New IIT graduates urged to develop affordable technology

TNM | Aug 10, 2014, 12.02AM IST


MUMBAI: ‘Affordable Excellence’ was the challenge thrown to the audience by chief guest R A Mashelkar as he prodded IIT-B's graduating batch to develop technology affordable to many.

To the 2,256 fresh graduates, Mashelkar, who was speaking at IIT-B's 52nd convocation on Saturday, asked, "Can we make an ECG machine available, not at $10,000, but at a price 20 times lower, not just 20%? Can we make a high quality Hepatitis-B vaccine, priced at $20 per dose, available at a price 40 times less, not just 40%?" Raaz Dwivedi (20), who completed his Bachelor's in electrical engineering, was awarded the President medal. Ashima Mittal (21), who completed her BTech in civil engineering, secured Dr Shankar Dayal Sharma award.

Copycats on prowl at IIT

By Ajit Ranade, Mumbai Mirror | Aug 9, 2014, 05.19 AM IST


Student survey in premier institute reveals that copying is widely prevalent amongst the average super-achiever.

The students who make it through the Joint Entrance Examination of IITs are often called 'cats'. In IIT lingo it means super-achievers. The JEE is extremely competitive, and has strict control to prevent cheating, copying or masquerading as someone else. (3 Idiots was a movie. You can't really masquerade for four years as someone else. But we digress.) Once admitted, the pressure does not really drop, but there must be a sense of triumph and relief. There's a great sense of achievement, that you made it through a gruelling competition on your own steam and preparation. IIT Bombay has an enviable distinction that every year, more than sixty of the top 100 ranks choose to come to IITB. So it was alarming to learn in a recent news report that a very high percent of IITB students, the 'cats' have 'encountered' copying. This means that either the they participated actively, passively or as bystanders in copying. This was based on a survey conducted by the student council. The very fact that the council was worried enough to conduct such a survey itself is remarkable.

The students gave similar feedback about a 'culture of copying' to an external review committee, consisting of world-renowned scholars, academicians and university administrators. What is heartening is that the students were frank in their feedback.

But what is not heartening is that this is more rampant than you think. The student survey had also asked foreign students to compare their 'home' experience with IITB experience. (The IITs do get a fair number of foreigners as exchange students.) The foreigners were not amused at the scale of copying they witnessed. Copying in exams is just
one form. The entire range consists of copying homework, plagiarism, wrongful representation in resumes, partial cut-copy-paste, non-attribution. It's a long slippery slope. So let's conclude, there seems to be significant scale copying and cheating, even at IITs. This is not a secret, and maybe not in all departments, but it is still alarming. What could be the reasons?

Here is a 'supply' and 'demand' theory. Mind you, it is untested and may be totally off the mark. (a) It is easier to do. Since class sizes are much bigger, especially in the early years. (b) Invigilators are lax. They are not enforcing rules strictly. Are they scared that some student will pull out a knife? (As happens in the badlands of Wasseypur) Why don't they police them more aggressively? What about CCTV monitors? (c) Students don't think it is such a big crime. Everyone is doing it. A competent student, who 'shows' his or her paper to others to copy, does not even think that this is wrong! This is decline in ethical standards. (d) That decline and 'chalta hai' attitude started at home when the student was a child. Parents have to take some of this blame. (e) The premium on marks and grades has gone up. You need to score big, and even a second decimal score higher than your peer, could mean an allotment job or a scholarship to a US university. (f) Due to excessive load on the system (huge growth in class sizes, infrastructure, funding crunch) the 'cheating' agenda has got relegated to a lower priority. These are 'cats' after all. But can you get through life just by copying all the way? Even in 3 Idiots the cover was blown.

Okay, so we have sounded the alarm bell. Even if the actual copying is much much less, it is important to make a big hue and cry. For if even a small bit is acceptable in IIT's, imagine how much more goes on elsewhere.

Thankfully, the remedy is not difficult. It relies on the principle of 90 + 5 + 5. It says, if five percent are incorrigibly corrupt or uncompromisingly honest, and the rest 90% go along with the 'systemic' swing. So if the faculty and the students make a determined effort and introduce minor reforms, (both on the supply and demand sides) we will see a big change.

For starters, zero tolerance and strict enforcement - and the 'cats' ostracizing their wayward classmates.

IITs as islands of excellence need to remain unblemished, and their beacon cannot even have a slight smudge.

'Eve ry unit should compete for its place in world ranking'

http://timesofindia.indiatimes.com/City/Allahabad/Every-unit-should-compete-for-its-place-in-world-ranking/articleshow/39921809.cms

ALLAHABAD: A group of senior faculty members and officials of around 150 Centrally funded institutions of the country, including Allahabad University, interacted with the secretary and deputy secretary, higher education, Ministry of Human Resource and Development (MHRD), on Friday. The officials laid down the areas which need immediate improvement and the same being stressed at the meeting with visitor (President of the country), Pranab Mukerji and Prime Minister, Narendra Modi.

The secretary informed the varsity officials that the PM was worried over the shortfall of teachers in every institute and stressed the fact that every institute should start courses in the emerging areas. He also asked these institutions to launch courses which enhance skill building among students. It has been made clear to all Centrally funded institutions that the future grants would be based on the performance of the unit concerned. The MHRD official also informed that the PM wants that every institution, including AU, should have the facility of E-Library and the research pursued by faculty members should be of benefit to the society at large. He also stressed on the fact that science and mathematics should be made more popular among students.
Likewise, the official also informed about the points stressed in the meeting with President of the country, Pranab Mukerji. President is of the view that every unit should compete for its place in the world ranking and all the offices should be neat and clean. He also wants that the campus and hostels of the institutions should be wi-fi enabled.

The MHRD officials have instructed AU officials, along with their counterpart across the country, to upload the data pertaining to mobile number, email and area of specialization of each faculty member by August 13. He has also instructed the institutions to keep their website updated regarding all the informations.

**HRD Ministry starts internship scheme**

[http://indiatoday.intoday.in/education/story/ministry-to-provide-internship-opportunities-to-ug-pg-research-students-at-govt.-departments/1/376317.html](http://indiatoday.intoday.in/education/story/ministry-to-provide-internship-opportunities-to-ug-pg-research-students-at-govt.-departments/1/376317.html)

The Human Resource Development Ministry has introduced an internship scheme called MHRD Internship Scheme-2014 for Indian nationals pursuing graduation/post graduation/research studies from a recognised university/institute within India or abroad and will be given a chance to intern with different government departments in the domain of education.

Students are eligible to apply for these internships if they are pursuing an under-graduate/ post-graduate degree or even if they are working in a research programme in education, social science, science, humanities, management, engineering, ICT and law from any recognised university/institution within India or abroad.

The government would be start with the first batch of this internship from October 1 and only six students will be selected per batch.

As part of this internship programme, students will work closely with the HRD Ministry for two months wherein they will be paid a fixed stipend of Rs 10,000.

Government officials reveal that this internship is being provided to students so that they can be involved in formulating policies and also understand how various projects are implemented.

