No. of JEE qualifiers dip, IITs to lower cutoff

8,600 Cross 35% Bar; It Was 19K in ’14

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Pune: The Indian Institute of Technology (IIT) management was forced to reduce its cutoff this year with fewer students qualifying for the benchmark that IIT had set for the 10,006 available seats. Before the exam, the IIT had declared a cut off of 35% or more in the joint entrance examination (JEE) Advanced, the results for which were declared on Thursday.

25 from Super 30 clear the exam

The famed coaching centre ‘Super 30’, run by mathematician Anand Kumar churned out 25 success stories in this year’s JEE. His students from financially weak backgrounds — including son of a daily wage earner, roadside vendor, taxi driver, farm labourer and painter — all made it to IITs. “Super 30 is a big family for me, all my team members get attached to it,” Kumar said. TNN

However only 8,600 candidates, against 19,000 last year, scored 35% or more marks. About 1.17 lakh candidates appeared for the examination held on May 24.

Education experts said the IIT management was forced to reduce the cut-off to 24.5% and not because the number of scheduled tribe students had dipped, as declared by the IIT in its June 12 notification.

Durgesh Mageshkar of IIT Prashikshan Kendra said, “The fact is that not enough students could meet the 35% cutoff due to which it was reduced. The harsh negative marking system introduced in the exam this year affected the students’ performance.”

Half the questions in both Paper I and Paper II carried two negative marks for every wrong answer.

For the full report, log on to www.timesofindia.com
To be a scientist is Delhi JEE topper’s dream

Piyal Bhattacharjee

New Delhi: For Anjishnu Bose, the Vaishali (Ghaziabad) lad who’s likely ranked the highest in JEE Advanced in Delhi, getting into an IIT is not even the first option. He wants to take his prodigious brain—he’s also won the Kishore Vaigyanik Pratisthan Yojana scholarship for basic science students that’ll see him through to research—and an all-India rank of 26 to the Indian Institute of Science, Bangalore.

“I want to do BSc Physics,” says Bose. “IISc is first option. If that doesn’t work, I’d prefer to join the general Physics programme at IIT Kanpur or Kharagpur.” But he may not even need a plan B. He has already been called for counselling for the KVPY quota at IISc which will be held on July 1. JEE Advanced is itself Plan B.

No corporate or coding job with a fat paycheck for him either—Bose will be a full-fledged scientist. “After my BSc, I’ll pursue a master’s and then research.” He attended coaching on school days and put in “nine-10 hours” of self-study on days off. The student of SR DAV School Dayanand Vihar, scored a 97.4% in his CBSE board exams. But Bose is far from being a dull all-work-no-play kid. He plays video games in his free time, reads science fiction voraciously and plays the keyboard. “I have a Trinity Grade V certificate in keyboards,” he says and is partial to Beethoven and Mozart. And he still finds time to practise Buddhist chanting every day. “It is a form of meditation. I am also fascinated by the Gita.”

Bose’s elder sister and father Tapas Bose, a PSU employee, are both engineers; mother Jhuma Bose tutors kids at home.

Suyash Agarwal (AIR 69) moved from Satna—where the all-India topper is based—to Delhi to attend coaching here. His school is in Haryana and he’d travel to Delhi to attend weekend classes. “I’d travel about 100km in a day on weekends,” Agarwal says.

Fewer Women in Top Ranks This Year

Sreeradha.Basu@timesgroup.com

Mumbai: The representation of women in the top rankings of JEE Advanced has slipped, even as more women have qualified overall in the exam as compared to last year. Only one woman—Krati Tiwari of Indore with an all-India rank of 47—has made it to the top 100 this time as compared to five women last year.

“Last year there were nine women in the top 200, this time there are seven. As for the top 500, there are 22 women this time compared with 26 last year,” S Sundar, chairman, JEE (Advanced) — 2015, IIT Madras told ET.

Traditionally, the overwhelming majority of top rankholders in JEE Advanced tend to opt for computer science and engineering. This year too, toppers ET spoke to mostly wanted to pursue this stream, with the favourite institute being IIT Bombay. With lesser representation of women at the very top, it means that the most coveted stream in top IITs such as Bombay, Delhi and Madras may see even lesser representation from women.

“Our computer science seats are normally filled up by rank 50-60. If there is only one woman in the top 100, that means fewer women will qualify as compared to last year,” said Devang Khakhari, IIT Bombay director. IIT Bombay has about 110 seats in computer science and engineering, of which 50% are reserved.

In 2013, for the first time in the history of IIT entrance exams, two women succeeded in breaking the top-10 barrier. Aditi Laddha from Madhya Pradesh secured all-India rank (AIR)-5 and Sibbala Leena Madhuri from Andhra Pradesh secured AIR-8 in JEE-Advanced. That feat hasn’t been repeated since, even as IITs continue to score poorly on the gender diversity count.

