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राज्यसभा में उठा आईआईटी जी परीक्षा में बदलाव का मुद्दा

सरकार से प्रभावी कदम उठाने की मांग

एजेंसी. नई दिल्ली

राज्यसभा में राकांपा के एक सदस्य ने आईआईटी-जी परीक्षा में बदलाव का मुद्दा उठाया और कहा कि परीक्षा पद्धति में परिवर्तन के पहले विभिन्न संबंधित पक्षों के सुझावों पर

■ जवाहर नवोदय स्कूल की संख्या में वृद्धि की मांग

गौर किया जाना चाहिए। शून्यकाल में राकांपा के तारिक अनवर ने आईआईटी में दाखिला के लिए आयोजित संयुक्त प्रवेश परीक्षा (जी) में बदलाव किए जाने का मुद्दा उठाया और कहा कि पद्धति में सुधार होना चाहिए लेकिन ऐसा करने से पहले सरकार को इसके गुण-दोषों पर विचार कर लेना चाहिए। उन्होंने कहा कि कई

आईआईटी संस्थानों की ओर से सुझाव आए हैं और उन पर विचार किया जाना चाहिए। अनवर ने कहा कि सरकार को प्रवेश परीक्षा में बदलाव करने के पहले विभिन्न संबंधित पक्षों से उचित विचार- विमर्श करना चाहिए और उनके सुझावों पर गौर करना चाहिए। तारिक अनवर ने विशेष उल्लेख के जरिए मुस्लिम बहुल क्षेत्रों में जवाहर नवोदय स्कूल की संख्या में वृद्धि किए जाने की मांग की। वहीं, द्रमुक की कनिमोई ने बच्चों के यौन शोषण पर रोक के लिए सरकार से प्रभावी कदम उठाने की मांग की।

माकपा की झरना दास वैद्य, अन्नाद्रमुक के एन बालगंगा और ए इलावरासन, कांग्रेस के पीजे कूरियन और हुसैन दलवई, निर्दलीय परिमल नथवानी और भाजपा की हेमामालिनी ने भी विशेष उल्लेख के जरिए लोक महत्व के विभिन्न मुद्दे अपनाए हैं।

IIT students build solar heater for Thane building

MUMBAI: IIT-B students Sumit Chhazed and Nikhil Jain had no doubt that they wanted to work on renewable energy when they decided to start an energy solutions firm.

After working for more than two years on their start-up, Enelek (Energy + electricity) Power Pvt. Ltd., the duo came up with an innovation that helps use solar energy to heat water for an entire residential building.

This year, their first commercial solar thermal water heating installation will become functional in Yashwant building, which is under construction in Charai, Thane (west), and expected to be completed in April.

Residents will save up to 250 units of energy a month with the help of the solar thermal water heating tank that costs Rs 3 lakh.

The students believe the building will recover its installation cost in two years.

"The technology requires the construction of a water tank on the terrace that has a capacity of 2,000 litre and is 4 feet x 1 feet in dimension. The tank is insulated with polyurethane foam that traps the heat inside and can maintain the water's high temperature till morning," said Chhazed, a fourth-year student from the department of chemical engineering.

The tank will draw water from the building's main water storage tank. Since it was installed during the construction of the building, the pipelines have been laid in such a way as to provide hot water directly to all the bathrooms.

Through Sunet Electricals, Chhazed and Jain got in touch with Archetype Consultants Pvt. Ltd. who introduced them to the building's developer, Thakkar and Narkhede Associates.

"As they were newcomers, I asked them to install their technology at my villa before referring them to the developers, and it worked perfectly," said Jyoti Jadhav, director, Archetype Consultants.
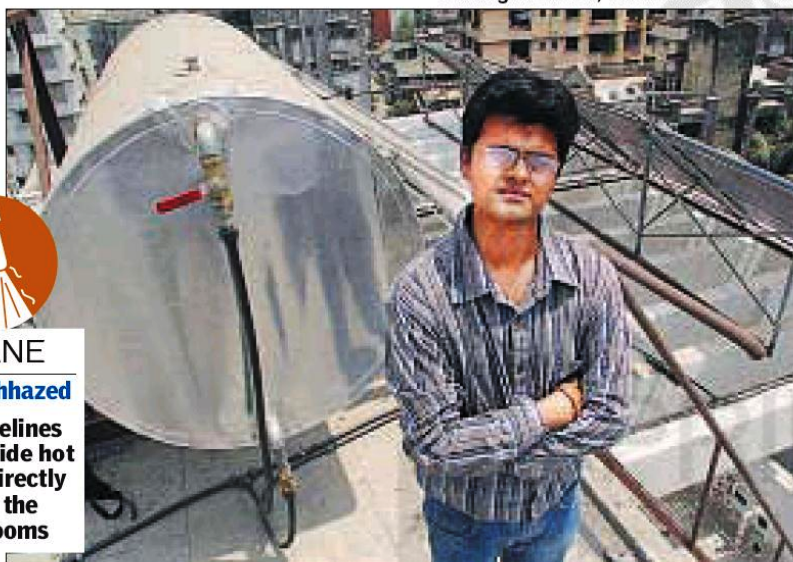
– NIKHIL M GHANEKAR

THANE
Sumit Chhazed

The pipelines will provide hot water directly to all the bathrooms

building in Charai, Thane. PRAFUL GANGURDE

Windmills to cut down you

MUMBAI: Entrepreneur Vijay Wani likes to practise what he preaches. The sole proprietor of Gogreen Ventures, a green energy solutions company, has fitted hybrid energy installations at his bungalow in Louis Wadi, Thane (west).

