

Newspaper Clips

September 1, 2011

Hindu ND 01.09.2011- P-5

IIM-Rohtak signs pact with Kelley School of Business

Sujay Mehdudia

NEW DELHI: The Kelley School of Business (KSB), US-based Indiana University, and Indian Institute of Management, Rohtak (IIM-R) inked a memorandum of understanding (MoU) here on Wednesday to work together for academic excellence and organisational goals.

The MoU was signed by Michael McRobbie, President of Indiana University, and Professor P. Rameshan, Director, IIM-R, on behalf of their institutions in the presence of Deepender Hooda, the MP from Rohtak.

According to an official statement here, KSB and IIM-R will collaborate in several areas like organising faculty research workshops, joint research projects, joint academic programmes, joint conferences, joint cultural programmes, doctoral student mentoring and development, besides exchange of faculty



Indiana University president Michael McRobbie (left) and IIM-Rohtak director P. Rameshan exchanging MoU documents on Wednesday in the presence of Rohtak MP Deepender Singh Hooda.
PHOTO: SHANKER CHAKRAVARTY

members and students.

Initially the agreement will be for five years and will be automatically renewed for another five unless either institution desires to terminate it by giving one year's notice.

Speaking on the occasion, Mr. Hooda said it was a matter of satisfaction and happiness that an MoU had been signed between Kelley School of Business (KSB) and IIM-Rohtak.

Times of India ND
01/09/2011 P-10

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IIT-Kharagpur celebrations

NEW DELHI: The Alumni Association of IIT-Kharagpur celebrated its 61st annual Foundation day at IIT-Delhi on Wednesday.

"More than 3,000 IIT alumni are settled in North India and heading major corporate and government bodies. As part of the 61st foundation day celebrations a discussion on 'Ethics in Corporate Governance' was organised to find ways to root out corruption from institutions headed by IITians in the country" said IIT Alumni Kharagpur (North India) president Y. P. S. Suri.

IIT-M student found dead in hostel

A Selvaraj & M Ramya | TNN

Chennai: B Gowri Sankar, a 36-year-old M Tech mechanical engineering student at IIT-Madras and an employee of Hindustan Aeronautics Limited (HAL), Bangalore, was found dead inside his hostel room on Wednesday.

Sankar was in the second year of his postgraduation. Investigations are on and the police are suspecting suicide though they haven't categorically ruled out anything. "We have sent his laptop to the cyber crime department to see if it contains any documents that could give us clues to why he committed suicide," a police officer said.

This is the third suicide in the past six months at IIT-M.

Sankar's wife Geetha was trying to reach him on his mobile on Wednesday and as he did not answer despite repeated attempts, she asked his friend Krishnamurthy, also an M Tech student at the institute, to check on him. Geetha and their two sons live at a house in Sathuma Nagar near Thiruvottiyur.

Financial Chronicle ND 01/09/2011 P-10

Firm incubated at IIT-K to raise fund in eight months

Brand loyalty provider Capillary Tech sets sights on Europe, US

KUMAR SHANKAR ROY

New Delhi

INCUBATED in IIT-Kharagpur, India's largest brand loyalty provider Capillary Technologies, founded by first generation entrepreneurs Aneesh Reddy and Krishna Mehra, is looking to raise growth capital of \$8-10 million (Rs 40-50 crore) in about 6-8 months, said a top official of Wednesday.

The firm, which does not immediately need cash now, may use the funds to expand in newer European markets, South East Asia and the US. Capillary is an end-to-end technology solution provider based out of India with presence in Middle East and the UK and South Africa. It provides customer engagement solutions to retailers and consumer facing businesses. Its clients include The Raymond Shop, Indus League, Peter England, Gitanjali, Woodland, William Penn, YLG Salon & Spa, Pizza Hut and The Mobile Store.

"Expanding new geogra-



INSTANT SOLUTION: The firm provides actionable analytics to help customers generate a far higher return on investment

phies is expensive. We are break-even now but to scale up faster we need to expand. We plan to enter two new geographies every year. We have a set up in UK now so that other markets in the European region can be tapped. We are also looking

at entering the US in 2012," said Aneesh Reddy, co-founder & CEO, Capillary Technologies.

The firm has around 150 people spread across Bangalore, Delhi, Mumbai, UK and UAE. The firm is currently backed by Qualcomm

Ventures and angel investors including Rajan Anandan (MD, Google India), Venkat Tadanki (founder of Daksh, later acquired by IBM) and Harminder Sahni (founder of Technopak).

The firm also provides actionable analytics, instant cross-sell solutions that it claims helps customers generate a far higher return on investment on customer engagement for retailers. The three-year old firm does so by using its patent pending cloud+ mobile platform. Currently, the company reaches over 10 million consumers in over 5000 stores in 400 cities for more than 60 major brands worldwide.

The plan in the next three years is to reach 20,000-30,000 stores.

Reddy also pointed out that the company plans to use the channel partner route to expand in India. There are about 10 lakh stores in India with a computer which can make use of our technology-enabled solutions, he added.

kumarsroy@mydigitalfc.com

Bloomberg

IIM-L teams up with US biz school

SREERUPA MITRA

Bangalore

THE Indian Institute of Management, Lucknow (IIM Lucknow), one of the renowned business schools in India, said it has signed a memorandum of understanding with The Kelley School of Business (KSB), one of the top 100 schools in US, to enter into a long term relationship and closely collaborate for research, fac-

ulty and student exchange programme.