This year’s woman topper Krati Tiwari is from Mhow, known as Dr Ambedkar Nagar, a cantonment in Indore district. The youngest in a joint family, 17-year-old Krati loves watching cartoons. This is her first shot at JEE-Advanced. Krati studied at a local coaching centre in Indore and spent 13-14 hours a day studying in the run-up to the exam. Her future goal is to take up research.

And yes, she wants to study computer science and engineering at IIT Bombay.
The Race to IITs

Number of seats
10,006 (Over 200 more than last year)

IIT Kharagpur has the most number of seats at 1,341 followed by IIT, BHU at 1,090

Two IITs become functional this year: Tirupati & Palakkad

A total of 26,456 students have qualified from among the 1,24 lakh for entry into the top IITs. This is 695 less than last year

Students who qualified
IIT Bombay had the most number of qualifying candidates at 6,838, followed by IIT Madras at 4,928

23,407 Male
3,049 Female

#1 among girls
KRATI TIWARI
(Mnt 47) Indore, Madhya Pradesh

MAJJI SANDEEP KUMAR
(AIR 10)

Majji Sandeep Kumar, 17, from Vizianagaram, cracked the exam in his first attempt. He studied at the Sri Chaitanya Narayana IIT Academy in Hyderabad for 13-14 hours a day. He was expecting a single-digit rank and says he missed it by one seat. His parents are government employees – while his mother is a teacher, his father is a local superintendent. He wants to study in the department of computer science at IIT-B.

Top Rankers

SATVAT JAGWANI
Topper, IIT Kanpur zone

The all-India first rank holder, son of a doctor couple, studied in Kota to prepare for the JEE Advanced. An avid reader, he wants to take up computer science at IIT Bombay

JANAK AGRAWAL
Topper, IIT Delhi zone

Son of a business father and a homemaker mother, the 18-year-old studied for 15-16 hours a day to give the JEE Advanced his best shot. But no matter how busy he was, going to the temple every day was a must, says his sister Amrita, who is in the final year of her chartered accountancy. Agrawal’s goal is to go to MIT and become a scientist. In his spare time, he likes to de-stress by playing video games, watching Hollywood movies and playing table tennis

MUKEHS PAREEKH
Topper, IIT Madras zone

Mukesh Pareekh, 17-and-a-half, was born in a remote village in Rajasthan and plans to opt for computer science at IIT Bombay. Like others, he spent over 13 hours studying every day. His parents run a transport business and his brother Gopal says they were expecting a rank in the 20s but were pleasantly surprised when he made it to the top 10. This was his first attempt

KAMANA NAGENDRA REDDY
Topper, IIT Madras zone

Kamana Nagendra Reddy, 17, wants to study computer science and engineering at IIT Bombay. His routine included 12-13 hours of studying every day at the Chaitanya Narayana coaching college where his father is a professor. His mother is a homemaker

BHARAT KHANDELWAL
Topper, IIT Bombay zone

Khandelwal was a state-level footballer till Class 10 when he decided to concentrate on the IIT exam. His father is a CA, his mother, a homemaker and Khandelwal, like most other toppers, would like to get into IIT Bombay for computer science and engineering

Varuni Khopla & Sneeradha D Basu
आईआईटी में शिक्षकों की कमी

जेई (एडवार्स) का रिजल्ट आने के बाद अब प्रौद्योगिकी संस्थानों में प्रवेश का दौर शुरू हो जाएगा, जबकि हमारे प्रतिष्ठित आईआईटी कॉलेज शिक्षकों की भारी कमी से जूझ रहे हैं।

आईआईटी की स्थिति

मशहूर तकनीकी संस्थानों में छात्र-शिक्षक अनुपात

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39% शिक्षकों के पद रिवाज हैं जिसका आईआईटी में रिहायश एवं 4079 मौजूद शिक्षक, 2574 रिवाज पद।

आकर्षक वेतन-भत्ते का अभाव, अनुसंधान सुविधाओं की कमी, अध्यापन का घटना आकर्षण आदि कई कारण हैं, जिसके चलते प्रतिभावान लोग शिक्षण के पेशे में नहीं आना चाहते।

आईआईटी-25 नवम्बर, 2014 तक के रेचार्डी मिनिस्ट्री, संबंधित विश्वविद्यालय
Railway to impart higher training to staff

NEW DELHI, DHNS: The Indian Railways has worked out an elaborate plan to reorient and train its employees. They will be given fellowships for higher study in reputed institutions like IITs and IIMs. It has also revised module for their training. The railways has also decided to modernize its recruitment-process by making it online.

The national transporter has also made Yoga compulsory for all its employees. They will be given Yoga training.

