cosmopolitan ambience, good connectivity and strong Information Technology (IT) sector is attracting top ranked to the Indian Institute of Technology- Hyderabad (IIT-H) over other IITs in the country, including some of the established and famous ones.

The opening rank was 534 this year compared with 632 last year and the number of top 1,000 rankers from the JEE has increased enormously compared with just single digit last year. "The registration process was completed on Wednesday. We are yet to compile the figures but good rankers have chosen us over other new IITs and also some old IITs," explained IIT-H Director, U.B. Desai.

Admissions closed at 988 rank in the Computer Science Engineering (CSE), one of the sought-after streams in the IITs. The last person to get into the institute was 5,500th ranker, considered to be pretty good for an institute that started only in 2008-09. Telugu students are not more than 35 percent thus ruling out that factor of only the locals choosing the institution.

"The credit should go to the city given its cosmopolitan nature and good connectivity with the country through rail and air networks apart from the surging IT sector that provides lot many opportunities to students," Prof. Desai feels. The city is dotted with India's top scientific and defence research institutions, and students feel it is easier to get internships and jobs in Hyderabad compared to any other city.

Telangana IT Minister K.T. Rama Rao was vigorously pushing Hyderabad as the start-up destination of the country thus providing ample opportunities for the bright minds and this will certainly help IIT-H students, he observed. The recently cleared plans for setting up India's biggest Incubation Centre at IIT Hyderabad in collaboration with Indian School of Business and NALSAR University of Law spread over 60,000 sq. ft. at a cost of Rs. 35 crores, is another big plus.

Academically, IIT-H is quite attractive to any student with 1:12 teacher-student ratio while other strong factors luring students include research opportunities in the newer areas. It also offers the best bouquet of courses. It has a strong research network and the new research labs. "We have the largest number of faculty among new IITs and more than 100 labs of which nearly 50 are for research," reveals Prof. Desai.

The institute has started a DigiFab Laboratory for 3D printing that equips students with latest manufacturing technologies. "We are the only institute to offer such facility in India and more so for first year students," he adds.
3.2k engg seats vacant, govt pockets ₹14cr

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Mumbai: A fundamental faux in this year’s admission to elite Indian engineering colleges has resulted in 3,200 spots lying vacant at the end of the admissions process. Without an exit clause, a bunch of students are stuck with seats they don’t want to join, and another anxious lot of candidates who want to sign up at these colleges cannot do so.

When the Joint Seat Allocation Authority (JoSAA) set the business rules for admission to the IITs, NITs, IIIT and other government-funded technical institutes, it did not permit students to cancel admissions. Not only did the faulty design not allow unhappy candidates to give up the allotted seats, it even restricted the interested students, sitting a bit lower in the merit list, to opt for these colleges. Moreover, for each of these 3,200 seats a non-refundable seat acceptance fee of Rs 45,000 was paid, with the government making a neat Rs 14.4 crore.

“At the end of the process, there are 3,200 seats where students have blocked the seats but have not confirmed their admission,” said NIT Patna director Asok De, also co-chairman of the JoSAA. Parents complained that the merit list did not roll as seats were not allowed to be withdrawn, with little change that took place in the allotment after the initial two rounds.

The process, broken up into four rounds, is thus: In the first round, students are permitted to put down as many options of institutes and courses as they please. For instance, if a student is allocated choice number 99, the student could block this preference, report to the institute and pay the non-refundable seat acceptance fee of Rs 45,000. The candidate could also opt for an upgrade (Non-acceptance of the option allotted leads to elimination from the process).