The collaboration will include extensive research and both, KSB & IIM Lucknow will look into avenues to enhance the research mission. The schools will develop collaborative case studies, which will then be used for teaching purpose, design and delivering series of faculty research workshops.

Both B-schools will also explore the best opportuni-

ties to combine the interests of faculty at both institutes with students, the business community and society in general. Further, the MoU will also explore the possibilities of launching a dual-degree programme in business analytics and global strategy.

This programme would be designed, developed, marketed and delivered by both the institutes and would be primarily taught at IIM Lucknow's Noida campus by

faculty members from both the institutes.

Devi Singh, director, IIM Lucknow said, "As the world gets globally connected, unification of professional education enriches the process of learning and reaches a greater potential. With globalisation comes in the opportunities that have been created in various domains of learning."

shreerupamitra
@mydigitalfc.com

Publication: The Times Of India Delhi; Date: Sep 1, 2011; Section: Times City; Page: 4;

NCERT prof blames high cutoffs on rigid system

Manash Pratim Gohain | TNN

New Delhi: High admission cutoffs are an offshoot of the "rigid" university system in the country. This was the view shared by professor R Govinda, officiating director, NCERT. He was speaking on the sidelines of a press meet on NCERT's golden jubilee celebrations, where HRD minister Kapil Sibal will deliver an address on Thursday.

Govinda, who is also the vice-chancellor of the National University of Educational Planning and Administration, said that the basic problem of high cutoffs has resulted from colleges admitting students based on a certification test (the Class XII board exams).

He highlighted the instance of undergraduate admissions in Delhi University this year where Shri Ram College of Commerce announced an unprecedented 100% cutoff, and students with 90-97% aggregate scores failing to make it to many colleges.

"Class XII exams conducted by CBSE and other boards are certification tests and not entrance tests for admission to institutions of higher education. The university system has remained very rigid and needs to respond to the re-



NEED FOR CHANGE: National-level common entrance test, on the lines of the Scholastic Aptitude Test, can be a solution

forms at the school level," Govinda said.

Govinda suggested a national-level common entrance test on the lines of the Scholastic Aptitude Test for college admissions in the United States or the Graduate Record Examinations. "As already suggested by the HRD ministry, a common entrance test can be a solution," said Govinda.

On the focus areas of the forthcoming five-year plan, Govinda said: "Quality of textbooks, teachers' education, making school education compatible with international standards and extending of RTE to Class X from pre-school are going to be NCERT's prior-

ities in the next plan starting 2012. In fact, we are proposing a 'teacher first' mission to improve teacher training. We also have an important role to play in formulating the framework for expanding the reach of right to education."

Govinda further informed that the core curricula for science and mathematics have been prepared and all CBSE schools are following it from this year. "The core curriculum for commerce will only be ready by September 15," added Govinda. Though the core curriculum is ready, its implementation will take time as state boards have to come on board.

Publication: The Times Of India Delhi; Date: Sep 1, 2011; Section: Times Global; Page: 18;

Harvard most discussed univ on Web

Los Angeles: Harvard regained its top spot on a list of most talked about US universities on the Internet, beating its rivals just in time for a return to fall studies, according to a survey.

Harvard conquered stiff competition from runners-up Northwestern University and the University of California, Berkeley based on the number of mentions it receives on the Web, according to the Global Language Monitor, which tracks usage of words and phrases on blogs, social media and the top 75,000 print and electronic media sites. **REUTERS**

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Hydrogen fuel from sunlight

Scientists have determined that an inexpensive semiconductor material can be 'tweaked' to generate hydrogen from water using sunlight.

Using state-of-the-art theoretical computations, the University of Kentucky-University of Louisville team demonstrated that an alloy formed by a 2 per cent substitution of antimony (Sb) in gallium nitride (GaN) has the right electrical properties to enable solar light energy to split water molecules into hydrogen and oxygen, a process known as photoelectrochemical (PEC) water splitting. When the alloy is immersed in water and exposed to sunlight, the chemical bond between the hydrogen and oxygen molecules in water is broken. The hydrogen can then be collected, according to a University of Kentucky press release. — **Our Bureau**

Hindu ND 1/09/2011 p-13

Breakthrough in hydrogen fuel cells

Hydrogen makes a great fuel because of it can easily be converted to electricity in a fuel cell and because it is carbon free.

The downside of hydrogen is that, because it is a gas, it can only be stored in high pressure or cryogenic tanks.

A team of University of Southern California scientists has developed a robust, efficient method of using hydrogen as a fuel source.

In a vehicle with a tank full of hydrogen, "if you got into a wreck, you'd have a problem," said Travis Williams, assistant professor of chemistry at the University of Southern California Dornsife College.

A possible solution is to store hydrogen in a safe chemical form. Earlier this year, Williams and his team figured out a way to release hydrogen from an innocuous

chemical material — a nitrogen-boron complex, ammonia borane — that can be stored as a stable solid, says a University of Southern California press release.

Now the team has developed a catalyst system that releases enough hydrogen from its storage in ammonia borane to make it usable as a fuel source.