“We have decided to send our employees for higher education in reputed institutions like IITs and IIMs. The eligibility criteria for availing such opportunities has also been relaxed,” said Member (Staff) Railway Board Pradeep Kumar. He said that new rules allow young employees to avail this facility.

The Railway Board member said that Railway Research Centres are being set up at IIT Madras, IIT Kanpur and IIT Roorkee.

These centres will have facilities for railway-related research. IIT Kharagpur will this year start M Tech program in Railway Engineering and 20 students from the railways and 10 students from outside will be admitted to the course.

The railways will give IITs Rs 20 crore each for running these centres.

Kumar said that railway employees would be exposed to the latest knowledge available abroad.

An Academic Service Agreement has been signed with Beijing Jiaotong University of China for training 100 officers.

The arrangements are being made to expose employees to the specialized knowledge available in European University on high speed rail.
Autonomy under attack, feel IIMs

Toughest case study yet for these premier institutes

Anuradha Raman

NEW DELHI: For one of India’s best known global brands, the Indian Institutes of Management, a Bill framed by the Union Human Resource Development Ministry has brought in worries over their autonomy. The oldest of these 13 institutes, the IIM-Ahmedabad, has expressed concern over some of the provisions of the Indian Institutes of Management Bill, 2015, which, it feels, will spell the end of autonomy.

After the treatment meted out to the directors and chairmen of the Indian Institutes of Technology, it appears that the IIMs are next on the block. The recommendations in the Bill, drafted by the Ministry headed by Smriti Irani, on display on mygov.in, are at variance with the recommendations submitted by them last year. The Bill, they fear, carries the trademark signature of overreach as is evident in some of the clauses. For one, they say the government seeks to appropriate for itself the power to decide on academic posts other than the one of director, whereas the draft submitted by the IIM-Ahmedabad wants the institutes to take the decision.

Pankaj Chandra, former IIM-Bangalore Director, who was involved in recommending changes to the structure of the IIMs earlier, says the Bill should grant more autonomy to the institutes in deciding how they wish to structure themselves, as they are governed by societies.
Enabling clauses in IIM Bill offset by autonomy question

Anuradha Raman

NEW DELHI: Though the Indian Institutes of Management Bill, 2015, does have several enabling provisions in making them more accountable, it leaves the question of autonomy in doubt.

Earlier, in an interview to the Mint newspaper, IIM-Ahmedabad Director Ashish Nanda said: “If the proposed Bill on Indian Institutes of Management is used to bring about centralisation of key processes, it would be bad news for these institutions and their autonomy.”

Perhaps, he was hinting at the Centre’s design to assume control over the institutes.

The enabling clause of giving degrees to students instead of diplomas is a welcome move, Saibal Chattopadhyay, Director, IIM-Kolkata, says. “This is only a draft. It will go to Parliament,” he says.

“Previous discussions were about how to structure the degree in a management course, in place of the diploma awarded now,” Pankaj Chandra, former IIM-Bangalore Director, says.

The draft Bill seeks to do away with the special emphasis on the IIMs by seeking to declare certain institutes of management to be institutions of national importance to empower them to attain standards of global excellence in management, management research and allied areas of knowledge and to provide for certain other matters connected with such institutions or incidental thereto — the IIMs want the Bill to confine itself to them.

Also, the proposed Bill takes away the powers of the institutes to determine fees by making it subject to prior approval of the government. Lastly, the Bill states that in discharge of its functions, the IIM Board will be accountable to the government, whereas the IIMs envisaged accountability only with respect to legal compliance, financial stability and growth of the institutes.

Quite clearly, the last word is not out yet as public comments are still being sought before the government makes its next move.
The BJP govt is aiming to finalise IIM Bill, 2015, which proposes to create an umbrella body headed by the HRD minister.

Prof raises concern over Bill on IIMs

By Darshan Desai
in Ahmedabad

PREMIER academic institute — the Indian Institute of Management, Ahmedabad (IIM-A) — has asserted that if the proposed IIM Bill ends up micro-managing the institutions and the proposed coordination body is used to centralise powers, it would not augur well for autonomy of the institutes.

IIM-Ahmedabad director Professor Ashish Nanda said: “Autonomy is at the core of flourishing of academic institutions. The government can definitely oversee functioning of educational institutions from a distance, but micro-management is never good. It makes people in the academic institutions feel disempowered.”

Nanda was speaking to mediapersons on Thursday on the sidelines of a seminar at financial institution IIFL, where former Planning Commission member and 1974 batch IIM-A alumni PP Pandey donated Rs 8 crore to set up a swimming pool and state-of-the-art auditorium at the institute.

The Narendra Modi government is aiming to finalise Indian Institutes of Management Bill, 2015, that proposes to create an umbrella body headed by the Union HRD minister and have chairpersons and directors of all IIMs as members.

