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Learning curve: Once a new system is in place, exams such as GATE, NET and few others may be conducted more than twice a year to allow students to improve their scores.

SCREENING TESTS

Government may outsource GATE, NET entrance exams

BY PRASHANT K. NANDA
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NEW DELHI

The human resource development, or HRD, ministry plans to outsource two high-profile entrance examinations—the Graduate Aptitude Test in Engineering (GATE) and the National Eligibility Test (NET)—to external testing companies to make their conduct more professional.

GATE is an entrance test for postgraduate courses, doctoral programmes in the Indian Institutes of Technology and Indian Institute of Science, Bangalore, and is also used by some public sector undertakings (PSUs) to screen candidates for entry-level jobs.

NET is conducted for determining the eligibility of candidates for junior research fellowships and lectureships at various Indian universities and colleges.

"We have undertaken a few rounds of meetings with concerned stakeholders," said a senior HRD ministry official, who did not want to be named. "Everybody feels that academic institutes and academicians should not get involved in too much logistical works like conducting entrance exams as it takes away their research and teaching time."

The official said that once a new system is in place, exams like GATE, NET and few others can be conducted more than twice a year to allow students to improve their scores. GATE is conducted once a year and NET twice.

The ministry has already held initial discussions with two private test-conducting companies to structure the tests in a manner “which is perceived to be transparent, fair, reasonable and reliable,” the official said.

The HRD ministry will discuss the subject with state education ministers at a meeting in New Delhi on Tuesday.

The common admission test of the Indian Institutes of Management is already being conducted by US testing company Prometric.

Uttar Vairagkar, director of Triumphant Institute of Management Education Pvt. Ltd, said any entrance examination has two parts—academic and logistic—and educational institutes like the IIT’s have little expertise in dealing with the logistics aspect.

"A professional body to conduct high-stake exams is a good move and will relax institutions from unwanted burden," said Vairagkar, whose coaching chain prepares students for GATE.

"GATE is no more just for pursuing postgraduate courses, many PSUs hire engineers via GATE score and that’s why you have seen a huge jump in the number of applicants in last three-four years. So, conducting GATE twice or thrice will be a great move for students and companies," he explained.

According to official figures, the number of GATE applicants rose 300% between 2010 and 2013. While some 414,000 gave the GATE exam in 2010, in 2013, the number was 1.2 million.

Vairagkar, also an alumnus of Indian Institute of Management, Ahmedabad, said the entity conducting the test may be private or public, but the focus should be on its smooth conduct, integrity, and fair evaluation.

"Even a section of Central Board of Secondary Education can be hired off to conduct such entrances as they have a good record of conducting large exams," he said.

Higher education secretary Ashok Thakur, who confirmed the plan, said the ministry would not force any institute to accept it. But stakeholders like the IITs are pleased with the move, and he said the authorities can consider conducting NET more than twice a year.

This will help create a larger pool of teachers for India’s university system, which is facing a staff crunch, said the HRD official cited in the first instance.

The university system is facing a teacher shortage in excess of 30%. With the government planning to increase higher education enrolment by some 10 million in the next five years, the demand for teachers will rise further.
Succumbing to the pressure of IIM Ahmedabad, the HRD Ministry on Monday not only refrained from taking a call on setting up an overarching IIM Council to regulate the premier B-schools but also agreed to rework provisions in the draft IIM Bill that were dubbed to be impinging on the autonomy of the prestigious management institutes.

HRD Minister MM Pallam Raju said that they "were getting closer" to it after reworking on the proposed legislation that sought to create IIM Council on the lines of IIT Council. "There are a couple of minor issues raised. I think we are getting closer and will meet their concerns," Raju said after chairing a meeting of the IIM heads. Sources said that IIM Ahmedabad stood firm on its autonomy issue and sought to get back to the Ministry and other IIMs after deliberating on the reworked Bill.

Raju said the government's intention is not to "impinge" on the autonomy of the IIMs as these institutes have thrived because of their autonomy. "We want to develop a stronger understanding with and within the IIMs and the Central government. Accountability is the factor we are moving towards and there should be more sharing of information with the HRD Ministry," Raju said.