Moreover, the system is air-stable and re-usable, unlike other systems for hydrogen storage on boron and metal hydrides.

The research was published this month in the *Journal of the American Chemical Society*.

The system is sufficiently lightweight and efficient to have potential fuel applications ranging from motor-driven cycles to small aircraft, he said. — **Our Bureau**

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Firing lasers to make rain?

IAN SAMPLE

Researchers have used a powerful laser to produce water droplets in the air, a step that could ultimately help trigger rainfall.

While nothing can produce a downpour from dry air, the technique, called laser-assisted water condensation, might allow some control over where and when rain falls if the atmosphere is sufficiently humid.

Records from 133 hours of firings revealed that intense pulses of laser light created nitric acid particles in the air that behaved like atmospheric glue, binding water mole-

cules together into droplets and preventing them from re-evaporating.

Within seconds, these grew into stable drops a few thousandths of a millimetre in diameter: too small to fall as rain, but large enough to encourage the scientists to press on with the work.

"We have not yet generated raindrops — they are too small and too light to fall as rain. To get rain, we will need particles a hundred times the size, so they are heavy enough to fall," said Jerome Kasparian, a physicist at the University of Geneva. A report on the tests appears in the journal *Nature Communications*.

With improvements, shooting lasers into the sky could either help trigger or prevent showers. One possibility might be to create water droplets in air masses drifting towards mountains. The air would cool as it rose over these, causing the water droplets to grow and eventually fall. An alternative might be to stave off an immediate downpour by creating so many tiny droplets in the air that none grew large enough to fall. "Maybe one day this could be a way to attenuate the monsoon or reduce flooding in certain areas," Kasparian said. — © **Guardian Newspapers Limited, 2011**

Hindu ND 01.09.11 P-7

Students from India, Pakistan launch a new joint campaign

Special Correspondent

MUMBAI: Students from India and Pakistan have launched a first-of-its-kind initiative called "Ummeed-e-Milaap" to invite opinions on initiating peace. It will be compiled into a 120-page diary and released next year.

The brainchild of Techfest, the annual science and technological festival of the Indian Institute of Technology (IIT), Mumbai, the venture is partnered by the Lahore University of Management Studies (LUMS) and the Association Internationale des Étudiants en Sciences Économiques et Commerciales (AIESEC), world's largest student-driven organisation.

"Ummeed-e-Milaap" aims at uniting the students of India and Pakistan. "We aim to set an example to the world that students can lead the way in establishing peaceful relations between countries and a hatred-free world," according to Ronnie Philip of Techfest.

The programme received an encouraging launch on August 30 with over 350 entries from students of 11 colleges here. IIT student Anish Sankhe writes, "Let's add every Pakistani Student on Facebook and share our thoughts. I am sure that [the]



IIT Techfest's Ummeed-e-Milaap Indo-Pak student initiative launched in Mumbai.

— PHOTO: SPECIAL ARRANGEMENT

youth of both these countries thinks positively on the peace process. So friends, Lets remove the hatred, lets spearhead Love."

Bharat Prabhakar says: "Whatever we do today is gonna be in the history textbooks of tomorrow. It's time we make our generation-Y immortal by taking a stand which no one has ever before."

The media too came in for criticism. Revanth Raju says: "Media on both sides must act more responsible. The attitude of pointing fingers at your neighbour as soon as a terror strike happens should

change; and I think media can play an important role here by spreading the message that a common man across the border faces the same threat as we do, and we must stand united to fight against the common enemy."

Others demanded that the voice of youth should be heard. Suparna Vivek Gharpure says: "We should have India-Pakistan student meets where we would get to meet and interact with people across the border. It's time we realise that people across the border are also just like you or me! And the youth of both nations should stand up to get

counted in this social issue."

Techfest aims at instilling in the youth of both nations a sense of fraternity. Over 30 colleges will be involved in Mumbai, Lahore and Karachi, and two dairies will be circulated for students in both countries to give their comments. In Mumbai, 11 colleges will take part and about 20 in Lahore and Karachi.

From each college, 20 best entries will be selected and pasted in the diary, which will then move on to the next college. Students are required to comment on the peace process and their thoughts on the role of students, media, people-to-people exchanges and their perception of the common people in each country. An online campaign is also being launched where people can write their thoughts in a diary at www.techfest.org/ummeed_e_milaap.

The diaries from India and Pakistan will be received by Techfest before the festival and an 'Ummeed-e-Milaap Diary' will be created along with a special section for the best entries from the online campaign.

The diary will be released from January 6 to 8, 2012, and kept for public viewing. In Pakistan, the diary will be kept on display in LUMS during their scientific festival 'PSIFI'.

Antibiotic resistance is ancient in origin

R. PRASAD

When did bacteria develop antibiotic resistance for the very first time? Of course, it was after the discovery and widespread use, and more often misuse, of antibiotics. This is the cornerstone of antibiotic resistance science.