The installations comprise a two-kilowatt windmill and three-kilowatt solar panel. These not only power LED lights, fans, a television and computer in his villa, but they also run the refrigerator and air-conditioner, appliances that usually consume the maximum power in a household.

The cost of the windmill equipment, solar panels and their installation came up to around Rs 12 lakh. Wani expects to save Rs 8,000 to Rs 10,000 on his monthly energy bills.

His firm, which undertakes commercial projects to install green energy solutions in residential buildings, recently installed a 1.8-kilowatt windmill atop Sea Line building in Khar (west).

It has also installed solar water heaters at other locations in the city.

A windmill with a capacity of one kilowatt can produce 5 to 7 units of energy every day, which is sufficient to power the staircase lights in a residential building, and the lights and fans

THANE
Vijay Wani

Hybrid energy installations will run appliances that consume maximum power in a household

■ Vijay Wani has installed hybrid energ Wadi, Thane.

in the Khar building's office.

Wani thinks the investment of Rs 8 lakh made on a 1.8-kilowatt windm can be recovered in six years throug money saved on energy bills.

"It's time we wake up to the prol lems of using conventional energy. big residential societies and familie start using renewable energy, it w

Going green, IIT-Bombay style

FOR BETTER FUTURE 550-acre campus installs censors, recycles waste and does much more

EARTH HOUR
LET'S SWITCH OFF, INDIA!
March 31, 2012, 8:30 - 9:30 pm
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Snehal Rebello
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MUMBAI: Till last year, Aditya Dogra never switched off lights in the hostel washroom simply because he didn't know where they were located. He still doesn't except that Dogra, a student at the IIT—Bombay (IITB), now knows the sensors will automatically turn off the lights when not in use.

"If there is no one in the washroom for 10 to 15 minutes, the lights go off," said Dogra, a final year civil engineering student.

In an effort to conserve energy, the institute had last year, installed sensors in bathrooms and toilet blocks in all 14 hostels and academic departments.
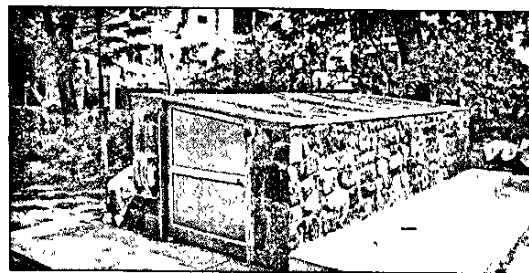
With an average consumption of 200 watts per toilet block, the results are telling — an approximate 70% energy saved per day.

It was in 2009 that IITB decided to take the sustainability route. And thus was born 'Green Campus Initiative' making IITB one of the first educational institutes to create an environmentally sustainable campus.

What followed was a three-month study by professor Shyam Asolekar that calculated the usage of various resources (See Box) before formulating an 'eco policy'. "As we go about with our daily chores, we must live with the smallest environmental and ecological footprint. This can be achieved by consuming the least resources and creating least amount of pollution," said Asolekar.

Taking a cue from a 2007 electricity bill of ₹10.2 crore with 40% consumption coming from ACs, the institute has installed six solar water heaters, informed professor MB Patil,

IDEAS FOR A GREEN CAMPUS

■ **The IIT-B has made a start towards 'zero garbage' through a vermiculture pit, where the kitchen waste is recycled.** HT

■ Recovery of water with either new or upgraded sewage treatment plant (STP)
■ Using rooftop or area rainwater harvesting to collect rainwater
■ Dual water supply: potable

water for drinking and bathing and treated water (recovered from STP for toilets)
■ Parks and gardens maintained using treated water
■ Solid waste collection, pro-

cessing and application of manure to enhance soil fertility.
■ Gradual migration from tube lights to CFL in the campus and adoption of solar street lamps

PAVING WAY FOR GREENER TOMORROW

At a time when the world is reeling under global warming, Some educational institutes are showing the way for a greener tomorrow

■ **The IIT-Delhi Campus.**   HT FILE

IIT Delhi

■ The main academic building stays cool even during summers due to the mud structure and natural lighting .
■ The eight solar houses in the campus built in the late 80's forks out the eco-friendly nature of the campus.
■ The campus has a water management system that has minimised the wastage of this natural resource.

TERI: To reduce water demand, the campus has low flow fixtures that results in 25% savings in water use.
■ The wind tunnelling system is a beautiful reflection of the university's energy consciousness.

IIT Kanpur

■ No tree on campus, or those within the boundaries of the residences can be chopped without formal permission from the green committee.
■ The campus recycles 60% of its used water.
■ This water is then used for watering the lawns and institute administered gardens
■ The green building in the campus has five-star TERI rating

convener of the initiative.

Besides solar heaters, plans are also afoot to make use of heat generated from ACs to heat water, which can also be used for cooking.

BEYOND ENERGY CONSERVATION
The 'eco policy' has gone beyond achieving energy efficiency. A

year back, more than 100 saplings of native species like moha and neem were planted in the campus.

, While there's been a start towards 'zero garbage' through a vermiculture pit, dry waste is also recycled.

The dry waste is collected every two days and given to Stree Mukti Sanghatana, an

NGO, for recycling purposes.

As for the solid waste, IITB is in talks with the Bhabha Atomic Research Energy that has developed a technology to convert kitchen waste into biogas. But it's not without the efforts of students who ride bicycles or opt for Tum-Tum, the CNG bus, that the institute can achieve a sustainable environment.

LEARNING ABOUT MOTHER NATURE IN CLASSROOMS

Vanita Shrivastava
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NEW DELHI: How about studying environmental economics? Or doing a BTech in environmental engineering? The spectrum of courses that have direct or indirect link with environment has increased over the years. More students are opting for such courses.