Again, if the student in the second round gets a better choice, the candidate can once again opt for it. For instance, after completion of all the rounds, let’s assume, the student is allotted a seat in NIT Delhi, but also gets into a better college (which has not participated in the JoSAA), there is no option of cancelling admission at the NIT. Hence, at the end of the process, this student, is in NIT, Delhi, but only on paper. He will not join the college as he has opted to join another institute of his choice.
IISc develops new methods to detect blood sugar

IISc Bangalore has developed two new methods of testing glucose levels in blood, which could predict the onset of diabetes better than existing tests.

http://www.livemint.com/Politics/BVTiCHqeMsFa6fJzsUBXSL/IISc-develops-new-methods-to-detect-blood-sugar.html

Bengaluru: It may soon be easier to detect diabetes, a disease that keeps around 7% of India away from sweets, at an early stage. The Indian Institute of Science, Bangalore has developed two new methods of testing glucose levels in blood, which could predict the onset of the disease better than existing diagnostic tests.

“To detect glucose (blood sugar), hospitals use chemical-based methods that are complicated and time-consuming. With the ever increasing demand for cheaper, quicker, and more accurate medical diagnostic devices, these technologies may well develop into usable products,” said Ajay Sood, professor of physics at IISc, who is also a fellow of the Royal Society, London.

The research team used two devices which made it possible to sense glucose at a concentration of two nanomolars.

“This is like searching for four people from a population that is 10 times that of India, and catching them,” said Sood. Two other scientists, Prof S. Asokan from the Department of instrumentation and applied physics and and Prof S. Sampath from the department of inorganic and physical chemistry at IISc , are also part of the team.

The International Diabetes Federation estimates that the number of diabetics in the country could go up from 65 million now to 110 million by 2035.

“Most of the patients come at a very late stage and a large part of population also goes undiagnosed. The later the diagnosis, the more the complications on organs like heart, eyes, brain, kidney and liver. In fact, sometimes, patients come to know of diabetes only after they have suffered a heart attack or have an unhealed wound or an eye infection. Early detection tests can reduce the diabetes burden to a large extent,” said Dr Ravi Sankar Erukulapati, Endocrinologist and national lead at Apollo Sugar Clinics.

At present, two standard tests are used for oral glucose tolerance, which indicate what the sugar level is before and after having food. There is another HbA1C (glycated haemoglobin) test, which shows how the sugar levels have been over the past three months.

IISc’s new approach to detect the disease is based on two devices called field effect transistor and Bragg grating. The former is based on electrical signals and the latter uses the principles of optics, Sood said.

Both these methods use what is called functional graphene, a layer of carbon atoms held together. Graphene has a love-hate relationship with water, which makes it repel as well as spread over it. This, in turn, makes graphene attach to glass fibre. This principle makes the test easy and helps detect early onset of the disease.

The other device, based on the principles of wave length, is sensitive enough to detect glucose in an ocean of healthy blood, and can detect glycated haemoglobin, Sood said.
IISc falls back on its old students to raise Rs 100 cr

http://economictimes.indiatimes.com/industry/services/education/iisc-falls-back-on-its-old-students-to-raise-rs-100-cr/articleshow/48663312.cms

BENGALURU: With its annual budgetary allocation barely enough to meet administrative expenses, the Indian Institute of Science (IISc) has now turned to its wide network of alumni to raise money.

Through a newly-established Office of Development and Alumni Affairs (ODAA), the 106 year-old institution is reaching out to old students spread all over the world for raising Rs 105 crore. The donations would fund six areas identified as requiring attention.

"We need additional funding to be internationally competitive in cutting-edge areas of research. We are not alone in undertaking such fundraising efforts. All the old IITs have major fundraising activities," said Govindan Rangarajan, chairperson, IISc Division of Interdisciplinary Research, who is overseeing the functioning of the ODAA.

The IISc gets Rs 400 crore from the Centre every year. This has more or less remained the same since the 2013-14 fiscal, when the Centre clubbed IISc along with the five Indian Institutes of Science Education and Research and released a combined budget for all of them.

"What we get takes care of salaries and basic infrastructure. There hasn't been an increase, of late," Rangarajan said. There was little need for the IISc to look elsewhere for funding until a couple of years ago when it was generously funded, according to B Ashok, deputy project director with the Aeronautical Development Agency and an old student. "And you cannot compare IISc with IITs, which are a younger lot with a different growth model."