“I feel the proof of this pudding is in the eating and not making. We do not know whether this body would be the highest decision-making body or have limited powers for coordination among various IIMs,” Nanda said.

The Bill aims to empower the 13 premier B-schools to award degrees instead of diplomas to students taking the two-year MBA programme, make the President a visitor to all IIMs and introduce a uniform four-year term for all IIM chairpersons.

“I hope they had given some more time to study the Bill and give our views,” the IIM-A director added.

Nanda is trying to rope in funds from its alumni to refurbish the heritage campus built by Louis Kahn.

“Following the 2001 earthquake, we need Rs 100 crore to restore the structure to its past glory and built other infrastructure,” Dean, (Alumni & External Relations) IIM-A Arvind Sahay said.
So is it SOS for IIMs?

V Ranganathan

Recently, a friend asked me if the existing 13 Indian Institutes of Management (IIMs) are financially viable. A back-of-the-envelope calculation provided a clue. For an "older" IIM — IIM Calcutta, Ahmedabad or Bangalore — a fee of about ₹20 lakh per student for a two-year postgraduate programme and an annual intake of about 400 students bring in a revenue of ₹80 crore. With a faculty strength of about 100, and at about ₹20 lakh per faculty and another ₹10 crore for staff, etc., the running costs would be about ₹30 crore.

So, management education is financially viable for the older IIMs. There are additional costs that include research. But there are also other revenues, typically from long-term and short-term executive education programmes, not to mention grants from alumni, more than offsetting these costs.

The government had, rightly, stopped giving any revenue grant to older IIMs. It even reneged on its earlier promise of matching the surplus generated by an IIM, even as the "old" IIMs have generated huge surpluses. Would these IIMs be able to return all the money spent on them by the government? Looking at the current reserves and surpluses of older IIMs, the answer is probably yes. So, these IIMs don’t need government subsidy today.

The market values the ‘products’ of IIMs enough for guardians willing to pay the fees in return for the students’ enhanced future incomes. For poor students, scholarships exist. Banks are also ready to finance expenses based on guaranteed future income.

So, why is the government spending money on IIMs when the market can sustain them? (The market is already sustaining a huge tuition industry for entrance exams.) Or, as in Japan, should the government spawn more IIMs and then privatise them, say, after 10 years and get its money back?

In education, both at the school and college levels, the private sector has overtaken government in reputation — although in engineering and management, the IITs and IIMs are still way ahead of their private sector counterparts. Although we call the IITs and IIMs “pinnacles of excellence”, they seldom figure in significant positions in global rankings.

This is partly due to the manipulation by ranking agencies. Also, reputation is built by students and faculties together. In the case of IITs and IIMs, reputation is built mainly by bright students at the entrance exams stage. Students are the ones who have international job mobility. The mobility of the faculty, on the other hand, is one-way: from a foreign institution to India, but seldom the other way round. The ecology of our institutions is such that, progressively, teachers lose their energy, drive and academic networks, and settle down to what Indian School of Business founding dean Sumantra Ghoshal once termed as “satisfactory underperformance”.

How does one then reach global levels of excellence? Certainly not by opening a plethora of IITs and IIMs. There is a huge shortage of quality. To create the supply, IIM-Ahmedabad pioneered the ‘Fellow Programme in Management (FPM) = PhD’ model. Unfortunately, the market for faculty is mostly in discipline silos — narrow specialisation in a particular discipline like finance or marketing.

Business schools typically expect the faculty to comprise specialists and students to integrate themselves from various faculties from different functional areas and disciplines. Consequently, the FPMs stand a step below American PhDs, who have a solid grounding in specialised areas, with rigorous course work.

In India, an BTech is generally better than an M Tech and an M Tech better than a PhD. This is because higher education is pursued most often only if one is not successful in the job market. In contrast, in the US, a PhD applicant has to be better than an applicant for a Masters programme.

One important consequence of this is that we just do not get good quality students at the entrance level for the FPM or doctorate programmes — in sharp contrast to Post-Graduate Programme (PGP) or Master of Business Administration (MBA) students. All other IIMs are following the FPM model (IIM-Bangalore has slightly tweaked it). They are running a race not only with barely enough faculty resources, but also without having the faculty bandwidth to give advanced-level courses. The directors of the ‘newer’ IIMs are using the FPMs to show their bosses in the HRD ministry that they are running many programmes with the given faculty, thus playing a numbers game — of quantity over quality. This has already taken a toll on the seriousness of the FPM programme.

The writer is a retired professor; IIM-Bangalore
NEW DELHI: Amid a row over the roll out of the CBCS from the ensuing academic session, UGC on Thursday asserted the programme will not “suppress” the academic liberal environment of universities or lead to inter-college transfer of teachers.