An environment ministry study in 2008 showed the number of courses themselves had increased from 52 in 1998 to 90 in 2008.

Here's a lowdown on some of institutes that have pioneered in environmental courses.

IIT DELHI
The institute has a mandatory course on environment engineering for all BTech students. The course include, pollution prevention and control, air pollution and control, advance wastewater treatment process, environmental impact assessment etc.

IIT KANPUR
IIT-K offers a course in environmental engineering. The program, which started in the 60's, was re-designed in 1997.

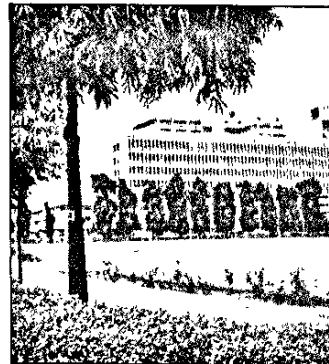**MADRAS SCHOOL OF ECONOMICS**
The institute offers two courses on environmental economics — resource and environmental economics and environmental policy. These have been offered as optional subjects to students under MSc.

INDIAN SCHOOL OF MINES
Located in Dhanbad, it is the only government institute, which offers a BTech degree in environmental engineering. The four-year course, started in 2005.

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Ivy League to hold debate in Hindi

Indo-Asian News Service

✉ letters@hindustantimes.com

WASHINGTON: Students from America's top universities like Yale, Harvard, Princeton and Columbia are all set for a debate on the theme of 'Higher education is not worth it' — in Hindi!

The fourth edition of the Yale Hindi Debate that has grown into a national event since its start in 2008 as an internal Yale competition will have two rounds; a preliminary on March 30 and the final on the Yale campus on April 6.

A platform for students to debate issues of social, economic, and political relevance, the debate also witnesses participation of stu-

JAYANTO

dents and faculty from Pennsylvania, New York, Cornell, Wellesley, California, Los Angeles (UCLA), Welseyan, and Texas universitues.

The annual Yale Hindi Debate was conceptualised and founded by Nikhil Sud, a 2006 graduate of St. Columba's School in New Delhi and a 2010 graduate

of Yale College who is now studying at the Yale Law School, regarded as the top law school in the US.

He was encouraged and guided by Seema Khurana, senior lector for Hindi and South Asian Studies at Yale University.

The Yale Hindi Debate has truly emerged as one of the most significant efforts of the Yale India Initiative and the growth of South Asian studies in the US.

This is reflected in the remarkable diversity of the participants. Debaters are not only native Hindi speakers. There are also a striking number of non-native heritage speakers, and non-native non-heritage speakers.

This round to Sibal, but Nitish not done yet

Leaders spar over Central university site in Bihar, HRD Ministry enforces its will and CM says state won't cooperate

PRASHANT RAVI

At IIT-Patna, April 2011

SANTOSH SINGH
PATNA, MARCH 29

THE DEBATE began at a function at IIT-Patna last April. Chief Minister Nitish Kumar wanted the Central University of Bihar to be set up in Motihari; Union HRD Minister Kapil Sibal preferred it in Gaya. They argued gently, with no sign of the bitterness that would follow over the following one year. The standoff has now reached flash point with the Centre announcing Sibal's choice as the venue and Nitish refusing to cooperate in setting up the university.

Then, Sibal had praised Nitish for his skills at "presenting his case like a Supreme Court lawyer", and gone on to counter Nitish's arguments point by point. Nitish had cited Motihari's historical importance, especially its Mahatma Gandhi connection because of the Champaran satyagraha. Besides, he wanted "equitable distribution" — Gaya has Magadh University already.

Sibal argued that historical importance is not good enough a reason to set up a Central university, but availability of a suitable location is, and Gaya has that advantage.

The debate became more intense in a chain of letters between the two *(see box)*. During this period, Nitish once described Sibal as "arrogant".

The chief minister had in fact chosen Motihari years before he first discussed it with Sibal. In 2006, when Arjun Singh was HRD minister, Nitish had requested New Delhi for a Central university in Bihar, though he did not specify then where he wanted it. The next year, Parliament passed an Act for 14 Central universities, one of these in Bihar.

Nitish's mind was made up by the time a site selection committee arrived in Patna in 2007. The committee's three members were taken by helicopter to Motihari, 200km from Patna. So fixated was Nitish on Motihari that in 2010, ahead of the Assembly elections, he promised to name

the Central university there after Mahatma Gandhi. This was after the Centre had already named it Central University of Bihar; it would need an amendment by Parliament to add Mahatma Gandhi to the name.

The committee was, however, not convinced about the "infrastructure" in and "accessibility" to Motihari, district headquarters of East Champaran. It rejected the choice.

A series of discussions followed.

Then HRD minister "agreed in principle" on Motihari but left the final decision with the committee. Sibal eventually took over, a new site selection committee discussed Patna and even Bihta, 25km away, while Nitish would not look beyond Motihari.

Last month, the HRD Ministry announced the site: 300 acres of unused defence land in Gaya. The land had been used as an airfield till World War II.

For Motihari, the Centre offered a state university. A livid Nitish Kumar has not only turned that down but threatened "non-cooperation" in the setting up of CUB at Gaya.

He said the state did not require any special central assistance for opening a state university as offered. And if the Centre needs the state government's cooperation to open a Central university, he said, it must consider Motihari, not Gaya, the "choice of which is against popular sentiment".