There were objections in the original draft Bill by IIM-A fearing encroachment on their autonomy by the Centre. The revised draft proposed a coordination forum of IIMs deliberating on matters of common interest, review of policy objectives and perform such functions referred to it by the Centre. The forum would comprise the HRD Minister, the minister in charge of technical education of the particular state with an IIM, secretary technical education at the Centre, the chairperson and director of each institute and three members of excellence in the sphere of academic and public service. It will meet twice a year and make a report after conducting a review and recommend actions it considers appropriate. The Bill also seeks to have an academic council for each institute, a principal academic body with powers to enact, amend and modify amendments governing academic matters.

As per the draft Bill, the board of governors, apart from fixing fees and other charges, will constitute a committee to evaluate and review performance of the institute. Each institute will prepare a 10 year strategy and a five year rolling plan and their performance will be reviewed by the committee against such plans. HRD Ministry will have the powers to give directions based on the committee's recommendations which would be binding in nature," said a HRD Ministry official.

The meeting also discussed attracting of international faculty and ensuring good linkages with industry.
आईआईएम काउसिल पर नहीं बनी सहमति

आगे और होगी चर्चा, फैक्टरी को आकर्षित करने के लिए पैकेज बढ़ाने पर जोर

नेशनल ध्वनि | नई दिल्ली

इंडियन इंस्टीटुट ऑफ मैनेजमेंट (आईआईएम) बोर्ड की बैठक में काउसिल बनाने के प्रस्ताव पर पूरी सहमति नहीं बन पाई। मानव संसाधन मंत्री पल्लव राजू ने दी यह खबर कि काफी हद तक मुद्दों पर जताताएं कम हुई है। बाजार के अभी और ब्याज चर्चा की जरूरत है। आईआईएम काउसिल बनाने के प्रस्ताव पर शुरू से करने वाले विरोध रहा है।

विरोध की बजह स्वायत्त में दूल्ह की आर्थिक रही है। हालांकि मंत्रालय ने गतिविधि समाप्त करने के लिए प्रस्तावित आईआईएम बिल में एक कोआइडिटिंग बोर्ड बनाने का प्रस्ताव रखा है। यह बोर्ड आईआईएम और मंत्रालय को शैक्षिक व प्राथमिक मस्तिष्क पर सुझाव देने लेकिन अतिम फैसला आईआईएम ही करेगा। बैठक में सुझाए आया कि सभी आईआईएम को एक साथ ब्रांड नाम देने की दिशा में भी गोर कराना चाहिए। इससे आईआईएम ब्रांड दुनिया में अलग साह बनाएगा। इससे लेकर सभी आईआईएम अपस में समस्त बनाने को दिशा में बिशेष उद्देश्य करेगा।

वेतन व अन्य मुद्दों पर भी आईआईएम स्वायत्त चाहते हैं। क्यों आईआईएम का कहना है कि आईआईएम डायरेक्टर के लिए योग्य लोगों को आमंत्रित करने के लिए बड़ा पैकेज देने के प्रस्ताव की तर्ज पर फैक्टरी को भी मोटी तानबाहिर होना चाहिए। आईआईएम का तर्ज है कि अगर आईआईएम को अंतरराष्ट्रीय मूल्य पर श्रेष्ठ रैंकिंग के दायरे में लाना है तो यहां मोटी तानबाहिर पर दुनिया की बेहतरीन फैक्टरी को नियुक्त करने की छूट होनी चाहिए। हालांकि बैठक में कुछ लोगों ने इससे फौस के बाहेर पर असंख्य पंजीकरण की आरोपित जताते हुए विरोध भी जताया। बाद में तव हुआ कि इस मसले पर फिर से चर्चा की जाएगी।