The premise

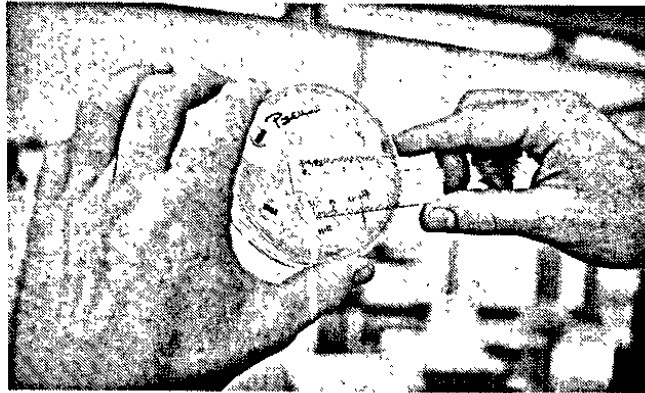
Since the discovery of antibiotics has being recent, no more than 70 years ago, antibiotic resistance seen in microbes should be a "modern phenomenon."

By extension, any microbes older than 70 years should be "highly susceptible to antibiotics," and hence should never have shown antibiotic resistance.

But a study published today (September 1) in *Nature*, rocks the very foundation of our understanding of antibiotic resistance. It provides sufficient evidence to prove that antibiotic resistance is a "natural phenomenon," and existed in microbes predating antibiotic discovery by man.

Earlier studies had estimated that origin of natural antibiotics dates back from 2 billion years to 40 million years ago. If natural antibiotics were that old, can antibiotic resistance be far behind?

Antibiotic resistance seen in microbes (bacteria and fungi) should not be a surprise as they produce antibiotics naturally. "Roughly 80



SURPRISE: Resistance to many common antibiotics like tetracycline, beta-lactam, and vancomycin was seen in 30,000-year-old microbes. - PHOTO: AFP

per cent of antibiotics currently in the market are derived either directly or indirectly (e.g. by modification of naturally occurring structures) from bacteria that are found in the environment, mostly the soil," stated Gerard D. Wright from McMaster University, Hamilton, Canada in an email to this Correspondent. Dr. Wright is the senior author of this study.

Shocking

What makes the findings all the more surprising is that all the genes extracted from nearly 30,000-year-old microbes reveal the presence of resistance to many commonly used antibiotics — tetracycline, beta-lactam, glycopeptides and even vancomycin.

In clinical settings, vancomycin resistance was first seen in pathogenic bacteria (enterococci) only in the late

1980s!

"Structure and function studies on the complete vancomycin resistance element VanA confirmed its similarity to modern variants," the authors write.

If bacteria already had antibiotic resistance towards drugs like tetracycline, Vancomycin, beta-lactam etc used today, why did it take some time for antibiotic resistance to show up in clinical settings?

"We need to differentiate resistance in pathogenic bacteria here from [benign] environmental bacteria that do not usually cause disease," replied Dr. Wright. "Pathogens are generally quite antibiotic sensitive unless they acquire resistance genes from other sources.

"The evidence suggests that environmental bacteria are the reservoir for these genes. Our study demonstrates that these benign bac-

teria have expressed these genes for millennia."

The widespread prevalence of antibiotic resistance seen today "is inconsistent with a hypothesis of contemporary emergence," they write in the paper, "instead it suggests a richer natural history of resistance."

So what is the role of clinically formed resistance? "The clinical (and other use) of antibiotics provides the selective pressure to select for resistance genes that may be mobilised from environmental bacteria," emphasised Dr. Wright in his email.

What needs to be done

If this is indeed true and correct, then there is an overwhelming need to have in place a more responsible planning and management mechanism of existing antibiotics and newer ones.

According to Dr. Wright, "we need two things: 1) more drug candidates, and 2) better use of existing antibiotics e.g. reduced use in agriculture, and tight controls in medicine."

Study area

The microbes used for the study were collected from Dawson City, Yukon, Beringia (east of Alaska) permafrost sediments. Rigorously authenticated ancient bacterial DNA samples were used for the study. The ancient DNA was collected from the permafrost that had not thawed since its deposition, and had never been leached by a river.

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Delhi students discover new asteroid

NEW DELHI, AUGUST 31

Two Delhi students have made history by discovering an asteroid as part of a unique astronomy project connected to US space agency NASA. The duo will also get an opportunity to name the asteroid.

Vaibhav Sapra and Sharanjeet Singh, class XII students of Bal Bharati Public School in Pitampura, discovered a main belt asteroid (2011 QM14) this month as part of the All-India Asteroid Search Campaign (AIASC). About 60 schools from across India participated.

NGO Science Popularisation Association of Communicators and Educators (SPACE) along with the International Astronomical Search Collaboration

(IASC), an international educational outreach programme, were behind the project involving the students.

Both Vaibhav and Sharanjeet were on cloud nine after they received a communication in this regard from IASC director Patrick Miller on August 27.

"I can't tell you how happy I am as I really wanted to discover an asteroid and name it. I had participated in the competition last year also but could not succeed then," said Sharanjeet, who wants to pursue a career in mechanical engineering.

Last year, two Delhi students had discovered a main belt asteroid for the first time during the same programme.

Asteroids are very small

planet-like objects that generally go around the Sun in orbits located between Mars and Jupiter. Sometimes these are nudged by gravitational forces out of their orbits and can come into contact with Earth.

The AIASC campaign, in its second year, provides an opportunity for students to collaborate and analyse data for asteroid hunting.