Not that his threat not to cooperate will make a difference. The Centre has the option of inviting global tenders and awarding the project to an agency, an arrangement that would shut out the state government, but which would also involve the risk of straining the Centre-state relations.

CUB has been running since 2009 on the premises of the Bihar Institute of Technology in Patna. It has 250-odd students doing Masters and M Phil courses.

POINT COUNTERPOINT

NITISH

WHY NOT GAYA
Because higher education needs to follow "equitable distribution". Gaya already has Magadh University. Centre had already agreed in principle on Central university at Motihari; decision on Gaya smacks of some "prejudice" against Motihari. The choice of Gaya "is against popular sentiment".

WHY MOTIHARI
"The availability of land has never been an issue. It is more an emotional matter with Motihari being the workplace of Mahatma Gandhi. People have now attached emotional importance to a central university in East Champaran," Nitish has written to Sibal.

COMPARISON
In one letter, Nitish observes that the Centre has set up Central universities in remote places in Kerala, Orissa, Punjab, Himachal Pradesh, Rajasthan and Tamil Nadu. He asks why the Centre has been using a different yardstick for Bihar.

ATTACK
Selection of land in Gaya was a "unliateral decision" by Centre, says Nitish, vowing to write to the Defence Minister challenging the MoD's decision to transfer the land to HRD without holding consultations with state government.

SIBAL

WHY GAYA
Already on international tourist map. "It is a historical and cultural centre of international importance and is located at a distance of 25km from Gaya International airport." It is 140km from Patna, well connected by rail and road;Bodhgaya has many hotels and restaurants.

WHY NOT MOTIHARI
"You may kindly appreciate that Motihari is neither adjacent to an urban agglomeration nor is well-connected for the intended purposes." Motihari is 200km from Patna, has "hardly more than half a dozen good hotels", and falls in seismic zone 5 against Gaya's safer zone 3

CORRECTION
Some of those universities mentioned by Nitish have not been performing well, replies Sibal, and hence the Centre cannot repeat the same mistake for a Central university, which should primarily attract students with accessibility and infrastructure.

DEFENCE
Sibal's reply is that when the Bihar government had not provided any land at Gaya, the HRD Ministry had to procure the requisite 300 acres of land from the Defence Ministry. [The plot, which served as an airfield till World War II, is now unused].

NITISH'S MIND WAS MADE UP BY THE TIME A SITE SELECTION COMMITTEE ARRIVED IN PATNA IN 2007. THE COMMITTEE'S THREE MEMBERS WERE SHOWN MOTIHARI, A CHOICE THEY EVENTUALLY REJECTED

Logistics sector seeks to tap B-schools

Aesha Datta
New Delhi, March 29

Consistent growth in the economy has brought the world closer, and has fuelled the growth of an important segment that helps ensure mobility — logistics sector.

According to a Frost & Sullivan report in 2011, the Indian logistics market, which grew at about 9.2 per cent to touch revenues of $82.1 billion in 2010, is likely to grow to $200 billion by 2020.

Yet, this sector has more or less remained in the background as far as students are concerned.

Mr A.V. Reddy, Executive Director of Transocean Express Logistics, said that he estimated the shortfall of manpower at the management level at about 30-40 per cent. "For international businesses, we are unable to get skilled manpower. And even if we get them, the cost is often too high. So, we take management trainees and build a cadre," he said.

In an effort to introduce students to this sector, T2P Consultants Ltd, in collaboration with Chartered Institute of Logistics and Transport, India, has launched the Logistics Talent Hunt 2012.

According to Mr Vipul Singh, Head of Department (Marketing) at K.R. Mangalam Institute of Management, the sector does not attract many students.

He said after the talent hunt event, interest had gone up and about 40 per cent and students now seemed interested in joining the sector. Dr Veni Mathur, a transport economist and faculty at IIT-Delhi, stressed the need for logistics companies to make themselves more visible. "There is a lag between practical and theoretical training at B-sch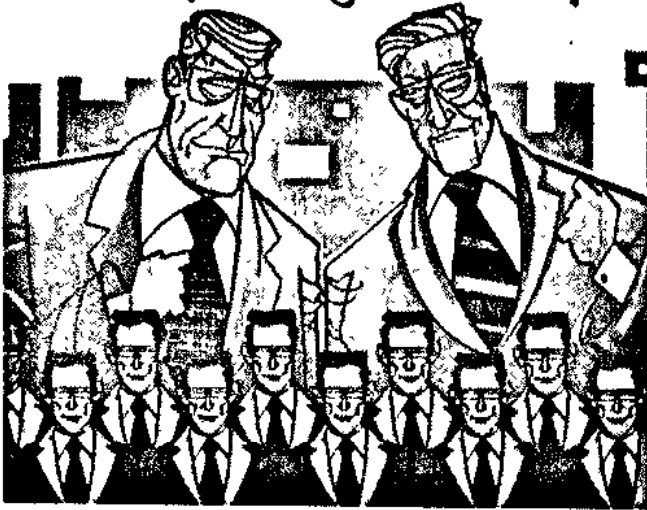ools. More in-depth teaching of supply chains is required in colleges," she added. Quoting a McKinsey report, Mr Prem Prakash, Director of T2P Consultants, said that the industry would need over 20 million skilled personnel by 2020, up from less than 10 million today, to function smoothly.
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Economic Times ND 30/03/2012p-8

फंड जुटाने का IIM फंडा

फैकल्टी को आकर्षित करने और अपना कामकाज जारी रखने के लिए पैसा जुटाने के नए रास्ते निकाल रहे हैं आईआईएम

[देविना सेनगुप्ता | श्रीराधा डी बसु *बंगलुरु* | कोलकाता]