ई-कॉपी के विस्तार को लेकर भी बैठक में चर्चा हुई। आईआईएम में लोगों को आकर्षित करने के लिए रोड को आवश्यकता करने पर भी हुई। मंत्रालय ने कहा कि आईआईएम काउसिल बनाने के प्रस्ताव में कुछ मुद्दों को लेकर रेट बने हुए हैं। आईआईएम को अपनी साक्षरता के साथ स्वायत्त की चिंता है। मंत्रालय चाहता है कि सभी आईआईएम मिलकर एक फॉरम पर आए। सार्वजनिक रूप से दुनिया में बाइंग हो। दुनिया के श्रेष्ठ संस्थानों में आईआईएम को जगह दिलाने के लिए जोड़ और शैक्षिक स्तर को लेकर नया दंग बनाना जाए। आईआईएम को स्वायत्तता देने के मसले पर सरकार को कोई ऐतराज नहीं है, लेकिन इसके प्रति मुझे वित्तीय रूप से आज्ञानिकता करने की जरूरत पर जोर दिया जा रहा है। एक अधिकारी के मुताबिक सरकार के लिए पैकेज को मानमांगी तनाव नहीं दी जा सकती, इसके लिए आईआईएम को लागू करना होगा। फिर से सभी मुद्दों को लेकर आईआईएम अपने स्तर पर अंजने वाले दिनों में चर्चा करेगा।
On Wheels: Engineering Talent Pool

The race for a seat at India's most coveted engineering institutions is heating up, with the JEE (Main) scheduled for April 7. While only the very best will make it to the top few institutes, engineering as an option will remain a big draw for many. The number of engineering colleges in India has shot up by more than 10-fold over the past two decades.

Engineering and technology graduates made up 7% of India's 5,000,799-strong fresh talent pool in 2012, according to consulting and research firm Knowledge@IIM. This stream is expected to grow at a compounded growth rate of 6% as against 4.1% in the case of medicine.

Computer science/information technology accounts for the biggest chunk of India's fresh engineering talent pool, with more than 98% of the colleges offering this stream, adds the report. Sreepradha D Basu takes a quick look at this space in India.

### Engineering Graduates in Various Streams

<table>
<thead>
<tr>
<th>In Percentage</th>
<th>21.8</th>
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<tbody>
<tr>
<td>Engineering Graduates in Various Streams</td>
<td>Electronics engineering</td>
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<td>17.7</td>
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<td>Mechanical engineering</td>
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<td>6.1</td>
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<td>Civil engineering</td>
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<td>10.8</td>
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<tr>
<td>Electrical engineering</td>
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<td>3.3</td>
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<tr>
<td>Chemical engineering</td>
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<td>7.8</td>
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<td>Others</td>
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### What the Future Holds in Various Streams

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<th>Stream</th>
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<th>2017</th>
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<td>Computer science/IT</td>
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<td>Electronics engineering</td>
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<td>Civil engineering</td>
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<td>Chemical engineering</td>
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<td>Others</td>
<td>27,777</td>
<td>34,123</td>
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### Degrees They Acquire

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<th>In Percentage</th>
<th>Graduates</th>
<th>76.8</th>
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<td>Degrees They Acquire</td>
<td>Post-graduates</td>
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<td></td>
<td>Doctorates</td>
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<td>Others</td>
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### How Far the Graduates Will Go

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<tr>
<th>Degree</th>
<th>2012</th>
<th>2017</th>
<th>Growth %</th>
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</thead>
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<tr>
<td>Graduates</td>
<td>2,73,777</td>
<td>3,76,060</td>
<td>6.4</td>
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<td>Post-graduates</td>
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<td>Doctorates</td>
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<td>Others</td>
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SOURCE: Knowledge@IIM
Surveillance cameras earn JNU students’ ire

RAHIBA R PARVEEN
NEW DELHI

The idea of putting the Jawaharlal Nehru campus under round-the-clock video surveillance has not gone down well among the students.

Alleging that the “undemocratic” move is to keep an eye on their movement, the students said the move evidently violates their fundamental rights of freedom.

The university administration has installed multiple cameras across the administration block, T-point, north gate, library and parking areas last week. “This move came all of a sudden. There is no need of enhancing security by keeping round the clock check on students. A university is meant for everybody, there is no need of any surveillance. It is merely infringement of our rights and an act to invade the privacy of students. There has never been any incident against women or other kinds of violence inside the campus that could have forced the authorities into introducing CCTV cameras. Today the cameras have been installed around gates and administration block tomorrow they will expand to hostels and food joints,” said Shakeel Anjum, the secretary of the Jawaharlal Nehru University’s Students Union (JNUSU) adding that they will start their protest from Tuesday.

