
Chartered Accountants
M V Ranganath
Partner
M No : 028031
Place: Hyderabad
Date : 03.08.2013

For and on behalf of the Governing Council
Prof. M. Venkateswarlu
Finance Officer
Prof. P J Narayanan
Director
Prof. K Vasudeva Varma
Member (GC)
# International Institute of Information Technology, Hyderabad

## Income and Expenditure Account for the year ended 31st March 2014

<table>
<thead>
<tr>
<th>Schedule</th>
<th>2013-14</th>
<th>2012-13</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rs</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fee from Students and Research Scholars</td>
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</tr>
<tr>
<td>Amounts Received for Research Projects</td>
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<td>Income from Hostel Accommodation</td>
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<tr>
<td>Expenditure on Education Courses</td>
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<td>Expenditure on Research Projects</td>
<td>16</td>
<td>197,399,805</td>
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<tr>
<td>Expenditure on Hostel Accommodation</td>
<td>17</td>
<td>41,388,440</td>
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<td>Administration Expenses</td>
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<td>Finance Cost</td>
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<td>Depreciation on fixed assets</td>
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<td>46,150,125</td>
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<tr>
<td>TOTAL Expenditure over Expenditure carried to B/S</td>
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<tr>
<td>Excess of Income over Expenditure carried to B/S</td>
<td></td>
<td>93,229,558</td>
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</tbody>
</table>

**APPROPRIATIONS:**
- Transferred to Building Reserve
- Balance Carried to Balance Sheet

| Notes on Accounts | 10 | 33,229,558 | 3,520,918 |

As per our report of even date
For M Anandam & Co.,
Chartered Accountants

M V Ranganath
Partner
M No: 028031

Place: Hyderabad
Date: 16.08.2014

For and on behalf of the Governing Council

Prof. M. Vrikshaswarthu
Finance Officer

Prof. P J Narayanan
Director

Prof. K Vasudeva Varma
Member (GO)
<table>
<thead>
<tr>
<th>Schedule</th>
<th>Income</th>
<th>2014-15</th>
<th>2013-14</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fee from Students and Research Scholars</td>
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<tr>
<td></td>
<td>Income from Hostel &amp; Mess</td>
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<tr>
<td></td>
<td>Other Income</td>
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<td></td>
<td><strong>TOTAL</strong></td>
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<td><strong>436,577,967</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Expenditure</th>
<th>2014-15</th>
<th>2013-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Expenditure on Education Courses</td>
<td></td>
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<td>15</td>
<td>Expenditure on Hostel &amp; Mess</td>
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<td>16</td>
<td>Administration Expenses</td>
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<td>17</td>
<td>Net Expenditure on Research Projects</td>
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<td>Finance Cost</td>
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<td>Depreciation on fixed assets</td>
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<td><strong>TOTAL</strong></td>
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<td><strong>336,154,544</strong></td>
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<table>
<thead>
<tr>
<th>Schedule</th>
<th>Excess of Income over Expenditure carried to B/S</th>
<th>2014-15</th>
<th>2013-14</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>100,423,422</strong></td>
<td></td>
<td><strong>93,229,558</strong></td>
</tr>
</tbody>
</table>

**APPROPRIATIONS:**
- Transferred to Building Reserve: 80,000,000
- Balance Carried to Balance Sheet: 20,423,422

**Notes on Accounts**

As per our report of even date
For M. Arvind, & Co.,
Chartered Accountants
M V Ranganath
Partner
M No: 028031

For and on behalf of the Governing Council
Prof. M. Varahateswarlu
Finance Officer
Prof. P. J. Narayanan
Director
Prof. Jayanthi Silaswaru
Member (GC)

Place: Hyderabad
Date: 09.07.2015