- आईआईएम त्रिरुचिरापल्ली फाइनेंस में फैकल्टी चेयर बनाने और एक फैकल्टी मेंबर को स्पॉन्सर करने के लिए एक सरकारी बैंक से बातचीत के अंतिम दौर में है

- आईआईएम लखनऊ उन एग्जिक्यूटिव के लिए अपने नोएडा कैंपस में ई-लर्निंग प्रोग्राम की शुरुआत करेगा, जो छह महीने के कोर्स के लिए एनरॉल कराना चाहते हैं

भारतीय प्रबंधन संस्थान (आईआईएम) फैकल्टी को आकर्षित करने और अपनी गतिविधियां जारी रखने के लिए पैसा जुटाने के नए रास्ते निकाल रहे हैं। जहां कुछ आईआईएम कंपनियों से समझौते कर रहे हैं वहीं दूसरे फंड जुटाने के लिए ऐकेडेमिक तरीके अपना रहे हैं।

अन्र्स्ट एंड यंग इंडिया में पार्टनर-ट्रांजैक्शन एडवाइजरी सर्विसेज और नेशनल सेक्टर लीडर-एजुकेशन अमिताभ झिंगन ने कहा, 'अगर वे इंटरनेशनल लेवल पर काम करना चाहते हैं और साथ ही बढ़ती कॉस्ट को मैनेज करने की कोशिश में हैं, तो उन्हें फंड जुटाना होगा। ग्लोबल आधार पर ऐसा होता है।' कुछ हफ्ते पहले आईआईएम बंगलौर ने स्टार्ट-अप क्राउडएनालिटिक्स के साथ अपनी तरह के पहले सहमति पत्र (एमओयू) पर दस्तखत किए। यह सभी के लिए उपलब्ध एक ऑनलाइन कम्पीटिशन है, जिसमें कोई भी नया एनालिटिक मॉडल रखने वाला हिस्सा ले सकता है। बेस्ट मॉडल को इनाम मिलता है। क्राउडएनालीटिक्स आईपी रखता है और दूसरे कस्टमर के लिए उसे इस्तेमाल किया जाता है, लेकिन आईआईएम बंगलौर को इससे रॉयल्टी की कमाई होती है।

इंस्टीट्यूट में क्वांटीटेटिव मेथेड्स और इंफॉर्मेशन सिस्टम्स के प्रोफेसर दिनेश कुमार ने बताया कि इंडस्ट्री की ओर से फंड का इनफ्लो ज्यादा नहीं है और इसलिए इंस्टीट्यूट को एमओयू पर दस्तखत करने की जरूरत है। पहला कम्पीटिशन एक स्पोर्ट्स एनालीटिकल मॉडल डेवलप करने पर है, जो इंडियन प्रीमियम लीग में किसी खिलाड़ी के लिए सही दांव लगाने में मदद देगा। इसे अमेरिका, ब्रिटेन, नीदरलैंड्स और भारत से 75 से ज्यादा एंट्री मिल चुकी हैं। इसके अलावा दूसरे मुल्कों से भी आवेदन आए हैं।

आईआईएम लखनऊ उन एग्जिक्यूटिव के लिए अपने नोएडा कैंपस में ई-लर्निंग प्रोग्राम की शुरुआत करेगा, जो छह महीने के कोर्स के लिए एनरॉल कराना चाहते हैं। इसके अलावा बिजनेस एनालीटिक्स में सर्विसेज मुहैया कराने के लिए ब्लूप्रिंट पर भी काम किया जा रहा है, जिसे कॉरपोरेट से काफी डिमांड देखने को मिल रही है। आईआईएम लखनऊ के डायरेक्टर देवी सिंह ने कहा, 'वक्त बदल रहा है। हम केवल आम बिजनेस स्कूल बनकर नहीं रहना चाहते।' पुराने आईआईएम जहां फंड के लिए पूर्व छात्रों पर निर्भर कर सकते हैं, वहीं नए संस्थानों के पास

रॉयल्टी से आमदनी

आईआईएम बंगलौर का स्टार्ट-अप क्राउडएनालिटिक्स के साथ करार से आ रही है रॉयल्टी

यह सहूलियत नहीं है। इसके बजाय वे कॉरपोरेट अलायंस की ओर मुड़ते हैं। आईआईएम त्रिरुचिरापल्ली फाइनेंस में फैकल्टी चेयर बनाने और एक फैकल्टी मेंबर को स्पॉन्सर करने के लिए एक सरकारी बैंक से बातचीत के अंतिम दौर में है। यह 3 करोड़ रुपए की ग्रांट या किस्तों में दी जाने वाली पेमेंट के रूप में हो सकता है।

New US research to aim at flood of digital data

STEVE LOHR
THE NEW YORK TIMES

The federal government is beginning a major research initiative in big data computing. The effort, which will be announced on Thursday, involves several government agencies and departments, and commitments for the programs total $200 million.