However, the authorities at the university said that the cameras have been installed to counter different problems including the need of providing safety for women. “The proposal of CCTV cameras included the areas of administration block, roads and parking. The reason mainly being reports of unauthorised vehicles found in the parking and often students get their damaged cars inside and later claim charges for them. We are also keen about women’s security as we don’t want any other Nirbhaya case. We want to keep a track on the movement of vendors and passers-by inside the university premises. It is not a step against the students but for them. There are no official details about installing the cameras around hostels at this moment,” said an official of the university who requested anonymity.

The JNUSU, All India Students Association along with other groups and students are going to protest on Tuesday against the installation of the CCTV surveillance inside the campus. “Our demand is that this university work on public funds so they should be utilised for the public not against them. The money should be invested by revamping the hostel premises, providing more scholarships, wifi connectivity and other things that are amiss in the university. But the opposite is happening, spending so much on CCTV’s is an utter wastage of money,” said Piyush Raj, the member of JNUSU.

A source from the university has said that vice-chancellor SK Sopory has sanctioned about Rs 75 lakh for making facilities of wifi available in the university hostels and all other areas.
Donald R. Sadoway, the current John F. Elliott Professor of Materials Chemistry at the Massachusetts Institute of Technology (MIT), is widely regarded as one of the world’s foremost experts on batteries and alternate power sources. He was one of Time magazine’s 100 most influential people in the world in 2012 and has been an outspoken critic of the way batteries are deployed by major battery manufacturers such as Boeing. During a visit to Bangalore, Sadoway spoke in an interview about the biggest challenges facing the battery industry, the new alternate technologies companies need to invest in and how Boeing needs to address safety concerns related to the batteries on the Dreamliner. Edited excerpts:

The battery industry has come a long way over the last 10-15 years. But it’s still far from being a perfect world. What are the areas that manufacturers need to improve and work on?

The big problem with batteries is cost. From mobile phones to computers, today’s batteries, which are primarily lithium-ion, are very expensive but they can meet that price point. But when you start thinking of electric vehicles, lithium-ion is far too expensive. When it comes to grid-level storage, they’re even more expensive. The big problem is the cost and my approach to research has been to focus on earth-abundant elements and to think about conceptual designs that are very simple, so that when you manufacture, you end up with something that’s cheap and scalable. With lithium ion batteries, it’s scalable, it’s great for a cellphone but you can’t put together a million of those and end up with something that’s a million times more expensive. It’ll be even more expensive, a million times, because when you put that many of them together in one power system, you have a heat build-up which then requires added plumbing and so on to dissipate the heat. The big shortcoming is the batteries that we have are just too costly.

What needs to be done to address this issue?

I think the research in the world is largely misdirected. What I mean by that is the conventional approach for battery research is: ‘Let’s find the cheapest chemistry. And then we publish the paper and somebody else should figure out how to make this device cheaper.’ And what we have been learning from the past four years with lithium ion is that the price does fall, but it doesn’t fall low enough for certain markets, like automobiles and grid-level storage. So that suggests that it’s not good enough to simply say, ‘Invent for the most brilliant idea.’ No. You have to invent for a brilliant idea that is designed from the beginning to be cost-effective. And that’s where there is a big mistake... You know, the battery industry is very conservative, it’s paradoxical—they say, ‘We want innovation, but we don’t want change.’ That’s an over-constrained problem.

Technology has obviously evolved at a rapid pace over the last few decades, especially with devices like computers and mobile phones. Has battery development been able to keep up with the evolution?

No. Microelectronic devices have continued to escalate at a very high rate, so the density of devices in a given area is phenomenal today. And that increases the power requirement. So battery improvements occur, but they occur in fits and starts. The demands on a PC for example—used to be monochrome screen, floppy drive, no wireless, no bluetooth, no nothing—now today (you have) colour screen, DVD player, wireless, all of this other stuff. So today the demand for power continues to escalate and the improvements in battery technology have been struggling to keep up. So, it’s really hard. Quite frankly, I think the research money isn’t wisely spent in large measure. I think people in research need to raise their sights. It’s a chicken and egg situation. If the money is being dedicated towards incremental improvements in lithium ion, then people who want to have players to propose incremental improvements in lithium ion. But if people are afraid they won’t get funded, they’re going to play the conservative game and give us a little improvement here, a little improvement there. It makes no difference. When lithium ion first came out, it was about 125 watt hours per kilogram. Now it’s maybe 140-150. Billions of dollars spent and that’s the improvement? We should have been moving away from lithium ion long ago. But we didn’t.