**IIM-Lucknow director to be VC of Laxmipat university**


LUCKNOW: A month before he ends his tenure as director of Indian Institute of Management, Lucknow (IIM-L), Prof Devi Singh has been appointed as the vice-chancellor of JK Laxmipat University, Jaipur.

Prof Singh's second term at IIM-L ended on March 9. Because of the model code of conduct, the MHRD gave him a six-month extension which ends on September 9.

With almost a month left before he is relieved from services, Prof Singh's name flashed on the JK Laxmipat University's website as the new vice-chancellor designate who will be joining shortly. When TOI called on the university's landline number, an operator said, "Yes, Prof Singh is our new V-C. He visited our university on August 5 and will be joining after August 15."

Chairman, board of governors, IIM-L JJ Irani told TOI that the search-cum-selection committee has finalised the names for the new director. "Approval from the MHRD is awaited," said Irani. Hopefully, by September end, the premier institute will be able to disclose the name of the new director, he added.

Sources said two names are doing the rounds at present in the campus. One is that of Prof Archana Shukla,
dean, IIM-L- Noida Campus and second is Prof Ravi Chandran from IIM-Bangalore. Director, Indian Institute of Information Technology and Management, Gwalior, Prof SG Deshmukh did not turn up for the interview, said sources. There was also a professor from a university in Canada but the ministry is not very keen to appoint a non-Indian, it is believed.

India, Japan to strengthen education ties


TWO LETTERS OF INTENT TOWARDS ESTABLISHING ACADEMIC COOPERATION BETWEEN THE INDIAN COUNCIL OF SOCIAL SCIENCE RESEARCH (ICSSR) AND THE INDIAN COUNCIL OF HISTORICAL RESEARCH (ICHR) WITH THE JAPAN SOCIETY FOR PROMOTION OF SCIENCE (JSPS) WERE SIGNED RECENTLY

India and Japan have agreed to advance bilateral academic cooperation. Two Letters of Intent towards establishing academic cooperation between the Indian Council of Social Science Research (ICSSR) and the Indian Council of Historical Research (ICHR) with the Japan Society for Promotion of Science (JSPS) were signed for the advancement of academic cooperation in humanities and social sciences between Indian and Japanese researchers, the human resource development (HRD) ministry said.

The letters were signed during a meeting between HRD Minister Smriti Irani and Hakubun Shimomura, Japan's minister of education, culture, sports, science and technology. Irani lauded Japan for its advancement in education and technology, and “appreciated the assistance of the government of Japan for the development of the new IIT in Hyderabad and the Pandit Dwarka Prasad Mishra Indian Institute of Information Technology, Design and Manufacturing (IIITDM) in Jabalpur”, the statement said.

She also proposed that the two nations could cooperate for sharing of knowledge resources through the Indian government's national e-library initiative and the Massive Open Online Courses (MOOCs).

Ahead of Prime Minister Narendra Modi's proposed visit to Japan, the two countries have also held discussions to explore opportunities for cooperation in the field of science and technology.

Briefing newsmen after meeting his Japanese counterpart Hakubun Shimomura, Minister of State of Science and Technology Jitendra Singh said the two nations are in the process of launching several joint programmes.

“We are also in the process of launching a number of joint programmes in the field of science and technology.

“(We are) Also setting up a joint Indo-Japanese Science and Technology Committee and a huge amount of collaboration in the area of ocean technology, in the area of space technology.

“Particularly, this assumes importance in the light of forthcoming visit of Prime Minister Narendra Modi to Japan,“ Singh, who is also the Minister of State in the Prime Minister's Office, said.

Modi is likely to visit Japan early next month. Pointing out that the relationship between any two nations in the future would be based on science, the Minister said that they tried to do “some speed work“ for a more fruitful science and technology interaction between the heads of India and Japan.

“I am sure this meeting today will pave the way for a long term relationship between the two nations based on science,” he added.

Singh also said that a Centre for Disease Biology is likely to be established in India with Japanese collaboration.

“We are looking forward to set-up a centre in India with Indo-Japanese collaboration.
It would specifically focus on medicine, disease and disease biology,” he said.
Shimomura is the Japanese Minister of Education, Culture, Sports and Science and Technology.

"We are looking forward to set-up a centre in India with Indo-Japanese collaboration. It would specifically focus on medicine, disease and disease biology."

>> HRD Minister Smriti Irani shakes hands with Minister of Education, Culture, Sports, Science and Technology of Japan, Hakubun Shimomura
Cutting into swing with a newer blade

INOovation in crickEtt

IT graduates from MumbArr come out with a modified bat that promises to make batting an even easier task

MAJOR DIFFERENCES

FALCON BLADE BAT

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NORMAL BAT

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SHAPE

FALCON BLADE: The shape of the bat from the face to the handle is conical, with the edges sharp to cut through the ball. The bat is lighter and easier to swing.

NORMAL BAT: The front and edges of the bat are straight.

IMPACT-BASED DIFFERENCES

Superior aerodynamics and power

Less air resistance, as the bat is aerodynamically optimised for faster swing.

LESS AIR RESISTANCE

Power of the bat against the bowler due to less air resistance, as it is aerodynamically optimised for faster swing. The blade is stiffer and provides a better way to cut the ball.

BETTER SHOTS THROUGH THE STRAIGHT ARMS

Release of the conical edges, the forward component of the bat is lowered by 30%. Every part of the bat has a forward component due to the bat being stiffer. The blade is streamlined and provides a better way to cut the ball.

CHANCES OF EDGES CARRYING REDUCE

The blade is aerodynamically optimised for faster swing, reducing the chances of the ball carrying edges.

TYPES OF BATS

1. ALUMINIUM BAT
2. GRANITE COATED BAT
3. MONOCOAT

HOW FALCON WOULD HAVE HELPPPPED INDIA

India's batsmen have made huge gains off the new bat, leading to a more effective and productive batting in the series. The Falcon could have prevented the ball from carrying too much spin.

EXPERT VIEW

"Batting on an engineering background, I am impressed by the improvements. There is a new blade that is hitting some form. Batsmen, many discussions through edges to edges," said Devdas.

"I like the idea of edges worked with forward and downward component, but I feel it will not hinder the German edge携带 blade to edges and flick in fact may get directed square and with lower grade."

"A fair, high and light weight is something that will add value to batsmen at all levels. It may improve their back foot game on quick bounce wickets. These are certainly worth trying..."

"I would very keen to use those have used by top grade hand higher through edge directional and in some competitive games to get the results expected..."

"Devdas said, "They did these for the better."

DIID YOU KNOW

Giant distance is an important aspect of any bat. The cleaner the front is, the shorter the ball can be. In the game of cricket, the ideal number of games is 1 to 1.5. The nearer the front is, the lower the ball hits in the game. Normal bats carry the ball around 3 to 7 while the ball used by international players can go up to 35 to 55 degrees.

ILLUSTRATION: DHARMADEEP DHIR HINDUSTAN TIMES
New CAT pattern likely to push cut-offs for B-school admissions

As the difficulty level falls, the minimum percentile requirement could go up

M SADANANDH
Mumbai, 3 August

In what could increase the minimum cut-off for admission to prestigious business schools, the Common Admission Test (CAT) examination is going to have a revised pattern this year — with more questions to answer, the time available to attempt each question will come down. According to coaching institutes and management school experts, since the difficulty level of questions is likely to be less than in earlier years, the minimum percentile requirement for the Indian Institutes of Management (IIMs) and other key management schools might go up.