Administration officials compare the initiative to past government research support for high-speed networking and supercomputing centres, which have had an impact in areas like climate science and Web browsing software.
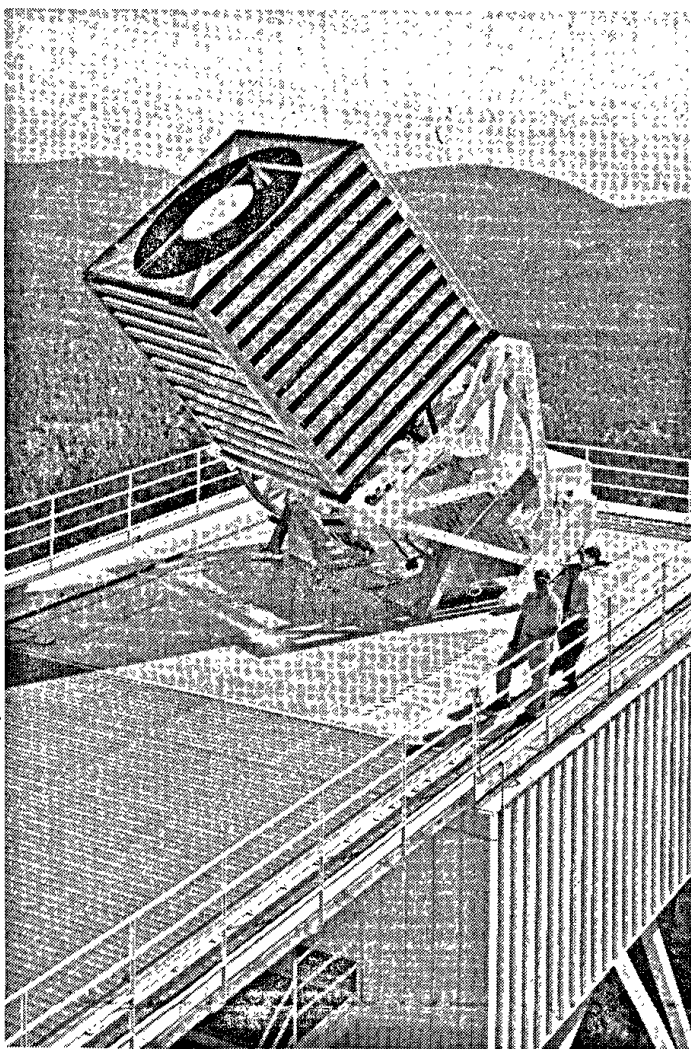
"This is that level of importance," said Tom Kalil, deputy director of the White House office of science and technology policy. "The future of computing is not just big iron. It's big data."

Big data refers to the rising flood of digital data from many sources, including the Web, biological and industrial sensors, video, e-mail and social network communications. The emerging opportunity arises from combining these diverse data sources with improving computing tools to pinpoint profit-making opportunities, make scientific discoveries and predict crime waves, for example.

"Data, in my view, is a transformative new currency for science, engineering, education, commerce and government," said Farnam Jahanian, head of the National Science Foundation's computer and information science and engineering directorate. "Foundational research in data management and data analytics promise breakthrough discoveries and innovations across all disciplines."

On Thursday, the National Science Foundation will announce a joint program with the National Institutes of Health seeking new techniques and technologies for data management, data analysis and machine learning, which is a branch of artificial intelligence.

Other departments and agencies that will be announcing big data programs at a gathering on Thursday at the American Association for the Advancement of Science in Washington include the United States Geological Survey, the defence department, the Defence Advanced Research Projects Agency and the energy department. These initiatives will mostly be seeking the best ideas from university and corporate researchers for collaborative projects.

The private sector is the leader in many applications of big data computing. Internet powers like Google and Facebook are masters at instantaneously mining Web data, click streams, search queries and messages to finely target users for online advertisements. Many major software companies, including IBM, Microsoft, Oracle, SAP and SAS Institute, and a growing band of start-ups, are focused on the opportunity in big data computing.

Still, there is an important complementary role for the government to play where the incentives for private investment are lacking, according to administration officials and computer scientists. Such areas, they say, include scientific discovery in fields like astronomy and physics, research into policy issues like privacy, and funding for research at universities, where the high-technology work force of the future is educated.

But for government departments and agencies promoting and mastering big data computing, there

advances in big data management and analysis are critical to achieving their missions," said Edward Lazowska, a computer scientist at the University of Washington. "It doesn't matter whether the mission is national defence, energy efficiency, evidence-based healthcare, education or scientific discovery." At the session on Thursday, there will be presentations by scientists who are experts in big data computing.

Astronomy is a pioneering discipline for the approach. The Sloan Digital Sky Survey has used digital sensors to scan distant galaxies from an optical telescope in New Mexico, collecting vast amounts of image data that are processed with powerful computers.

The resulting three-dimensional mapping has yielded a "visual representation of the evolution of the universe," said Alexander Szalay, a professor at Johns Hopkins University. He calls the digital sky program a "cosmic genome project."

At Stanford University, an intriguing big-data experiment in online education is under way. Last year, three computer science courses, including videos and assignments, were put online. Hundreds of thousands of students have registered and participated in the courses.

The courses generate huge amounts of data on how students learn, what teaching strategies work best and what models do not, said Daphne Koller, a professor at the Stanford Artificial Intelligence Laboratory.

In most education research, teaching methods are tested in small groups, comparing results in different classrooms, Ms Koller explained. With small sample groups, research conclusions tend to be uncertain, she said, and results are often not available until tests at the end of school semesters.

But in an online class of 20,000 students, whose every mouse click is tracked in real time, the research can be more definitive and more immediate, Ms Koller said.

"If 5,000 people had the same wrong answer, it's obvious a concept is not getting through, and you have a clear path that shows where students went wrong," she said.

That kind of data tracking in education, she said, provides "an opportunity no one has exploited yet."

The Sloan Digital Sky Survey (above) collects image data. White House office of science and technology policy deputy director Tom Kalil (right).

is self-interest as well.

"There is recognition by a broad range of federal agencies that further

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DUTA protest against education policy

Staff Reporter

NEW DELHI: The Delhi University Teachers' Association sat on a dharna at Jantar Mantar here on Thursday to protest against the education policy of the Union Government which it said was anti-poor.