It said the syllabi finalised, will give leverage to the universities to modify the same to the extent of 30 per cent.

Further, the elective subjects offered will only be from the subjects which are available in the universities, it said in a statement issued on Thursday.

A section of teachers have been arguing that the programme would infringe upon the autonomous status of the universities and is detrimental to the future of students.

System (CBCS) arguing that the programme would infringe upon the autonomous status of the universities and is detrimental to the future of students.

Dismissing such contention, UGC said CBCS “will not suppress the academic liberal environment of the university as nothing contrary has been suggested in the template of the syllabi so designed by the experts”. “As such the teaching load of the teachers is not likely to increase beyond the norms stipulated by UGC. Also there will be no inter-institute/inter-college migration transfer of teachers,” it said.
UGC allows universities to customize syllabi

Manash.Gohain @timesgroup.com

New Delhi: Giving more breathing space to the universities in implementing the proposed Choice-Based Credit System (CBCS) from the 2015-16 academic session, the University Grants Commission announced that universities can customize the model syllabi by 30% depending upon their areas of specialization on Thursday.

The UGC also clarified the concern of teachers saying there will be no inter-institute/inter-college migration transfer of teachers.

Initially, UGC uploaded the model syllabi stating that 20% leverage for modification is allowed. There has been growing protest from teachers’ groups including Delhi University Teachers’ Association and students’ groups as well. In fact, the right-wing National Democratic Teachers’ Front from DU has been questioning the feasibility of implementing the system.

On the other hand, many state universities informed the ministry of human resource development about their preparedness.

Concerns were raised on the model syllabi and how it could dilute the strength of individual universities.

Historians have been some of the loudest in their resistance to and criticism of CBCS. Historians have been some of the loudest in their resistance to and criticism of CBCS and other higher education reforms with Romila Thapar saying these will reduce India’s universities to teaching shops and coaching centres.

Under the CBCS system the elective subjects offered will only be from the subjects which are available in the universities/institutes.

For the full report, log on to www.timesofindia.com
NEXT IN LINE? HRD ministry urges Prez to seek explanation from VC regarding financial & administrative irregularities

After DU, Irani Pushes for Ouster of Visva-Bharati VC

Ritika Chopra & Dipanjan Roy Choudhury

New Delhi: The Smriti Irani-led human resource development ministry has sent a report to President Pranab Mukherjee questioning the conduct of the Visva-Bharati University vice-chancellor Sushanta Datta Gupta.

Months after the ministry pushed for the ouster of the Delhi University vice-chancellor Dinesh Singh, it has urged the President to seek an explanation from the Visva-Bharati University vice-chancellor regarding several financial and administrative irregularities alleged by a three-member probe committee appointed by the government.

Officials at the President’s office told ET that the report from the HRD ministry was received this week. The President is the ‘Visitor’ of all central universities and is therefore the authority that appoints or fires their heads. The government’s latest move could pave the way for Datta Gupta’s ouster, officials said. Datta Gupta said he did not know anything about the ministry sending the file to the President. HRD Minister’s office declined to comment on the developments saying that the “matter is still under consideration”.

“I would, however, like to inform you that I have challenged the appointment of the three-member probe panel by the government in court as it goes against the University Act. The writ petition was filed in Calcutta High Court on June 15,” Datta Gupta told ET.

Earlier this year, the President had issued a showcase notice to Singh at the behest of the ministry. Although the government has scrutinised his reply, its final decision on his continuance is still awaited.

The Visva-Bharati University, founded by poet Rabindranath Tagore, has notable alumni including Nobel Laureate Amartya Sen and filmmaker Satyajit Ray. Datta Gupta’s term as the vice-chancellor of the university has been uncertain ever since the ministry set up a probe against him after Pradeep Bhattacharya, a Congress MP from West Bengal, levelled allegations of irregularities against him during a discussion in the Rajya Sabha during the winter session last year.

The probe indicted Datta Gupta on a number of counts. It said that he had not followed proper procedure in awarding tenders. Secondly, it said he had made over 40 appointments without sanctioned posts and even billed the university for his personal liquor consumption. The ministry has sought the President’s intervention regarding these irregularities.
Quality of higher education takes a hit: Ex-chief of IISc


MANGALURU: The quality of higher education in the state has been severely compromised, said Goverdhan Mehta, former director of IISc, Bengaluru, at Mangalore University's 33rd annual convocation that was held at Mangalagangothri campus on Wednesday.

Shedding light on the current plight of higher education institutions in the state, he said: "Endemic shortage of faculty and learning resources, mindless proliferation of courses, dwindling infrastructure, inadequate budgetary support, indifferent leadership and governance deficit have had crippling effect on quality education."