So, what are the feasible alternatives to lithium?

There are two that are obvious—magnesium and aluminium. Because those elements are far more abundant in the Earth’s crust... Aluminium is second only to silicon and oxygen. So, if you can make a battery out of aluminium, it’s going to be abundant. It’s going to be cheap. And that’s the other issue—the reason we don’t have electric cars isn’t because we don’t have the range, it’s because the cost is too high.

If you can put an electric car at the same price as a Tata Nano, people would buy it, because then they don’t have to buy petroleum. But the cost of an electric vehicle is $40,000-100,000—then you can only sell to people who can afford them, a niche market and so on. But if you want to really change the ignition’s profile and reduce our dependence on imported petroleum, you’ve got to make a car that can sell for much cheaper. And that means the battery. The motors are there, everything else is ready in the electric car, but the battery is far too expensive.

There’s been a huge amount of scrutiny over the lithium-ion batteries used in Boeing 787s. Do you think enough has been done to address the safety concerns?

When you have a small-format battery such as the one in your cellphone, the distance from the centre of the battery to the outside of your case is small. Just passive means will dissipate the heat. But in the airplane, they have a battery that’s roughly about 47x42x40 meters—it’s a cube. And there are many cells inside and they’re packed close together. When they draw current or when they charge, they generate enough heat that the heat can’t dissipate simply by passive means. With Boeing, it’s going in the wrong direction. What they’re doing is building a thicker-walled case and sealing it on the grounds that if a fire erupts, it will be contained inside the case.

I’m arguing they should be putting active cooling—there should be water flowing through it. I’ve looked at what they’re proposing—now—they’re talking about putting some temperature monitors, putting a thicker-walled case and so on. All of that is trying to deal with the situation after it goes out of control. But to prevent it from going out of control, they need to install active cooling. And they’re resistant to it. I can’t explain why, but to my mind what they’re proposing is simply containing a problem.
सरकार का रिपोर्ट कार्ड तैयार करेंगे आइआईटी के छात्र

इंटरनशिप कार्यक्रम में 71 छात्र करेंगे योजनाओं का मूल्यांकन...

उदाहरण

सरकार का रिपोर्ट...

इसके आधार पर यह हिस्सा कार्यक्रम अभाव योजना में शामिल सुझाव देने में मददगार मामूली है। इंटरनशिप समय के प्रारंभ में सभी पहले रिपोर्ट कार्ड आया-आयामों ने हिस्सा में शामिल रिपोर्ट कार्ड की बनाने की कामगारी किया जाता। इंटरनशिप समय के प्रारंभ में सभी पहले रिपोर्ट कार्ड आया-आयामों ने हिस्सा में शामिल रिपोर्ट कार्ड की बनाने की कामगारी किया जाता। इंटरनशिप समय के प्रारंभ में सभी पहले रिपोर्ट कार्ड आया-आयामों ने हिस्सा में शामिल रिपोर्ट कार्ड की बनाने की कामगारी किया जाता। इंटरनशिप समय के प्रारंभ में सभी पहले रिपोर्ट कार्ड आया-आयामों ने हिस्सा में शामिल रिपोर्ट कार्ड की बनाने की कामगारी किया जाता।
IIT-Guwahati wins at CIMA GBC 2013

Team Breakevens, IIT-Guwahati, emerged as winner in the Eastern Regional Final of the CIMA Global Business Challenge (GBC) 2013 held in Kolkata. Team Empresarios, from IIT-BHU, Varanasi, was the runner-up. GBC 2013 also announced two awards — Best Business Report and Best Speaker. There was a tie between two teams from IIT-Kharagpur, Odeyssey and Tonnerre, for the Best Business Report award. Khushi Gupta from Breakevens won the Best Speaker’s award. Team Breakevens and the Empresarios will now compete in the India finals on April 6 in Mumbai.