"Their policies are intended to convey the message that education will be possible only with a loan," said DUTA member Abha Dev Habib.

DUTA secretary S. D. Siddiqui said: "We are also concerned about the irrational fee-hike in universities and lack of concern by the Government to honour its commitment to invest at least 6 per cent of the GDP on education."

Times Of India ND 30/03/2012 P-23

Self-driving car lets blind man take it out for a spin

Javed Anwer | TNN

New Delhi: Steve Mahan is 95% blind. But on Wednesday, he drove a car. Or at least he sat in the driving seat, while the car, heavily modified by Google as part of its driverless vehicle project, drove itself. "Look ma, no hands. No hands, no feet... This is some of the best driving I have ever done," Mahan joked of his trip.

Google is working on self-driving cars for some time now. To demonstrate how far autonomous vehicles have come and how they can change the lives of those who can't drive or hate driving, Google asked Mahan to travel on one of the seven modified Toyoto Prius cars that are part of the project.

"We organized this test as a technical experiment outside of our core research efforts, but we think it's also a promising look at what this kind of technology may one day deliver for society if rigorous technical and safety standards can be met," Google said.

Earlier, a company spokesperson had told TOI that driverless cars had so far "successfully driven roughly 200,000 miles across a wide variety of terrain and road conditions." The cars have been fitted with various sensors, including a spinning laser radar, and cameras that map the environment around the vehicles.

"These sensors feed real-time into a quad-core computer, which can process 1.3 million laser mea-

LOOK, NO HANDS: Steve Mahan gets behind the wheel

surements and make 20 driving decisions every second," said the spokesperson. "The sensors help determine where other cars are and how fast they are moving. The software controls acceleration and deceleration, and mounted cameras read and interpret traffic lights and other signs."

The project is headed by Sebastian Thrun, a Google Fellow and expert in artificial intelligence. Last year during a TED talk, Thrun said that he wanted to transform the way humans commute. "When I turned 18, I lost my best friend to a car accident," he said. "Then I decided that I will dedicate my life to the save one million people (who die in accidents) every year."

Google said that even though the driverless car has been phenomenal so far, the company is now working on how the car handles severe weather conditions like snow.

Business Standard, ND 30/03/2012

P-10

NIT-Allahabad student bags ₹1.34-crore Facebook offer

KALPANA PATHAK
Mumbai, 29 March

You may not have heard of the Allahabad-based Motilal Nehru National, Institute of Technology (MNNIT). But Mark Zuckerberg's social networking giant, Facebook, has.

Facebook has 'liked' an MNNIT student and made him a job offer with an annual pay package of ₹1.34 crore ($262,500), the biggest offer ever made at the institute, so far. The earlier high when Facebook hired at a crore-plus salary was, in 2010 when it picked up an Indian Institute of Technology (IIT) Madras student at an annual package of ₹1.7 crore.

P Chakrabarti, director, MNNIT, said generally average salary offers at the institute are ₹12 lakh with exceptions of ₹19-20 lakh annual packages at times.

"This is the highest in the recent past. We have approached Facebook in the past also, but this time the student could clear the nine rounds of interviews over the phone," said Chakrabarti.

Facebook has been recruiting students from technology institutions in India, especially IITs. This is the first time it has recruited someone from NIT. Chakrabarti refused to divulge details of the student citing privacy reasons. The student, said the director, would join Facebook in June after his final examination.

Many core companies, in addition to software companies such as Microsoft, Amazon and Adobe among others, have visited the campus to recruit students this year. The institute has 850 students across 11 branches and 820 have been placed. The 45-year-old institute is funded by the Union ministry of human resource and development. Inspired by this success, director of the institute is planning to rope in the British Council to provide professional and social skills to the students.

"Our students, have sound technical knowledge. But being a government institution,, we get students from all strata of society; some from very poor families. Thus, general feedback from companies is that students are technically very sound, but have poor professional skills. We need to address that issue," said Chakrabarti.

He took over as director 10 months ago and is planning to develop the institute and its infrastructure. There are a little over 30 NITs in the country. An average NIT funding is ₹50 crore. On an average, they also receives ₹20-25 crore under the World Bank-funded Technical Education Quality Improvement Programme.

Business Line ND 30/03/2012
p-20

Scientists warn of severe floods, disasters for Mumbai

Associated Press

Washington, March 29

Global warming is leading to such severe storms, droughts and heat waves that nations should prepare for an unprecedented onslaught of deadly and costly weather disasters, an international panel of climate scientists says in a report issued on Wednesday.

The greatest danger from extreme weather is in highly populated, poor regions of the world, the report warns, but no corner of the globe from Mumbai to Miami is immune. The document by a Nobel Prize-winning panel of climate scientists forecasts stronger tropical cyclones and more frequent heat waves, deluges and droughts.

The 594-page report blames the scale of recent and future disasters on a combination of man-made climate change, population shifts and poverty.

In the past, the Intergovernmental Panel on Climate Change, founded in 1988 by the United Nations, has focused on the slow inexorable rise of temperatures and oceans as part of global warming. This report by the panel is the first to look at the less common but far more noticeable extreme weather changes, which recently have been costing on average about $80 billion a year in damage.

"We mostly experience weather and climate through the extreme," said one of the report's top editors, Chris Field, an ecologist with the Carnegie Institution of Washington. "That's where we have the losses. That's where we have the insurance payments. That's where things have the potential to fall apart.

The report specifically points to New Orleans during 2005's Hurricane Katrina, noting that "developed countries also suffer severe disasters because of social vulnerability and inadequate disaster protection."