"The participants are provided hands-on training to go through exclusive data files of the sky provided by IASC using astronomical data analysis software. The data files had images of the sky taken in the night with 24-inch and 32-inch telescopes at the Astronomical Research Institute (ARI) Observatory in the US," said Space Group chief

managing director Sachin Bahmba.

Explaining about the process, Sharanjeet said, "We were working on this for the last one-and-a-half months. We used to sift the data every day for two-three hours and send our observations to IASC."

"It was a tough task to work on this along with our studies, but both of us were totally into it. We have sent in total 11 observations and have got confirmation for one," he said with a smile.

The programme allows the discoverers to name the asteroid. "We haven't decided about the name as it will take three-four years before we get to name it. The IASC will continue to monitor and track its path," said Vaibhav. -- IANS

TRIBUNE ND 1/09/2011 p-11

India embarks on first study on health risks of mobiles

Anyone can participate; study to evolve data for determining safe levels of radio frequency radiation exposures

ADITI TANDON
TRIBUNE NEWS SERVICE

NEW DELHI, AUGUST 31

If you are 18 to 45 years old and have been using a mobile phone regularly, you might like to consider participating in India's first biomedical study on the health risks of mobiles.

Embarking on a major research -- "Effect of Non-ionizing Electromagnetic Field on Human Health" -- in Delhi, National Capital Region and the nearby states of UP and Haryana, the Ministry of Health has invited anyone to take part in the study.

The subjects will be examined by top experts of AIIMS and will get free pick and drop. The development comes close on the heels of a recent WHO-sponsored study that linked the

CATEGORIES OF STUDY

- **Heavy exposure male group:** 1,000 subjects exposed to RFR for over 4 hours a day
- **Moderate exposure male group:** 1,000 subjects exposed to RFR less than 4 hours a day but not less than 2 hours a day
- **Control male group:** 1,000 subjects not exposed and not using mobile phones or cordless phones
- **Heavy exposure female group:** 500 women exposed heavily
- **Moderate exposure female group:** 500 women exposed moderately
- **Control female group:** 500 women not exposed

use of mobiles to potential risks of health and cancers in the long run. But recognising the fact that the Indians widely differ from the Caucasians (subjects of most studies in the West) in physical and biological attributes, the government has decided to conduct a local study, which will then guide it in determining the levels of safe exposure of

the radio frequency radiations (RFRs), which the mobile phones and mobile phones' towers emit.

The study will be conducted by the Indian Council for Medical Research (ICMR), which said the Indians were different from the Caucasian population in their socio-economic status, bone mineral density, mus-

cles and fat content and environmental conditions.

"Data generated in the West can't be used to develop safety standards for the RFR exposures in India. We don't have any data on the RFR affects on the Indians. Hence this study," Dr RS Sharma, Deputy Director General, ICMR, said. The study is rooted in the fact that the RFRs emitted from the mobile phones and towers are a subset of electromagnetic energy covering the frequency range 3 KHz to 300 GHz

The explosive development of cellular phone system has increased the extent and magnitude of the RFR exposure and new technologies are being introduced without information about their nature or even prior detailed discussion within the scientific community about their possible conse-

quences for health.

"Potential exposure also develops in the vicinity of the fixed, broadcast facilities often located in the residential areas and schools. As costs of mobile phone technology have fallen, their use has increased dramatically and the overall levels of exposure to the population as a whole have increased drastically.

Though the review of international scientific data available so far could not establish conclusive evidence on the safety or risks of the RFRs emitted from the mobile phones and cell masts, growing body of scientific evidences indicate towards the adverse health effects of the RFR, which may be possible if not probable. We need to find out where we stand," Dr Sharma said.

TRIBUNE ND 1/09/2011

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ISRO to build more powerful satellites

BANGALORE, AUGUST 31

Indian Space Research Organisation (ISRO) plans to build a new class of powerful communication satellites that packs more capacity and new technologies, its Chairman K Radhakrishnan said here today.

This kind of spacecraft would handle larger amount of power and accommodate more number of transponders in the same satellite, he said, adding that ISRO planned to incorporate new technologies in them and get into higher bands.

"Today, we are at Ku band. We want to get into Ka band and even higher bands. This is one of the priorities in the coming five-year plan, which starts in April next year," said Radhakrishnan, who is also chairman of the Space Commission and Secretary in the Department of Space.

"In the remote sensing satellite field, we have to get into the environmental studies and climate change studies. This is our require-

Farther into space

■ Spacecraft will handle more power, transponders in the same satellite

■ In the remote sensing satellite field, ISRO to get into climate change studies

■ ISRO will launch its first navigation satellite next year

ment in the next five-year plan," he said.

He said the Bangalore-headquartered ISRO would launch its first navigation satellite next year, under its Indian Regional Navigation Satellite System programme, which would be followed by six more such spacecrafts.

"These will have live coverage over the Indian region," he said. ISRO's GSLV at present can carry satellites weighing 2.2 tonnes into space. Radhakrishnan said the GSLV-Mk III, which can lift four tonnes spacecraft, is going to be one of the "major targets" in the coming five-year plan. — PTI

Financial
Chronicle ND
01/09/2011

P-10

Isro plans to develop a new class of satellites

PRESS TRUST OF INDIA

Bangalore

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"Today, we are at Ku band. We want to get into Ka band and even higher band. This is one of the priorities (in the coming five-year plan (which starts in April next year)", Radhakrishnan, who is also chairman of space commission and secretary in the department of space, said.