Apparently, one area in which IISc needs alumni funding is upkeep of heritage buildings. They include the general and applied chemistry department started in 1911, the physics department started by Sir CV Raman in 1933, and the old aerospace engineering, the old dining hall/auditorium and the metallurgy buildings built by German architect Otto H Konigsberger in the 1940s.

According to IISc Director Anurag Kumar, the institute gets about Rs 250 crore of non-plan grants for salaries, electricity, water and other recurring expenses. "We get another Rs 120 crore meant for scholarships and the library," he said.
Admitting that the government outlay is insufficient to compete globally, Kumar said: "Funds from other sources would permit us to do what government funds don't allow."

The IISc has produced at least 20,000 graduates, and about 1,600 of them have signed up on a new online portal created for the purpose. The IISc Alumni Association of North America, comprising many successful academics and businessmen, has pitched in with Rs 10.20 lakh.

How creative minds rekindled the spirit of innovation at Bangalore’s Innofest 2015

With some of the brightest students gathering at Innofest 2015, held on August 22 at the campus of Indian Institute of Science (IISc) in Bangalore, several innovations stood out for the pure ingenuity that went into its creation. The events saw the participation of 12 colleges and several start-up companies from different cities across the country.

Although several invations grabbed eyeballs at the challenging events, the solar car invented by 22 students from Manipal University proved to be the spotlight stealer for the day. During an extensive briefing about their invention, G Anubranta, 22, a 4th year student from Manipal University said, "At present the speed limit of the car is 100 km per hour. However, its USP is that it runs on a renewable source of energy that is solar power."

Medical inventions have always had their own place in such fests and sure enough, Srinivas Murali and his team from Smart Cardia, company that was started two years ago developed wearable sensors that can help get you a medical check-up done within minutes. Murali, CEO of Smart Cardia said, "This device can monitor indicators like hearbeat and give ECG reports which can be sent to hospitals or doctors for reading."

Meanwhile, PHD students of IISc came up with a unique medical device, which helps in diagnosing malaria within seconds, as opposed to the usual three days taken at labs. The inventor of the device Printo Sebastian claimed that the malarial test equipment can help anyone in identifying their condition without the slightest delay, which in turn will help saves lives of patients.
Two deaths and an attempted suicide later, IIT-B upgrades on-campus student support system


Besides deploying counsellors in hostels, institute is allowing families of distressed students to stay with them on campus for a few days; students claim nothing much has changed

In the wake of two deaths and an attempted suicide on IIT-B campus in less than a year, the management has taken steps to ensure that students don’t feel stressed or get bogged down by academic or other pressures.

From hiring counsellors to making arrangements for families of stressed students to stay with them for a few days, the institute is deploying various methods to ensure that students are offered a strong support system.

One such method is the appointment of a counsellor to work from hostels. This counsellor is easily approachable as per students’ convenience. “We realised students felt uncomfortable while visiting counsellors at their offices in the main building, so we made arrangements for a counsellor to work from the hostels.

This counsellor moves form one hostel to another on a rotational basis and ensures more interaction with the students,” said Soumyo Mukherji, dean, student affairs, IIT-B, adding, “Since the counsellor is in the hostel, several students freely approach the counsellor. Some of the students simply visit so that they can chat with the counsellor.”

Currently, two counsellors work on IIT-B’s payroll and the third has been hired on a contractual-basis. According to figures given by institute officials, the number of students seeking help from counsellors has increased over the years. At present, on an average, two different counsellors conduct 120 to 130 sessions a month.

Of these, 25 sessions are dedicated to first timers, while the remaining ones are follow-ups. Officials added the number of students attending group workshops on stress management has increased by over 50 per cent due to word-of-mouth publicity, as most of the workshops have yielded positive results for distressed students.