"There are lots of places that are already marginal for one reason or another," Field said. But it's not just poor areas-"There is disaster risk almost everywhere."

The scientists say that some places, particularly parts of Mumbai, could become uninhabitable from floods, storms and rising seas. In 2005, over 24 hours nearly 1 meter of rain fell on the city, killing more than 1,000 people and causing massive damage. Roughly 2.7 million people live in areas at risk of flooding.

Other cities at lesser risk include Miami, Shanghai, Bangkok, China's Guangzhou, Vietnam's Ho Chi Minh City, Myanmar's Yangon and India's Kolkata.

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TECH TREASURE

Deep-sea space hunt

Amazon CEO claims discovery of Apollo 11 rocket engines.

LOS ANGELES: Long before Amazon.com founder Jeff Bezos became an Internet mogul, he was enthralled by the mysteries of space.

As a five-year-old, Mr. Bezos, along with half a billion people around the world, watched in awe as American astronaut Neil Armstrong took the first step on the moon in 1969.

More than 40 years later, the billionaire will attempt to haul from the dark depths of the Atlantic at least one of the mammoth rocket engines that helped boost the Apollo 11 astronauts into history.
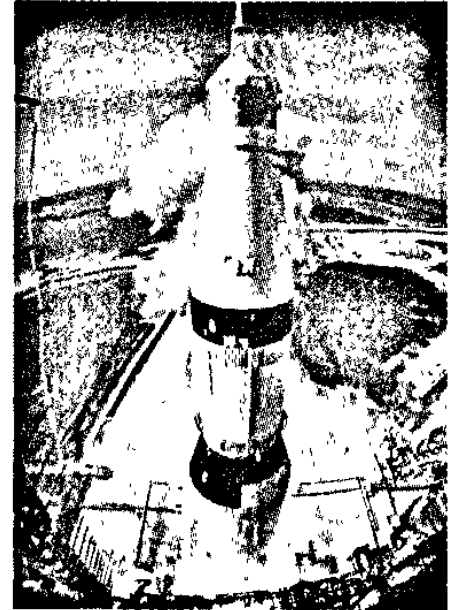
Using high-tech sonar, an expedition spearheaded by Mr. Bezos has discovered what he claimed were discarded engines from the mission lurking 4,300 metres deep.

In an online announcement on Wednesday, Mr. Bezos said he was drawing up plans to recover the sunken engines, part of the mighty Saturn V rocket that launched Mr. Armstrong, Buzz Aldrin and Michael Collins on their moon mission. The five engines dropped into the sea as planned minutes after liftoff in 1969. Four days later, Mr. Armstrong and Mr. Aldrin walked on the moon. "We don't know yet what condition these engines might be in," he wrote. "They hit the ocean at high velocity and have been in salt water for more than 40 years. On the other hand, they're made of tough stuff, so we'll see."

Mr. Bezos acknowledged the engines were the property of NASA, but said he hoped they will be displayed in museums. NASA expressed excitement about the find. The space agency said it has not been formally contacted by Mr. Bezos and waited for more information.

The sea floor is littered with spent rockets and flight parts from missions dating back to the dawn of the Space Age and it is unknown what survived decades later. — AP

The Saturn V rocket of the Apollo 11 moon mission lifts off from Cape Kennedy, Florida in this July 16, 1969 photo.
— PHOTO: AP

Mint ND 30/03/2012   P-24

IPCC REPORT

Greenhouse gases changing global climate

Scientists reaffirm that climate change has led to heat waves, record high temperatures and heavy rainfall

BY JACOB P KOSHY
jacob.k@livemint.com
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NEW DELHI

Although greenhouse gases released by human activities are changing global climate, it's not yet clear if that has an effect on monsoon patterns, a report said on Thursday.

The report on extreme events and disasters by the Intergovernmental Panel on Climate Change (IPCC) has found an increase in the frequency of warm daily temperature extremes and higher average maximum wind speed of tropical cyclones.

The assessment by over 200 scientists has reaffirmed that climate change has led to heat waves, record high temperatures and, in many regions, heavy rainfall in the past half century.

"The main message from the report is that we know enough to make good decisions about managing the risks of climate-related disasters," said Chris Field, co-chair of IPCC's working group II, which produced the report in collaboration with its working group I. "Sometimes we take advantage of this knowledge, but many times we do not."

The report doesn't contain any surprises but sets the tenor for a series of important reports, called the fifth assessment report, that will be published next year, an expert said.

"The projections of rising sea levels and an increase of heavy rainfall events aren't new," said Sudhir Bokhade, who was involved in a previous IPCC re-

> Countries are expected to convene at Doha this year to begin talks on an agreement beyond the Kyoto Protocol

port. "However, this gives you a sense of what to expect from the fifth assessment report next year."

While it is uncertain what the theme of this future assessment might be, it will play an important role in formulating the positions that countries may take at global fora to decide the quantum of emission cuts they must enforce to limit global warming.

Countries are expected to convene at Doha in Qatar later this year to begin negotiations on an agreement beyond the Kyoto Protocol, the current standard by which countries are expected to cap emissions until 2017.

"The IPCC is deeply committed to producing reports that are policy-relevant but not policy-prescriptive through a trans-parent process," IPCC chairman Rajendra Pachauri said in a statement.

IPCC got mired in a controversy in 2010 over sections in the fourth assessment report, in which it said glaciers in the Himalayas would disappear by 2035, a statement that was picked up from non-scientific literature and later edited out of the modified text.

While an independent group absolved IPCC of malfeasance, it recommended that future scientific reports observe higher levels of prudence in sourcing and attributing climate projections.