"Endemic shortage of faculty and learning resources, mindless proliferation of courses, dwindling infrastructure, inadequate budgetary support, indifferent leadership and governance deficit have had crippling effect on quality education," he said.

Making an additional submission to governor Vajubhai Rudabhai Vala, also the chancellor of Mangalore University, Mehta recalled the previous one made earlier about the need to safeguard the autonomy of universities and protect them from any political and bureaucratic meddling.

Reiterating the repeated mention in various fora that only less than 20% of tech graduates are employable, Mehta said that the statement is not without substance.

"If not remedied, this quality deficit may have serious socio-economic consequences and compromise the lives and aspirations of the young generation," he warned, adding that there are templates available to enhance and maintain the quality in higher education. It may be recalled that the state government had its run-in with the governor over appointments of vice-chancellors of various state universities and this had caused consternation among academic circles in the state.

Later, engaging the other stakeholders, namely the students and the teachers, Mehta - who is the national research professor, School of Chemistry, University of Hyderabad - reminded students to appreciate the diversity, colours and flavours of India.

Reminding Gen Y that India panaroma of lights and shadows is unique and paradoxical and reflects its formidable strengths as well as a soft, vulnerable underbelly, Mehta exhorted the generation to resolve this paradox. He said that India is a canvas of many opportunities.

He said: "We are entering an era where good is not good enough, only better than the best will make the grade. Therefore, as you gaze at the limitless horizon of opportunities, dare to aim for the impossible."

Stressing the need for students to be creators, entrepreneurs and innovators, he cited the example of 13-year-old Shubham Banerjee of Indian origin who invented world's cheapest, affordable Braille printer.

He urged students to become innovators and provide solutions to problems that are mega, simple or complex, local or global. Citing the Swachh Bharat movement, he said that the mission to clean Ganga offer the much-needed opportunity for fresh, young minds to innovate.

Varsities as knowledge aggregators Training his thoughts on restoration of primacy of research in educational institutions, Mehta said it is important for universities to position themselves not only as consumers, disseminators and generators of knowledge, but also as aggregators of knowledge to build intellectual capital and global leadership in the knowledge-driven era.

He reminded the faculty that research is an elixir that fuels creativity and instincts and enriches the intellectual life. Mangalore University vice-chancellor K Byrappa presented a report on the university's achievements.
In a bid to realize a successful consultation process to form the new education policy, the Ministry of Human Resources has been using MyGov as a crowdsourcing platform.

Livechat is an online live discussion platform on MyGov initiated by the MHRD, where education experts and academicians discuss and answer people’s various concerns regarding new education policy.

In a series of the online chats which we have been covering, today Director of IIT Kharagpur Professor Partha P Chakrabarti discussed promoting research and innovation.

Arguing that our research should bear international comparison in terms of standards of attainment, Professor Chakrabarti touched upon various other aspects.

**On Promoting research and innovation:**

Self-reflection by academicians and to look back and find out what are the salient features that need to be addressed. In the spirit of India, we should have a realistic image of what we are. It is important to be critical about one’s own self.

**On knowledge and research:**

Knowledge has dramatically grown rather grown explosively in recent times. It has doubled 1950 onwards. With the huge growth in knowledge, education has transformed dramatically in the last 20-30 years. Today we have a very large disciplines each requires ages to study, where people are becoming super specialists, the current generation is losing out on the importance of interrelationships.

90% of research is affecting miniscule number of people. It is not proved to be fruitful. We need to know interdisciplinary things and also be able to learn quickly across multiple barriers.

**On Fun laws as he calls them (which can be satirical and critical):**

Course curricula- colleges look up the course content of foreign institutions and cramp up their own curricula. Course volume is inversely proportional to quality of teaching.

The advent of the internet has changed the way of obtaining information, rather than relying on teachers notes, which are dilapidated and torn.

Laboratories are the heart of learning but recently students get perfect results. This can only mean that instruments don’t work as there is no perfection in the lab. The spirit of enquiry lessens, and they learn jargon without enrichment of knowledge.

**On higher education:**
Everything should not be focused on premiere institutions, we should put higher education everywhere in the country. Vision is important. We need to enrich and garner premiere institutes all over India. Also invest heavily on foraying higher education.

The IIT Director also highlighted the several steps that the government can take to encourage research and innovations in the universities.

Sustained growth of education and research in science and technology is crucial for development of the nation.
CNR Rao gets Japan's highest civilian award


NEW DELHI: Eminent scientist and recipient of Bharat Ratna CNR Rao was on Friday conferred Japan's highest civilian award for promoting academic interchange and mutual understanding in science and technology between the two countries.

He was presented with the 'Order of the Rising Sun, Gold and Silver Star' and certificate by Japanese ambassador to India Takeshi Yagi in the presence of senior officials of the Department of Science and Technology, which Rao has helped shape up over the years.