CAT 2014 will be conducted in four sessions over two days — on November 16 and 22. The changes being brought in the examination pattern for 2014, according to a press statement from CAT, will improve the structure followed in the past five years.

Ekti Sharma, assistant professor at Management Development Institute, Gurgaon, says the access flexibility has been increased. Since there is less time per question, the difficulty level will be raised. "If this happens, the cut-offs for admission to business schools will go up," she adds.

The duration of the examination this year has been increased from 140 minutes to 170 minutes. Further, questions in each section — quantitative ability, data interpretation, verbal ability, logical reasoning — have been increased from 30 to 50.

A senior professor from a South India-based IIM explains there could be some breaking in the difficulty level to facilitate the changes. He adds this will also mean a higher cut-off, especially for the older IIMs.

Candidates, however, will have the flexibility to devote more or less time to each section, depending on their respective abilities. They could switch from one section to another for the duration of the examination. Sharma explains there could be students performing in one section and under-performing in another because of this.

According to Ramachandra Kavakaddi, course director at coaching institute Triumphant Institute of Management Education (TIME), Hyderabad, there will be more emphasis on time management, as the sectional time limit will not be there, with the flexibility to switch among sections. "At TIME, we have multiple practice tests; we will teach students to better manage their time," he says.

Shobhit Bhattager, founder of Graduation.com, a mobile learning platform, points out that most candidates are not used to taking tests for three hours at a stretch. They will now have to, as the CAT exam duration has been increased by 30 minutes, which is a lot of time.

"The time available per question has gone down, from two minutes and 20 seconds to one minute and 42 seconds. This means speed will be very important now. The strategy of attempting questions and understanding what is the right time to leave a question, among others, will play a key role," he adds.

Also, CAT will have a new interface from this year. The exam is to be administered by Tata Consultancy Services for the next five years. In 2013, nearly 333,000 candidates had taken CAT. In the results, CAT saw right male engineering graduates scoring 100 percentile. In CAT 2012, 10 candidates had scored 100 percentile.
Never a slump in this business

Protesting aspirants may have created a din in Delhi, but in Jaipur, coaching centres continue to harvest riches as the number of candidates signing up is ever on the rise

Aarti Dhar

Tucked between a shopping mall and the magnificent Vidhan Sabha building in Jaipur is Lal Kothi, loosely translated as red bungalow. Why the place got this name, no-one seems to know, but today, career aspirants flock to this place.

The semi-convivial area has a huge cluster of coaching centres for students aspiring to crack various competitive examinations — pre-medical and pre-engineering entrance tests; Railways, police and banking recruitment tests; Rajasthan Administrative Services Examination; Civil Services Examination; and so on. These centres claim to provide “coaching with high success rates”.

If Kota is known for its coaching institutions where students are trained to clear pre-medical and pre-engineering examinations, including those for admission to the Indian Institutes of Technology, Jaipur is fast catching on as a centre for coaching for the State Administrative and Central Civil Services examinations. Even big names such as Chanakya IAS Academy and Rau’s Study Centre have expanded their business into the historic Pink City.

While many local coaching centres have been around for many years and made a place for themselves, others are struggling to find a foothold in this business with a promising future.

Whatever be the reason for the unrest among Civil Services aspirants over the nature of the examination, coaching centres do good business.

The teachers and students may have different opinions about the issues being flagged by the protesting aspirants, but there is no slump in the number of aspirants.

“We train students according to the pattern of examination adopted by the Union Public Service Commission (UPSC) and try to ensure, as much as possible, that they are clear. Before 2011, we taught the optional subject in preliminary; and after that, we switched over to the Civil Services Aptitude Test (CSAT), now the bone of contention,” says N.K. Jha, Director of Raj’s Jaipur Institute.

The prospectus is bilingual because a large number of students come from a rural background and the Hindi medium. Over at Chanakya IAS Academy, separate batches are run for Hindi- and English-speaking students.

The courses run for eight to nine months with classes held daily for four hours.

Once written tests are cleared, students are prepared for interview at the main centre in New Delhi.

Debating point

The agitation over CSAT may not have affected the coaching centres, but it is a debating point these days.

“Students are curious and do ask pertinent questions about the anger being expressed by aspirants in the national capital these days because a change of examination pattern would affect them,” Jeevan Singh Bisht, acting head of the Chanakya academy, said.

While a majority of the students support the agitation as they believe the examination is tilted in favour of English-speaking students and those from urban backgrounds, guides at Rau’s Study Circle feel scrapping CSAT is not the answer. It is the schooling and education system which needs a revamp to provide a level playing field.

“It is all in the mind of the students. Students are just afraid of English. It is just a mental barrier. Make English simple and make the translation into Hindi and other regional languages accurate, the problem is solved,” a guide said.

He feels CSAT is a good and scientific method to assess a student. When students with a Hindi or regional language or Humanities background can write competitive examinations for banking and others, what is the hassle when it comes to the Civil Services Examination? It is about not only knowledge but also the ability of an individual to implement that knowledge.

However, his argument does not go down too well with students from a rural background. Nand Kishore Kalan, who cleared the 2013-14 Civil Services Examination, says Hindi-medium students have to read questions in Hindi and English to get a clear understanding, which is time-consuming and confusing. In the first two attempts, he opted for Hindi but could not clear the test; this time, he opted for English and made it.

His teacher, Mr. Jha, says a student has to be taught in several languages — local, regional, Hindi and English — so that he or she is fully prepared. Often, students know the meaning of a word but do not know its usage. Good reference tools are not available in Hindi.

Many feel there is a scientific way to test the aptitude for any career; however, civil servants deal with problems pertaining to public administration, and their temperament has to be different from that of bankers, business managers and the like.

So, typically those tests which assess the ability to be accurate under time pressure in terms of numbers are not appropriate. So care and consideration are called for to test aptitude to be in the civil services.

Case-based questions which test mental make-up, attitude and aptitude, ability to get along with people, take risks and lead a team, and presence of mind can be taken from a variety of situations — urban and rural settings, tribal areas, violence-affected areas, gender and other variables — so as to make it a level playing field for all candidates irrespective of their socio-economic background, some aspirants suggest.

But not all are impressed with the products of these coaching centres. It is easy to figure out for interviewers that a candidate has been tutored to compete. Mainly, it is because coaching centres seem to produce candidates as would through an assembly line.
IITs' virtual classes a great hit with colleges

NEW DELHI: At 1 pm every Monday, Prof. N. Swaminathan of IIT Madras delivers a lecture on machine design, a part of the mechanical engineering division. However, his students are not from IIT, but come from the 40-50 different colleges who log on to his lectures.

"This is a good start. There are stumbling blocks, but the whole idea is to make an impact in society and this is a step in that direction," said Prof. Swaminathan, who conducts two virtual classes a week.

Venkatesh, a second-year computer engineer, is a student of a college in Coimbatore. He attends a lecture on Linear Algebra by an IIT professor: "I could not get admission in IIT. This interface has helped me learn from one of the best of the faculty. It teaches us beyond the curriculum," he said.