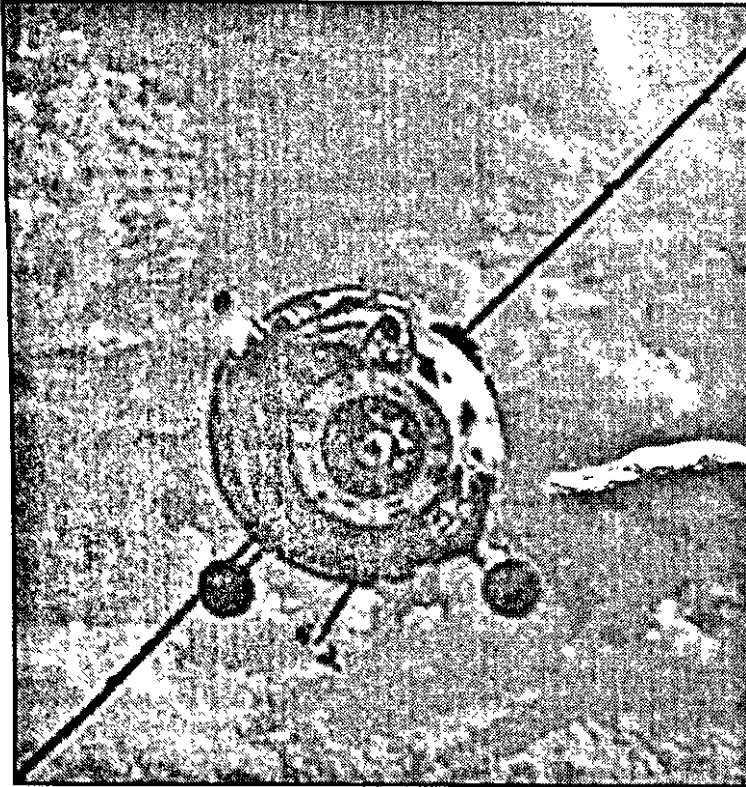
"In remote sensing, we have to get into environmental studies and climate change studies. This is one requirement, new requirement (in the next five-year plan)," he said.

He said the Bangalore-headquartered Isro would launch its first navigation satellite next year, under its Indian Regional Navigation Satellite System (IRNSS) programme which would be followed by six more such spacecraft. "So, these will have live coverage over Indian region," Radhakrishnan said.

Isro's GSLV today can carry satellites weighing 2.2 tonne into space. Radhakrishnan said GSLV-Mk III (which can lift four tonne spacecraft) is going to be one of the "major targets" in the coming five-year plan.

Political & Business Daily ND 01-Sep-11 P8

Russia postpones space mission after crash



TIMOTHY HERITAGE

RUSSIA postponed the next manned mission to the International Space Station by at least a month on Monday and an official said any further delay might force Moscow to consider leaving the station unmanned for the first time in a decade.

The Russian space agency, Roskosmos, announced its decision to allow time for safety checks to be made following the crash of an unmanned cargo craft ferrying food and fuel to the space station on August 24.

It set no new dates for the missions in a brief statement. But Russian news agencies said three of the six crew would now return to Earth around September 16, instead of September 8, and the

replacements would blast off in late October or early November instead of on September 22.

"If for any reason we will not be able to deliver the crew before the end of November, we will need to review all possibilities including leaving the station unmanned," Alexei Krasnov, who is in charge of manned flights at Roskosmos, was quoted as saying by Interfax news agency.

Interfax quoted an unnamed space official as saying Roskosmos would carry out two test launches of its unmanned Soyuz rocket before sending the next astronauts into space.

The International Space Station, an orbiting research laboratory which is a \$100-billion project involving six countries, has been permanently manned

for more than a decade.

The next launch of crew members to the space station will be the first since the US space agency NASA retired its 30-year shuttle program in July. This has caused concern at NASA as it now relies entirely on Russian craft to send people into space.

Russian space officials hope the announcement of safety checks will increase confidence following the crash, in which a Russian Soyuz-U craft failed to reach orbit and burned up in the atmosphere shortly after launch.

The Soyuz-U, whose failure was caused by an apparent problem with the rocket's upper-stage motor, closely resembles the Soyuz-FG used to transport astronauts to the orbital station.

"These delays and checks are normal following such a failure. I think they will manage to get a craft to the space station to avoid it being unmanned," said Igor Lissov, editor of monthly Russian space journal *Novosti Kosmonavtiki*.

"You can run the space station from Earth but you can't do it as well as when it is manned," he added, but declined to speculate how long it could be left unmanned.

NASA said last week the six astronauts in orbit had enough food and water to go several months without supplies. But bringing astronauts back to Earth would be safer before winter starts in Kazakhstan, where they would touch down.

The station is manned by US astronauts Ron Garan and Mike Fossum, Japan's Satoshi Furukawa and Russian cosmonauts Sergei Volkov, Alexander Samokutyayev and mission commander Andrey Borisenko.