READ ALSO: Do something different, CNR Rao tells students

File: Who is CNR Rao?

"I believe the future of India and Japan are connected together. India has to realize Japan as its greatest strength in Asia and Japan has to realize India is its greatest friends. The future of Asia depends on these two countries working together," Rao said after being bestowed with the honour.

He said both the countries should help each other emerge as great nations and appealed the younger generations both in India and Japan to know more about each other and work together in realizing their potentials.

"The scientific work Japan is doing is outstanding. I owe a lot to Japan. Its a great honour received from a great country. I am an admirer of Japan from my childhood and have seen the country grow after the second world war", he said.

Sir Paul Nurse (R), president of the Royal Society with scientist and Bharataratna C N R Rao, during the inauguration of the Commonwealth Science Conference in Bengaluru in November 2014. TOI photo by Chethan Shivakumar

The highest civilian award of Japan is conferred on academicians, politicians and military officers.

Rao had been bestowed with about 70 honorary doctorates and is the 'Linus Pauling Research Professor' and honorary president of the Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore.

He is the only Indian to be elected as a foreign member of the Japan Academy.

He is also credit for shaping several premier technical institutes in the country such as IIT Kanpur and has authored over 1000 research papers and 36 books.

Secretary of the Department of Science and Technology Shailesh Nayak said the award is not only an honour for Rao but also an honour to the entire scientific community in India.

Rao, he said, continues to inspire thousands of scientific minds in the country and still as the same curiosity, he said.
B. Jayant Baliga, a US-based Indian-origin scientist, is being awarded Russia's top technology award in recognition of his work in energy management which brought about huge increase in efficiency and major savings.

The award will be presented to Professor Baliga and Shuji Nakamura on Friday by Russian President Vladimir Putin at a ceremony here.

Nakamura, a Nobel Laureate, is being recognised for his work on blue light emitting diodes (LEDs). In Russia, the Global Energy Prize is known as the electronics equivalent of the Nobel Prize.

Professor Baliga invented the digital switch or the insulated gate bipolar transistor (IGBT) while working at General Electrical research & development centre in New York state in the US in 1983. The IGBT switches energy hundreds of thousands of times a second, raising the efficiency of any equipment manifold.

"Every equipment from your refrigerator to lights to motor vehicles has the need to use energy efficiently. If you take away the IGBT today, almost everything will come to a standstill," Baliga told a visiting IANS correspondent on the eve of receiving the award.

Scientific American magazine called him among the 'eight heroes of the semiconductor revolution', and President Barack Obama awarded him the highest American technology prize last year and he is the 2014 recipient of the IEEE Medal of Honour, a rare distinction.

Professor Baliga, who now teaches to the North Carolina university as 'distinguished university professor', said that the IGBT that his invention combines two streams of electronics and electrical engineering and has possibly saved the world around $24 trillion dollars by raising efficiency, according to one detailed calculation.

"I got zero out of it. But then I did it all for humanity."

Of course, says Prof Baliga, that he did make some money when he started three companies, but these were financed by venture capitalists who exited with enormous profits at the right time.

He says every motor today is at least 40 percent more efficient, the light bulb like the CFL better by almost 75 percent and a motor vehicle saves over 10 percent fuel because of his invention. He has written 19 books and over 500 papers in peer-reviewed journals.

Baliga passed out of IIT Madras before going to the US for his MS and PhD after electrical engineering after which he joined GE where he spent over 15 years.

After his 'switch' was invented, several of his colleagues told him that it would not work, and many scientists said he would fall "flat on his face". But he said it stood the test of time.

The chairman of GE at that time, Jack Welch flew down especially to meet him when he heard what it could do. GE used the switch in the several of the equipments it sold, including medical devices.

A US citizen since 2000, he now has very little connection with India and does not travel to his home country much, especially after his parents and parents of his wife passed away. But, says Prof Baliga, an invention like
his is unlikely in India, because it needs huge research infrastructure to be in place from universities to industries.

He feels, that India has a potential which has not been fully used, although in software "it has made great strides".

Could a Nobel be on its way in the future? "I used to say no way," but with so many recognitions and this "global prize where I am being feted with a Nobel Laureate, who knows", he says. His regret though is that India does not know much about him.

"Top scientists that I meet always ask me, why has India not recognised your achievement?" And with characteristic modesty, Baliga told IANS, "I tell them that perhaps my country does not know about what I did."

Sons in IIT top-500, daily-wager dad doesn’t have ₹1L for fees

Rehna Lalgunj (Pratappgarh): Dharamraj Saroj of UP’s Pratappgarh district is in a fix. Both his sons have cracked the IIT entrance test — one securing rank 167 and the other 410. Dharamraj, a daily-wage earner, desperately needs Rs 1 lakh for their admission fees. But that’s an astronomical sum, for he barely manages ends meet.