The Quality Enhancement in Engineering Education (QEEE), an initiative of the HRD ministry was conceptualised last year, and the pilot project was launched in January. The second phase started last week.

Nearly 130 colleges have registered for the programme, where IIT profs will deliver lectures.

Dainik Bhasker, ND 11/08/2014  P-11

विदेशी अवसरों के लिए आईआईटी गांधीनगर ने किया अनुबंध

इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी, गांधीनगर ने नैनितान इंडिया के साथ समझौता किया है जिसके तहत आईआईटी गांधीनगर के अंदरेज्युएट स्टूडेंट्स को पहले से ज्यादा ग्लोबल अवसर मिल सकेंगे। नैनितान इंडिया एक अयोग्य इंफांसेन्शन और रेटिंग फर्म है जो 100 से ज्यादा देशों में कंज्यूमर्स से जुड़े सर्वेक्षण करती है। समझौते के अनुसार नैनितान आईआईटी गांधीनगर में वाणिज्यिक आधार पर विविध नैनितान अमॉर्ड्स के लिए फंडिंग प्रदान करेगी। इससे अंदरेज्युएट स्टूडेंट्स को ग्लोबल कॉन्फ्रेस, वर्कशॉप्स, इंटरनशिप में हिस्सा लेने का मौका मिलेगा। इस समझौते के शुरुआती दौर में 10 से 15 स्टूडेंट्स को फायदा मिलेगा और भविष्य में इसकी संख्या में इजाफा होगा।
आईआईटी जैम की परीक्षा ऑनलाइन

अमर उजाला ब्यूरो

नोएडा। आईआईटी से एमएससी, एमएससी-पीएचडी और डूअल डिग्री कोर्स में एडमिशन के लिए होने वाले ज्याइंट एडमिशन टेस्ट फॉर एमएससी (जैम) के सभी पेपर इस बार ऑनलाइन (कंप्यूटर बेस्ड टेस्ट) कराए जाएंगे। जैम का फॉर्मेट बदल दिया गया है, सभी पेपर ऑफिसेंट टाइप होंगे। 8 फरवरी को होने वाले जैम-2015 के ऑनलाइन रजिस्ट्रेशन 3 सितंबर से शुरू होंगे, जिसका कार्यक्रम जारी कर दिया गया है।

ये परीक्षा पहले एमसी और दो एमटेक प्रोग्राम समेत एमएससी कोर्सों के लिए होती थी। पिछले साल एमसी और एमटेक के दोनों प्रोग्राम बंद कर दिए गए थे। सन 2015-16 के लिए होने वाली प्रवेश परीक्षा में एमएससी, एमएससी-पीएचडी प्रोग्राम के कुल 51 कोर्सों के लिए सात पेपर कराए जाएंगे। 8 फरवरी को 9 से 12 बजे की शिफ्ट में बायोलॉजिकल साइंस, मैथमेटिक्स, फिजिक्स और 2 से 5 बजे की शिफ्ट में बायोटेक्नोलॉजी, कंटेंस्ट्री, ज्योतिषी और मैथमेटिकल स्टेटिस्टिक्स का पेपर होगा। हर पेपर में एमटिपिल च्यास्ट (चार विकल्प में से एक सही जवाब), मल्टीपिल सेलेक्ट (चार विकल्प में से एक से ज्यादा सही जवाब) और नूर्मार्क्टिक पैटर्न पर ऑफिसेंट सवाल होगी। एक छात्र एमएससी व पीएचडी कोर्स की प्रवेश परीक्षा 8 फरवरी को दो शिफ्ट में होंगे कुल सात पेपर।

परीक्षा का कार्यक्रम

रजिस्ट्रेशन शुरू : 03 सितंबर
रजिस्ट्रेशन खत्म : 30 सितंबर
आवेदन प्रक्रिया खत्म : 09 अक्टूबर
जैम एनजार- 08 फरवरी
रिजल्ट- 19 मार्च

अधिकतम दो पेपर की परीक्षा दे सकता है। लड़कियों के लिए आवेदन फीस एक पेपर के लिए 750 रुपये और दो पेपर के लिए 1050 रुपये होगी। जनवरी-पीएचडी छात्रों के लिए 1500 व 2100 रुपये और कंटेंस्ट्री/एमसी छात्रों के लिए 750 व 1050 रुपये। परीक्षा नोएडा समेत 66 शहरों में आयोजित की जाएगी।
IIT-B’s 1st satellite delayed, but work begins on second

Srinivas Laxman, TNN | Aug 10, 2014, 11.58 PM IST


MUMBAI: Unfazed by the delay in the launch of IIT-B's first satellite, Pratham, students of the institute have begun preliminary work on the second, Advitiya.

Project manager Shantanu Shahane told TOI that initial studies relating to the design phase of Advitiya began a few months ago, and a memorandum of understanding will be signed with Isro once the project is firmed up. Advitiya was a part of Mumbai IIT’s student satellite project.

Shahane said the aim of Advitiya was to develop a 'plug and play' satellite system that is basically a modification of Pratham.

He said they will try and launch it in two years, once the project is finalized, "by adhering to strict deadline schedules and avoiding mistakes done while making Pratham".
Advitiya is the second of Mumbai IIT’s five satellites planned.

He said mistakes made while making Pratham were mostly administrative and relating to manpower. The 10-kg satellite was to launch in December 2010, but the project was dogged by delays, and plans now envisage it to be launched towards the end of 2015.

The integration of the flight model of Pratham was initiated between April 24 and May 12, 2012, at the Isro satellite centre, Bangalore.

"We were very close to launching it but problems cropped up and we missed the launch slot," he said.

Meanwhile, problems cropped up with some instruments. "We will bring it back next week, set right the problems and in April-May 2015 it will be at the satellite centre for rigorous pre-launch checks," he explained, while emphasizing that the launch date will be decided by Isro.

Pratham, with a four-month mission life, will piggyback along with another satellite on Isro's highly-proven workhorse, the four-stage Polar Satellite Launch Vehicle (PSLV).

**ISRO: India working on manned flight mission**


India’s scientists are on course to sending the country’s first manned flight to space, Chairman of the Indian Space Research Organisation (ISRO) K. Radhakrishnan said here on Sunday.

“A number of critical technologies are being developed for a possible human space flight in the future. A full-scale, unmanned crew module is getting ready to be flown onboard the experimental flight of GSLV Mk-III, to understand its ballistic re-entry characteristics,” Dr. Radhakrishnan told graduating students of the Birla Institute of Technology and Science (BITS), Pilani-Hyderabad.

He said an experimental flight with a cryogenic stage, to be launched by the ISRO’s next-generation launch vehicle GSLV Mk-III, would soon take place, giving the organisation the confidence to take up its first developmental flight in 2016-17.

On India’s first inter-planetary probe vehicle, the Mars Orbiter spacecraft, Dr. Radhakrishnan said the mission was on the verge of creating history.