Borisenko, Samokutyayev and Garan are due to end their mission.—Reuters

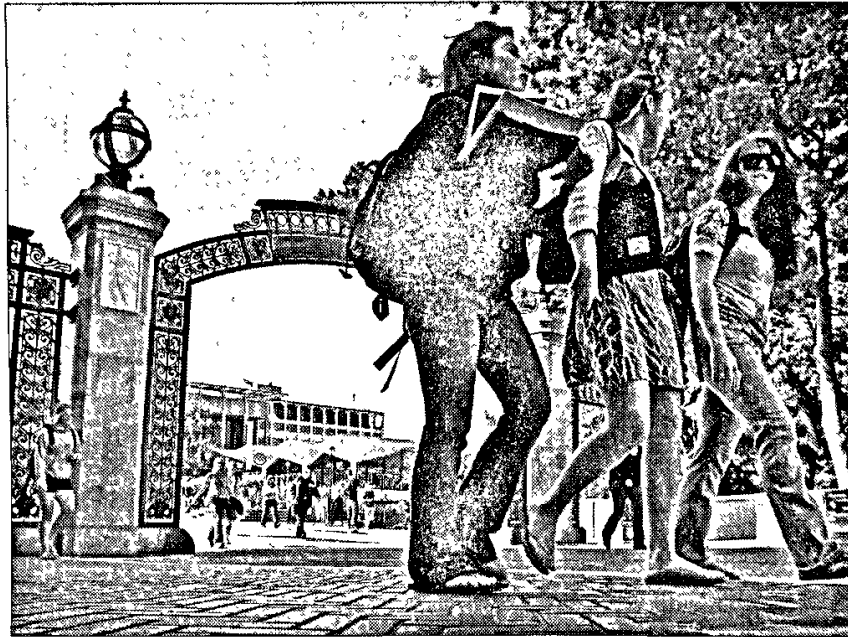
Pass or fail: professor's dilemma

IN MANY countries getting a university education is not what it used to be: Guaranteed entrance into an employment track, where salary and perks grew year in and year out. These days, completing a bachelor's degree ensures a jump in salary over high school graduates, but not necessarily long-term growth in income. The same is true for many — thankfully, not all — master's and doctoral degree programmes. Many academics have blamed these developments on technical progress that favours the computer literate and greater competition from talent abroad. In fact, a good part of the answer may be far closer to home — and represents a growing threat to national living standards.

While this article is about the growing incentives that are generating falling university standards, the cause for concern should not be exaggerated. There still are many dedicated professors willing to give their time to students. In addition, many students remain keen on learning and don't fret about grades. Having taught in universities on both sides of the Atlantic, what I want to draw attention to are the pressures that are undermining meritocracy — pressures that will no doubt be exposed in a scandal at some point in the future.

Woe betide a professor that dares to fail many students. "Obviously" such failures reflect poorly on course design and execution and couldn't possibly be the fault of students themselves. Implausibly short exams and assignments discourage the setting of tough questions that reveal whether a student can construct a sequential argument. Another tactic used to create the illusion of standards is to set so many assignments that it is al-

Simon J Evenett



MINDSET CHANGE: Professors should not be expected to bail out underperformers by dumbing down course content or evaluation procedures to inflate grades, otherwise students will face a tough time looking for jobs

most impossible for students to master them all — students know this and resort to a deadline-meeting mentality. Quality is squeezed out by quantity.

Appeal procedures and rules, which allow students to retake a course's exams, place almost all the burden on professors, and send a strong signal too. And if all of this fails, then professors know that students can fill in scathing evaluations of their courses, which university administrators often base promotion and salary decisions on, yet show little energy getting to the bottom of the problem. These are hardly the circumstances conducive to preparing minds for the 21st century.

Student contentment — not intellectual pursuits — has moved to the centre of univer-

sity life, as if college has become an expensive finishing school. Lobbying for higher grades, even if it comes at the expense of a fellow student, is *de rigueur*. Sometimes, even parents join in, incapable of accepting the fact that their offspring isn't a genius. In many courses, failing students is simply not an option for all but the most secure professor. Important opportunities to learn from failure and adversity are lost.

Fortunately, the situation is reversible, but it would take bold steps on the part of faculty, students, and university officials to stop the rot. The latter would have to accept that the chase for higher and higher revenues from greater student numbers is limiting student-faculty interaction, ensuring that a growing propor-

tion of students are barely trained at all. Professors should not be expected to bail out these underperformers by dumbing down course content or evaluation procedures. Students and their parents should start asking hard questions about rising faculty-student ratios and inadequate post-lecture support for learning.

For their part, university students should recognise that eventually the labour market does a serious job of sorting out those with critical skills and will discount degrees from those universities where grade inflation is rampant. Reputational considerations should induce universities to move towards examinations that are double-blind, that is, where neither the student nor the evaluator can find out the identity of the

other, before and after exams and the like take place.

Examination boards, with external faculty to ensure that standards don't fall below accepted norms, should be appointed and appeals by students must be taken up against the board, not individual faculty. The evaluation process needs to be as depersonalised and evidence-based as possible. That means that grades for "class participation" should be replaced with other ways of assessing understanding. The highest grades should be awarded very sparingly. Entrenching these reforms, which should be backed by university leaderships committed to excellence, would be a massive corrective step.