Dharamraj works for a Surat mill and hardly manages to fend for his family of seven. When his sons — Raju, 18, and Brijesh, 19, — broke the news of their stellar performance to their dad, he didn’t even know why it was such a big deal. Raju ranked 167 and elder brother Brijesh 410. Today, Dharamraj knows. But he isn’t celebrating. He’s lost sleep over rustling up Rs 1 lakh (Rs 30,000 ad-

Elder brother wants to be in IAS, other wants MBA

True, it’s a great achievement, but we’re worried about making it, that too, before the June 25 counselling date. Banks will give us loans only after we get admission,” Raju told TOI.

Dharamraj and his family live in a rundown mud hut with a tarpaulin roof at Rehna Lalgunj village. Dharamraj owns eight goats, one cycle, and a table fan.

“Double shift work in Surat gets me Rs 12,000 a month. Things were smoother when the boys got admitted to Jawahar Navodaya Vidyalaya at Pratappgarh. They bagged scholarships to prepare for their IIT entrance. But now what? Where to raise the money from? I don’t own a single inch of land,” lamented Dharamraj.

Both boys scored over 95% in their Class X exams, after which they were picked for a scholarship programme. “Our village has a number of sharp students, but don’t know that dreams don’t need facilities to support them. It’s the commitment that matters,” Brijesh told TOI over the phone from Patna. “I’ll opt for electrical engineering and after finishing studies at IIT, prepare for IAS. A district magistrate can do a lot more for people,” he added.

Raju, though, wants to get an MBA after IIT and make money for himself and his family. “We’ve been brought up in extremely adverse conditions. Our family of seven lives in two small rooms that has two CFL bulbs,” he said.

Children of this family have never eaten paneer, ridden a car or had the luxury of a radio or TV set. But knowledge comes easy to them

“Had it not been for our school, where we got three meals and scholarships for IIT preparation, things would have been different,” he added. Their house got an electricity connection last year and they use a ‘chulha’ to cook. Children of this family have never eaten ‘paneer’ (cottage cheese), ridden a car or had the luxury of a radio or TV set. But knowledge comes to them easy. Asked to recite the table of 32, their youngest brother Rohit (11) does it with ease.
UGC asks varsities to undertake cleanliness drive

Hindustan Times (Lucknow)

The University Grants Commission (UGC) on Friday requested all universities and affiliated colleges to participate in a cleanliness drive starting June 22. This is part of the Swachh Bharat campaign. “The government has decided that a week-long cleanliness drive should be held from June 22-26 in all universities and affiliated colleges. Activities as mentioned must be undertaken with vigour during this week,” UGC secretary Jaspal S Sandhu said. The activities include upkeep and cleaning of offices, toilets, stairs and lifts along with areas outside the office, pathways and parking lots.
Nasa, N-agency join forces to step up earth defence

William J Broad

In grappling with the threat of doomsday rocks from outer space, Hollywood has always been far ahead of the US government, cranking out thrillers full of swashbuckling heroes, rockets and nuclear blasts that save the planet. Now Washington is catching up.

On Wednesday, the nation’s agencies that build civilian rockets and nuclear arms sealed an agreement to start working together on planetary defence. The goal is to learn how to better deflect comets and asteroids that might endanger cities and, in the case of very large intruders, the planet as a whole.

“Often, these agencies focus on their own pieces of the puzzle, so anything that brings them together is a good thing,” said Bruce Betts, director of science and technology at the Planetary Society, a nonprofit group.

Comets and asteroids are part of the cosmic rubble left over from the birth of the solar system. Comets, made of dirty ice, visit Earth’s neighbourhood only when knocked loose from their home orbits beyond Pluto. That makes their movement somewhat unpredictable. Asteroids, made of rock, fly mostly in a belt between Mars and Jupiter. Their orbits can be calculated with great precision if astronomers can spot the dim objects. Rocky debris rains down steadily on Earth, mostly as dust grains and tiny pebbles. But every once in a while a tumbling giant, miles wide, such as the one thought to have done in the dinosaurs, zooms past the planet.

In 2013, this threat gained new credibility after a 7,000-tonne rock exploded over the Russian city of Chelyabinsk, injuring 1,500 people, mainly as shards flew from shattered windows.

The two agencies — Nasa and the National Nuclear Security Administration — have long studied such threats on their own. They have surveyed the cosmic debris, designed rocket interceptors and run supercomputer simulations to see if a nuclear blast could nudge a large asteroid off course. In interviews, federal officials and private experts said the new agreement would deepen expert cooperation and governmental planning, ultimately increasing the chances of a successful deflection. NYT NEWS SERVICE