“The Mars Orbiter spacecraft has traversed nearly 88 per cent of its distance along its designated path to the red planet. The next operational milestone is the insertion of the spacecraft into the Martian Orbit on September 24, 2014. If successful, India would be the first Asian country to orbit a spacecraft around planet Mars, and the first country in the world to achieve it in the first attempt,” he said.

Recognising the increasing demand for communication satellites in the country, he said ISRO was open to partnership with foreign industries to acquire the best of technology and also to upgrade their current satellite platforms.
With the country having a constellation of 13 earth observation satellites, Dr. Radhakrishnan said, several new ones are being planned to replace ageing satellites, so as to enhance observation capability.

He also spoke about the yet-to-be launched Astrosat, a multi-wavelength space-borne observatory that would enable simultaneous observation of celestial bodies in ultra-violet, visible and X-ray bands.

Hindustan Times (Mumbai)

2,256 students receive degrees at IIT Bombay

MUMBAI: The 52nd convocation of the Indian Institute of Technology, Bombay (IIT-B) saw 2,256 students receive degrees for completing their academic programme at the reputable institute this year.

Raaz Dwivedi from the electrical engineering branch was awarded the President of India medal, bestowed each year on a student for academic excellence. The prestigious Dr Shankar Dayal Sharma gold medal was conferred on Ashima Mittal of the civil engineering department.

The medals and degrees were given away by the chief guest RA Mashelkar, national research professor, Council for Scientific and Industrial Research and president of Global Research Alliance.

In his address, Mashelkar spoke about the need for affordable excellence in technology. “Our dream should not be about some Indians doing well, but India doing well. Creating low technology products for the poor is easy, but making high technology work for the poor is very difficult. I urge you to take up the challenge,” Mashelkar said.

Presenting the institute’s report for the year 2013-14, Devang Khakhar, director, IITB, said the institute continues to remain a sought-after destination. “Among the 16 IITs in the country, 44 out of the top 50 rankers and 58 of the top 100 rankers in JEE 2014 have joined IIT Bombay,” he said.

Khakhar also announced that the Institute has recently started a Centre for Excellence in Steel Technology, besides offering a joint executive MBA programme with Washington University, St. Louis, USA.
IIT-K’s research convention to be an annual affair

KANPUR: The two-day students’ research convention-2014 at the Indian Institute of Technology (IIT-K) concluded here on Sunday. Over 100 students of the institute participated in the convention and presented their respective research papers. Addressing the participants, IIT-K director Indranil Manna said more such events were required to promote research activities in different disciplines. He said the convention would now be made an annual programme and it would also be held at the national level for better and more fruitful results in the research field.
Have a degree from Yale, claims Smriti

New Delhi: HRD minister Smriti Irani, whose lack of a graduation degree was cited by Congress as a disqualification for the job, has claimed she has a degree from Yale though she was being painted as illiterate.

Irani, who made the remarks at a media summit on Saturday, did not explain what the Yale degree was but she was part of a group of Indian MPs which underwent a crash course at the Yale University in US, which focused on the elections in India, the prospects for Afghanistan and Pakistan after the US military withdrawal in 2014 and the implications of political and economic transitions in China.

Eleven Indian MPs visited the Yale University campus in New Haven, Connecticut, on June 19 last year to complete the six-day leadership course.

When a questioner wondered what the mystery about her educational degrees was, the 38-year-old Irani said, “In that kitty of mine where people call me anpadh (illiterate) I do have a degree from Yale University as well which I can bring out and show how Yale celebrated my leadership capacities.” PTI
Row over Smriti’s alleged ‘Yale’ remark

SMRITI HAD ATTENDED A SIX-DAY LEADERSHIP PROGRAMME AT THE YALE UNIVERSITY LAST YEAR AND GOT A CERTIFICATE FOR IT

NEW DELHI: The controversy over HRD minister Smriti Irani’s education qualification has taken a new twist by her allegedly saying she has a degree from Yale University.

Smriti had attended a six-day leadership programme along with 11 other Indian MPs last year and got a certificate for it.

Irani had allegedly made the remark when one of the members of the audience asked her about her education qualification at the India Today Woman Summit 2014.

At the event on Saturday Irani was allegedly quoted as saying: “In that kitty of mine where people call me ‘anpad’ (illiterate) I do have a degree from Yale University as well which I can bring out and show how Yale celebrated by leadership capacities.”

“Extraneous circumstances are being created so that I deviate my concentration from what my goals are. I should be judged from what I deliver as a minister,” she added.

Soon after the Lok Sabha results were announced on May 16, Irani was at the centre of a controversy over her educational qualifications.

It emerged that she had made contradictory declarations when she contested the parliamentary elections in 2004 and 2014.

The 11 MPs who participated in the 2013 Yale programme were drawn from five different national and regional political parties in India, including Irani.
MOULDING YOUNG MINDS

GRAB IT With the spotlight on research, aspiring lecturers need to push the boundaries

Anchal Bedi

Dr. Mallika Pathak, an alumna of Miranda House, was bitten by the teaching bug during her college days.

“The way my teachers interacted with us, helped us overcome obstacles and motivated us left a lasting impression on our minds and made us wonder if we could ever be as responsible as them. Needless to say, I was sufficiently inspired to make a career in teaching,” she shares.

Pathak was awarded CSIR-UGC Junior Research Fellowship (JRF) and eligibility for lectureship—National Eligibility Test (NET)—in 2002. “I have served as an assistant professor in Miranda House for the past nine years and there has never been a dull moment. This profession not just offers me an opportunity to mould opinions and shape young lives. I also get to constantly learn and grow,” she adds.

Pathak, who has a specialisation in physical chemistry, hopes to be an agent of change through her work and spends hours preparing for her classes. “We have to officially be in the college for 25 hours per week. But most of us end up spending almost 40 hours which includes preparing for lectures, presentations, giving guidance, checking papers, organising academic events and attending various meetings,” she says.

While Pathak enjoys every aspect of her job, she acknowledges the unique set of challenges that it brings. “I think being a lecturer on ad hoc basis was challenging for me considering the amount of uncertainty it involved. Also, since I started my job while I was still doing my PhD, there was extra pressure. I wanted to give my best to both and somehow it always felt inadequate,” she shares.

Talking about on-the-job challenges, Pathak says, “Because we have a semester system, there is always this pressure to finish the syllabus in the shortest possible time (without compromising on the quality of teaching). To do this effectively, we have to bring all students on the same level. Since no two students are alike, you should have the ability to come down to the level of the weakest and take all students along, even if it requires you to give one or two extra lectures.”

With the spotlight on research, teachers are expected to push the boundaries of knowledge. “These days all the teachers are supposed to do research work. Hence, holidays are also not entirely free. The role of teachers has changed over time. We are no longer mere knowledge givers, instead, we have to generate knowledge,” says Pathak. “It isn’t about just reading a book or two in class. Your teaching should reflect how much you’ve thought about the topic at hand. While having in-depth knowledge of the old concepts is important, keeping abreast with the new technology is also essential,” she adds.

ROLE CALL

University teachers should have the ability to take all students along.

I take home ₹40,000 per month

Because...

I get to interact with the young and stay young.

Expert gyan

Subject expertise is important. It is not about just reading a book or two and reproducing it in class. Your teaching should reflect how much you have thought about the topic at hand.