“There are several measures that we are trying to implement, but most of these are still ideas and we want to ensure they are implemented well and benefit our students. For now, students are busy with the orientation programmes and we want them to know that the institute is always there to help them,” Mukherji said.

Counter view
While the institute claims it is implementing all possible measures to strengthen the support system, students have questioned the impact that the counselling sessions have had. “The institute may or may not be responsible in certain cases when students take extreme steps.

But, in case of a suicidal attempt or a death, the administration’s reaction has always been far from what it should have been. There is a need for change in the way our problems are treated. Counselling isn’t the only solution,” said a third-year student.

Cases

June 2015: A 23-year-old MTech student, pursuing degree in Earth Sciences, tried to end his life when he was alone in his room at Hostel 5. His mates claimed that after the initial attempt to commit suicide by hanging
failed, the student popped some pills. He was immediately rushed to the IIT-Bombay Hospital and later to the Hiranandani Hospital in Powai, where he finally recovered.

**May 2015:** Jitesh Sharma, a third-year chemical engineering student, was found dead on the terrace of one of the hostels on May 2. The 21-year-old was reportedly suffering from depression and was undergoing counselling for over six months. Sharma’s body was found around 7 pm on the terrace of Hostel 15-B. He, however, resided in Hostel 8.

**September 2014:** Aniket Ambhore (22), a fourth-year student pursuing a dual degree in electrical engineering, died after falling from the sixth floor of Hostel 13. Aniket was immediately rushed to Rajawadi Hospital, Ghatkopar, where he was declared dead on arrival. It is still unclear whether it was an accident or a suicide.

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**Yields that weather many risks**

An IIT entrepreneur makes climate work for farmers

VENKAT IYER

It was no small challenge that a few IIT students took on when they left their jobs in 2004. They wanted to help farmers adapt to climate change and profit in the process too. And at 39, Sonu Agrawal from IIT-Kanpur is quite pleased with that leap forward. As managing director of Weather Risk, which promises security against climate change, he has 150 people working with farmers in 15 states to optimise crop production, guard against weather patterns, access credit and insurance, and be part of a supply chain.

Weather Risk charges ₹3,000 per hectare to offer consultancy for a single crop season and usually works with groups of farmers. Over a decade, more than 25,000 farmers have approached the company, which also works with governments on solar energy programmes in Rajasthan and horticulture in Haryana, and tailors crop insurance schemes to suit specific areas.

Agrawal says the company has roped in corporates and agri input companies as sponsors, and set up 1,000 monitoring stations to collect data in homogenous climate zones. Each station has been built at a cost of ₹13,000.

Farm Income Groups (associations of small and medium farmers) in Haryana, Bengal and Uttar Pradesh form the bulk of the company’s clientele, while some big farmers ask for specialised services.

Managing losses is a part of the work. Describing, for instance, the company’s work with a group of potato farmers in Bengal over the last eight years, Agrawal says, “We introduced soil management systems and optimised water use. Several potato farmers went into loss because of unseasonal rainfall in April and frost in winter. We analysed weather systems and advised farmers in Bengal and Punjab to sow in September-end and harvest by February.” When potato is sown early, its leaves can be nipped before winter to protect them from frost, while the early harvest saves them from the unseasonal rains in March.

Apart from working with governments and farmers on crop insurance, a crucial area of intervention involves facilitating bank loans. Banks (mostly private ones) are more willing to lend to farmers if repayment is assured. “The farmers are paying us for specialised data on soil, weather and rainfall, as well as for providing access to credit, insurance and supply chains. What we do is unique, we bundle a lot of tangible services to farmers. Our initial idea of simply selling crop insurance wouldn’t work,” says Agrawal.

The need for a company like this is a clear indication of how extension work by the government has failed in the country. On the other hand, it shows that farmers are willing to pay for specialised services.

The writer is an organic farmer based in Dahanu, Maharashtra