ALL YOU NEED TO KNOW ABOUT A CAREER AS A UNIVERSITY TEACHER

Lowdown

University teachers not only work in the tertiary-level and research institutions, but also contribute their expertise to many national and international missions. In addition to universities/colleges, private institutes, private education—content companies/web portals, and think tanks, some can be consultants to big companies and international bodies.

Institutes

- University of Pune; www.unipune.ernet.in
- University of Calcutta; www.caluniv.ac.in
- University of Delhi; www.du.ac.in
- Jawaharlal Nehru University, New Delhi; www.jnu.ac.in

Eligibility

Maintain a consistently good academic record up to your masters/MPhil/PhD. The UGC conducts the National Eligibility Test for lectureship and for award of Junior Research Fellowship in 77 subjects. The Council of Scientific and Industrial Research holds the NET for life, physical, chemical, mathematical and earth atmospheric ocean & planetary sciences—jointly with the UGC.

Skills and traits

- Intellectual vitality
- High levels of self-motivation, especially to focus on research
- A genuine interest in your discipline as well as desire to gain additional knowledge
- Analytical skills
- Strong verbal and written communication skills
Lobbying for location of IIM gains momentum

TNN | Aug 10, 2014, 09.01 AM IST


BHUBANESWAR: Lobbying for location of the proposed Indian Institute of Management (IIM) in the state has gained momentum with elected representatives pressing for its establishment in their respective localities.

While Balangir MP Kalikesh Singhdeo recently shot off a letter to Prime Minister Narendra Modi to consider his native Balangir town for the elite B-school, his party colleague in BJD and Sambalpur MP Nagendra Pradhan wrote to the state higher education department seeking to establish it in Sambalpur. Prominent citizens in Berhampur have formed a ?Forum for IIM in Berhampur'.

"The poverty of belt of KBK (Kalahandi, Balagir, Koraput) region doesn't have a good quality institution. An IIM will in someway make up for the deprivation. Balangir is well-connected with Chhattisgarh and Telengana and can be a strategically good location. So, apart from being a social inequity bridge, the institute will also have large catchment area of industries here," Singhdeo told TOI on Saturday.

Singhdeo's Sambalpur counterpart Nagendra Pradhan has written a letter to the higher education department, requesting it to recommend Sambalpur city for the central institute.

The higher education department on Friday forwarded Pradhan's letter to the technical education department for further action.

Justifying his demand, Pradhan said that after the Cuttack-Bhubaneswar urban complex, Sambalpur is the most promising place in the state.

"With an airport coming up at Jharsuguda less than 50 km away and good rail connectivity, it will be a good location for a central institute. It would also help remove regional disparity. Bhubaneswar already has several institutions such as Indian Institute of Technology, AIIMS and NISER," he told TOI.

But regional aspiration is not confined to Sambalpur or Balangir. Prominent citizens in Berhampur have recently formed a 'Forum for IIM in Berhampur' pressing for its location in the southern Odisha town.

Higher education minister Pradeep Panigrahy had earlier said the issue about the IIM site should not be politicized.

"Political considerations should be kept aside while deciding on the location of the IIM. Future growth of the institute should be the guiding factor while deciding any site," he had told TOI days after the Union budget announced an IIM for the state.
IIT Bombay sees decrease in number of patents, research grants in 2014

Sunday, 10 August 2014 - 7:20am IST | Agency: DNA


Research grants at IIT Bombay have gone down in 2013-14 for the first time in a decade, which witnessed a compound annual growth rate of over 24% till previous financial year.

The premier technical education institute received a total of Rs213.6 crore in 2013-14 for research and development (R&D) activities. A year ago, the fund was nearly Rs293.5 crore, says the institute director's report, which was released in the 52nd convocation ceremony held on Saturday.

In 2004-05, the research funds were just Rs37 crore, growing almost eight-fold by 2012-13 with several government departments and corporates giving money for several projects.

The report also states that the institute bagged 225 sponsored projects in the same year. In 2012-13, the number of projects was 240. However, the number of consultancy services provided by the faculty has gone up from 517 to 523 in the same period, underlining the reputation of the teachers and their contribution in the public sector and industries.

The number of patents filed by the institute during 2013-14 was 61; 70 patents were filed in the previous year. Austerity drive at Centre, faculty crunch and rising competition among IITs are supposed to be behind the fall. "You can't expect funds coming to the institute when you have a deficit of 30% teachers," said a professor, on condition of anonymity.

Another professor said, "The Centre has been cautious in disbursing funds now. Besides, there is a huge competition among IITs to get the grants from public and private sectors. We may have to scale up our efforts."

The director's report sought to justify the decline differently. "The drop in 2013-14 funding could be partly due to lower receipts on account of deferred release of funds from government sponsorships and due to higher receipts in 2012-13 on account of NME-ICT project release," it says.

However, the institute hopes for better times ahead as it has now managed to fill almost all vacant posts for teachers over the past year. "We have 572 faculty members on roll, the largest by far among all IITs, with many of them globally acknowledged for their research contribution," mentions the director's report.

R&D revenue
Rs102.2 crore in 2009-10
Rs179.8 crore in 2010-11
Rs189.9 crore in 2011-12
Rs293.5 crore in 2012-13
Rs213.6 crore in 2013-14

Record 227 PhDs at IIT-B this year
Over 2,256 students were awarded their degrees at the 52nd convocation programme, including 227 PhD students. This is the highest number of doctoral students being awarded degrees at a convocation in the history of IIT-B. Of these, 27 students were selected for the 'Award of Excellence in PhD Thesis'. In addition, eight
joint PhDs, in association with Monash University, were also conferred by the Chancellor of Monash University, Prof. Alan Finkel, present on the occasion

**Eight gold medallists**

This year, eight students were presented gold medals for their exemplary performance at IIT-B. The 'President of India Medal' was bestowed on Raaz Dwivedi (electrical engineering), the 'Institute Gold Medal' was awarded to Rahul Sharma, (physics), and the 'Dr Shankar Dayal Sharma Gold Medal' was conferred on Ashima Mittal (civil engineering)
B-schools need a new vision

Aaditi Isaac
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Despite having the highest number of educational institutions offering a business degree in the world, even the top Indian B-schools lag behind their Asian peers in China and Singapore in terms of research, accreditation, rankings and the number of foreign students.

“The gross enrolment ratio (GER) for higher education is 19%, which is low as compared to the US, Brazil, etc. The government wants to increase the GER to 30% by 2020 but there is an employability issue, even in management courses. There is a disconnect between industry demands and academia. The traditional MBA no longer enjoys the status it had. The newest degrees that are becoming popular are corporate partnership degrees because they cater to the need of a company. The downside of this trend is that one does not become a specialist in a general sense,” said Madhukar Angur, chancellor of a private university in Bangalore, speaking at a management education conclave organised by MBAuniverse.com in Delhi recently.

To address the gap, a shift in pedagogy is needed, said various speakers at the conference on envisioning the future of Indian MBA education where an Indian management education vision 2025 document was released. The gap could be filled by moving from subject matter expertise to process-driven expertise, by allowing students to work on live projects, by teaching students about sustainability and ethics, they said.

The role of technology, too, needs to be examined in detail. “There are 10 million people who enrol in massive open online courses (MOOCs), which barely 4-5% complete. We are looking at different models in our university. We would like to try and incorporate the Wharton Business School model. In the first year of the MBA programme, students are not required to study in class. After they complete the first year, a rigorous selection takes place and those who clear the selection process attend regular classes on campus. Having a blended model allows students to learn beyond the four walls,” said Angur, adding undergraduate programmes, too, need to be strengthened.

Another speaker highlighted the challenges for institutes. “The MBA market is fragmented and the cost of an MBA degree is higher with lower funding and there is a lack of qualified teachers. Students are looking to study a one-year MA programme. They prefer a Master of accounting/finance rather than an MBA. B-schools need to increase research work, give sustainability training and face stiff competition from corporations while being relevant,” said Ricardo A Lim, dean, Asian Institute of Management, Manila and chairman, Philippine Academy of Management.
JAPAN BOOSTS ACADEMIC TIES

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Japan’s minister of education, culture, sports, science and technology visited IIT-Hyderabad recently to review the progress of its new campus. The institute’s permanent campus is being developed at Kandi village, Medak district, with the east Asian country’s assistance.

The Japan International Co-operation Agency (JICA) is extending integrated support to IIT-H through an official development assistance (ODA) loan of 23,035 million Japanese yen for campus development, joint research, and academic exchanges to develop a new methodology for technical innovation and in response to industry needs.

During the visit, Hakubun Shimomura said cultural differences hampered international education and business between the countries in the past, but both would expand rapidly in the future.

The minister interacted with IIT-H students, calling them ‘very bright.’ He appreciated the way the IITs took the best minds of the country and trained them. “India is the biggest recipient of JICA funds, and the assistance to IIT, Hyderabad, is an example of the kind of good results this partnership could bring,” he said.

On being asked about immigration opportunities, he said the Japanese government understood the need to ease immigration norms for students who chose to study in Japan.

During the academic fair, faculty members from Japanese universities talked to the students about the scope in applied research and study at the universities, and the academia-industry linkages at the institutions where such research is applied for industrial development.

Speaking on the occasion, a participant from a Japanese university said, “Universities have facilitated industrial growth in Japan through science and engineering. The close working relationship between industrial clusters and academic institutions has fuelled cutting-edge research, which has been the source of innovation and development of technologies that have not only made everyday living better but have also led to internationally acclaimed manufacturing processes and products.”

Universities have facilitated industrial growth in Japan through science and engineering. The close relationship between industrial clusters and institutions has fuelled research.
A Harvard degree from home

Diplomas from reputed universities, tuition classes for school students, coaching for entrance exams, the online world has it all.

ARVIND JAYARAM
Quality education has never come cheap. But thankfully, learning is no longer confined to four walls and a roof. As a result, an increasing number of top-notch colleges and universities from around the world are offering online courses, for the academically inclined, in many cases, free.

Expand your mind
For example, the IITs and Indian Institute of Science (IISC) offer a National Programme on Technology Enhanced Learning (NPTEL) that provide online courses and certification in programming, data structures and algorithms. The student is assumed to have no prior experience with programming, but is expected to be at the second-year undergraduate college student in science and engineering. The course will run over 10 weeks with about two-three hours of lecture every week. At the end of each week, the student is expected to write some programmes, classified as easy, moderate or difficult, and submit them for grading. In addition, students have to answer a set of objective assessment questions at the end of each week. While the course is free, if you want certification for your efforts, you will have to pay a fee. Since the programme is sponsored by the Ministry of Human Resources Development, the programme prospectus stresses that this fee is "nominal" and you will have to appear for a proctored examination in person.

But maybe computer science is not your thing. So how about solid state chemistry or statistics? Universities across the globe, such as Harvard, Massachusetts Institute of Technology, IIT Bombay and Kyoto University have joined hands to offer over 200 courses online at edX to enthusiastic students, completely free of cost.

The course is conducted at your convenience, with lectures and assignments available 24 hours a day, which means you can watch videos and complete work at leisure. All reading and other course materials will be available on your computer.

Simply log into your course and work through the course material. While assignments and exams often have due dates, these are designed to give you enough lead time to schedule your work easily. The courses have a stipulated completion timeframe and may have prerequisites to join.

Interaction with faculty and students is limited to discussion forums or social networking spaces. Once you complete a course, edX offers three certificate types — honour code certificates of achievement, verified certificates of achievement, and XSeries certificates of achievement.

Honour code certificates state that you have completed a course, but don’t verify your identity; verified certificates do that.

Course certificates
This could be advantageous if you want to show off your credentials to a prospective employer. The cost of a verified certificate varies from course to course.

XSeries certificates are earned by successfully completing a series of courses that make up an XSeries, such as the aerospace engineering XSeries offered by MIT or the astrophysics XSeries from Australian National University. An XSeries course entails a fee ranging from $75 to $375.

Then there is Coursera, a website which has 706 free courses on offer from 80 top universities and colleges that it partners. Coursera even offers "specialisations" or focus programmes created by universities that are tailored to help you master applied skills.

Degree desire
If you’re more desirous of a degree than a diploma, an increasing number of global universities now give you the option to earn one online.

This could save you money, too, in comparison to living in a foreign country while you study. But costs can still be high. For example, let's say you take up a six-credit graduate study programme at New Jersey Institute of Technology. That would cost you $1,533 per semester, and that’s besides various academic and infrastructure fees. Living expenses would add substantially to your bills. If you took up the course online, it would cost you $449 for that semester and at the end of the course, you would also be confered the same degree.

There is also the possibility of taking up a few semesters online and completing the remainder at the university if you crave that campus lifestyle.

Online tuition
But before college comes up on the horizon, there are school exams and other entrance exams to clear. E-learning is an option here as well. Websites like euronews.org, onlineuniversity.in and zib.com offer online tuition to students in various classes — from nursery to Class XII — as well as candidates vying for engineering or medical seats. They even offer music and art tuitions.

The fees vary from site to site, but don’t base your decision on who’s offering the lowest or highest fees. Ask for a free trial of the services they offer. This should help you decide whether the quality is up to your standards and suitable.

But if your passion is to join civil services, look at resources such as iasunivsite.com, which offer a comprehensive 500-hour coaching package for Rs 70,000 and a 400-hour general package for Rs 50,000.

Though similar to the costs charged by reputed institutes such as Shankar IAS Academy, time and cost of travelling to and from the coaching centre is done away with.
रिसर्च के लिए राइट टू रिसर्च की स्थापना

हाल ही वैज्ञानिकों और शिक्षकों के एक समूह ने विदेश से शिक्षा और प्रशिक्षण प्राप्त करके भारत लौटने वाले रिसर्चर्ज को प्रोत्साहन देने और देश में उपयुक्त जॉब तलाशने में मदद करने के लिए राइट टू रिसर्च (आर 2 आर) फाउंडेशन की शुरुआत की है। फाउंडेशन के प्रमुख का कहना है कि विदेश से एमएस, पीएचडी और पोस्ट डॉक्टरेट फैलोशिप लेकर बड़ी संख्या में देश लौट रहे भारतीय रिसर्चर्ज को जॉब के बेहतर अवसर प्रदान करने के लिए आर 2 आर फाउंडेशन की स्थापना की गई है जिसका संचालन पुणे के हिंजेवाड़ी बायोटेक पार्क से किया जा रहा है। फाउंडेशन ने ड्राई लैब सुविधा के साथ शुरुआत की है जिसमें करीब 25 रिसर्चर्ज को नियुक्त किया गया है।
Smart sensors to sniff out cancer-causing pollutants

Eco-friendly, cost effective ‘smart polymer’ technology is the brainchild of R J Krupadam

Pollution control and remediation is all set to get smart in India, thanks to ‘smart polymer’ or new-age sensors that can sniff out cancer-causing substances in extremely minute traces and also help in removing them from the air or water sources.

The eco-friendly, cost-effective ‘smart polymer’ technology is the brainchild of scientist R J Krupadam, who recently received the National Award for Technology Innovation in the field of Polymer Science and Technology from the ministry of chemicals and fertilizers.

According to Krupadam, the new method can distinguish between similar molecules and get an exact hit on the carcinogen that one wants to monitor - and that too in a swift manner as compared to conventional chromatographic methods.

These lab-designed substances were successfully applied to detect a group of compounds called polycyclic aromatic hydrocarbons (PAHs).

Classified as carcinogenic and mutagenic, PAHs are found in industrial emissions, automobile exhaust and smoke from burning wood, tobacco and charcoal.

Several PAHs are known to cause lung and skin cancer on long-term exposure.

PAHs are released into the ambient air and water bodies due to fossil fuel combustion and industrial emissions, in particular hydrocarbon processing plants and oil refineries.

‘The method proposed to detect PAHs is very sensitive and doesn’t need much of a sample of the polluted source,’ Krupadam, a senior scientist at Nagpur’s National Environmental Engineering Research Institute (NEERI), said in an email interaction.

These super-sensory polymers also allow detection of other chemicals belonging to the same group of carcinogens with greater accuracy and sensitivity.

To give you an idea, standard processes measure contaminants in parts per million (ppm) or parts per billion (ppb). One ppb is equivalent to one drop of impurity (pollutant) in 500 barrels of water.

Now, these smart polymers have a clear edge. They can detect traces in parts per trillion which translates to one drop of impurity in 500,000 such barrels.

Additionally, these can take up and hold in (absorb) the carcinogens, thereby acting as clean-up agents, for example, in oil slicks and water purification. ‘These polymers are reusable... can be used more than 20 times and also they are environmentally benign,’ Krupadam said.

Currently, these are being produced at laboratory scale and pilot scale quantities. Krupadam said the next step is to scale them up to the kilogram level.

‘Laboratory and pilot scale preparation of these sensory materials and absorbents is successful and we are looking for industry partnership for commercialisation,’ he said.
Welcome ban

The University Grants Commission (UGC) has done well to order a comprehensive ban on dissection of all animals at under-graduate and post-graduate levels in colleges across the country. The ban takes forward restrictions on dissection that the UGC imposed in 2011. The 2011 order was aimed at a phasing out dissection. To that end, it put in place a few first steps restricting dissection of animals. Thus, students at the under-graduate level were not permitted to dissect but could watch a teacher doing so. At the post-graduate level, students could dissect animals that were not unprotected species. Colleges were encouraged to opt for other methods to impart understanding of animal anatomy and physiology. However, over the past three years, colleges have done little to phase out dissection, triggering a renewed attempt by animal activists and a section of educators to push the UGC to end dissection of animals in all forms. The 2014 order banning dissection is the outcome of this effort.

Dissection of animals is repugnant and unethical. It amounts to torture of living beings as the animal is often alive when it is dissected. Its use in teaching, training and testing legitimises using extreme violence against animals.

It even discourages the developing of compassion and kindness among students to other living creatures as dissection desensitises us to the suffering of others. Besides, dissection of animals takes a toll on biodiversity and ecology. There is a worrying decline in some frog species, for instance. Some will justify the cruelty of dissection and the dwindling numbers of some species as necessary costs that must be borne for the sake of knowledge and understanding of animal anatomy. They will argue that dissection gives students a better ‘touch and feel’ of the animal’s body parts. Such arguments may have had some merit decades ago. They do not, today, where modern technology provides equally good if not better dissection alternatives. Anatomical models, audio-visual aids, interactive and three-dimensional computer simulations are among several options available today. Computerised dissection allows students to re-examine, pause, reverse, repeat and zoom in or out on specific organs repeatedly. These dissection alternatives are cost-effective and do not damage biodiversity.

Biology is the science of life. How can we teach it through the suffering and death of other beings? Life sciences should be about respecting all life forms. The UGC ban on dissection of animals will take the study of life sciences in India closer in that direction.

English Vinglish

It's time we recognised the obvious — English is an essential skill for administrators of a globalised economy like India.

After its thumping electoral victory, the Bharatiya Janata Party interpreted the massive mandate as one for good governance and strong decision-making, implying it will deliver both. By caving in to pressure from predominantly Hindi belt political parties and excluding the English language skills component of the Civil Services Aptitude Test (CSAT) from being graded, it has failed on both counts. Already emboldened by their win, agitators are pressing for the axing of the quantitative skills section as well, on the ground that this “discriminates” against humanities students! Worse, by accepting the demand for an all-party meet on the issue, it has shifted decisions about how candidates for civil services should be chosen from the ambit of educators and administrators into the realm of politics and politicians. This is singularly unfortunate. Our politicians have many admirable qualities, but the ability to look beyond immediate political gains is not one of them.

Language, particularly English, the language of our erstwhile colonial masters, is an emotive issue in India. Language also reshaped the contours of post-independence India, with States being created on linguistic lines. Language — particularly the alleged imposition of Hindi on non-Hindi-speaking States — saw a bitter North-South divide in the 1960s. It is therefore not surprising that the debate over whether or not aspirants to the civil services should be tested on basic English skills — which is what the CSAT attempted to do, when it was introduced in 2011 — has been clouded by issues of class, equality, inclusion, social mobility and, above all, power. Psephologist and Aam Aadmi Party ideologue Yogendra Yadav even used the term “linguistic apartheid” to describe the divide between English-speaking havens and non-English-speaking havens.

There is no dispute that the line that divides classes in India is English. But in the ideological heat of the debate, there are some simple, if unpleasant, truths that are overlooked. Whether we like it or not, English is the only genuine link language in our polyglot country. Moreover, it has entrenched itself as the language of higher administration, the judiciary, the corporate sector, and professions ranging from medicine to accountancy. We often either ignore or underplay the advantage it gives our human resources pool over competitors from other regions of the non-English speaking world. Better numeracy and English skills of our workforce enabled our IT sector gain an advantage in the global marketplace. The same skills are needed by the administrators of an aspiring global economic superpower as it engages with the world. Given the central role and overwhelming presence of government in our lives and the many developmental challenges to overcome, the bureaucracy is crucial to driving inclusive development. Simply dropping a key skill requirement in the name of inclusion is not the solution.