Every year, I ask the MBAs, who visit my university for a semester, why they chose their home university programme. One talented Chinese MBA let the cat out of the bag when she said that she chose a UK university because "everyone" in China knows that the exam grades there cannot be "gamed". The look of horror on some of her classmates said it all; the termites eating away at meritocracy had been exposed.

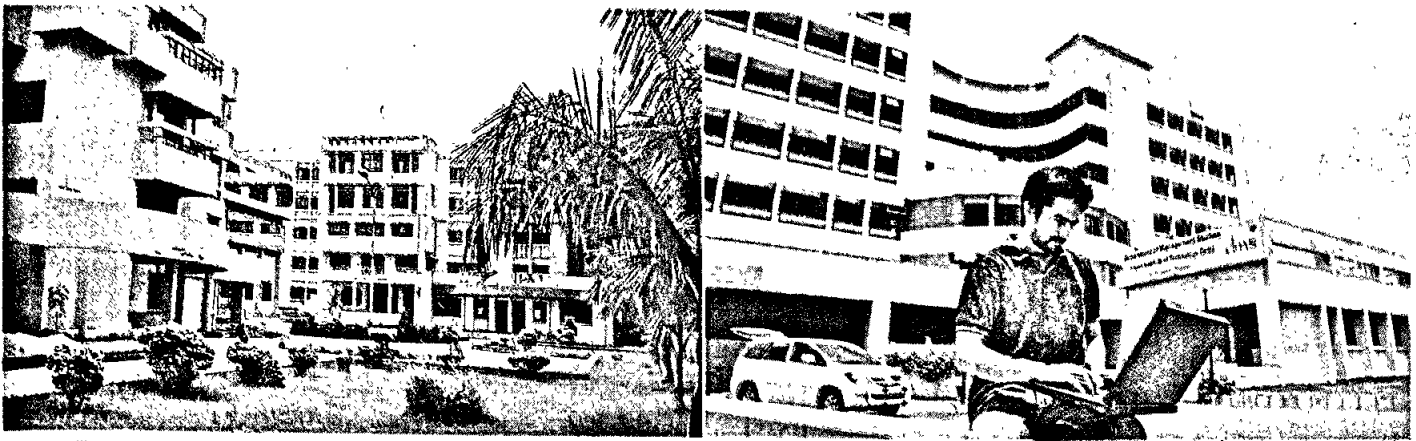
What is needed now is a counterattack in favour of academic standards. For those students who want their university education to be more than advanced exercises in lobbying, such reforms would be welcome. Parents and policymakers should take note too — otherwise, where is all that innovation going to come from to lift living standards throughout the 21st century, especially once populations begin to age. Failure must be restored as an option.

(The writer is a professor of international trade and economic development at University of St Gallen, Switzerland)

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SHOT IN THE ARM FOR CAT, AS B-SCHOOLS SEEK CREDIBILITY

While competitive exams like JMET die a slow death, a growing number of institutes take to CAT scores



Institutes like XLRI (left) and IIT Delhi will contribute to a 25 per cent increase in CAT registrations for this year

KALPANA PATHAK & VINAY UMARI
Mumbai/Ahmedabad

At a review meeting in June, the Indian Institute of Technology (IIT), Delhi, decided to do away with the Joint Management Entrance Test (JMET). The decade-old exam, a qualifying test for getting admissions into business schools run by IITs and the Indian Institute of Science, has now given way to the Common Admission Test (CAT), promoted by the Indian Institutes of Management (IIMs).

IIMs are elated at the growing popularity of CAT. In a maze of over a dozen management qualifying examinations, CAT is the only one that attracts a few lakh aspirants every year. "It's heartening to see quality institutes like IITs too joining the bandwagon to accepting CAT as a qualifying examination. This reinforces CAT's credibility. This will not only push CAT's popularity but also increase the number of registrations by 25 per cent," said Janakiraman Moorthy, CAT convenor for 2011.

The death of JMET can be attributed to the fact that it was not too different from CAT in content. Most students who take JMET also appear for CAT. Also, it saw enrollment from 30,000 students in 2010 compared to 40,000 in 2009. In 2010, CAT saw about 206,000 registrations. However, after a fall in the number of students taking the CAT over the last two years, IIMs say they expect to see a growth this year. The third computer-based edition of the yearly-test, conducted by IIMs through partner Prometric, is expected to witness a 25 per cent rise in applications. In 2008, around 276,000 aspirants appeared for CAT. This fell to 240,000 in 2009.

Expectations of such a rise in applications may also be due to an almost glitch-free CAT last year, after a bumpy start in 2009, when IIMs and Prometric had to conduct the test in two phases, after thousands of candidates suffered technical glitches at several centres. Prometric also discontinued its partnership with NIIT after the first stint and moved on to tie up with MeritTrac and Everonn.

Ten new non-IIM B-schools would accept

CAT scores this year, which would push the total number of non-IIM institutes accepting CAT scores to over 165. While B-schools registering with IIMs to use CAT scores pay a first time fee of Rs 2.5 lakh, regular B-schools pay Rs 2 lakh per annum for this.

IIMs plan to take the examination to international level in future and conduct it round-the-year. They have received requests from international B-schools to conduct CAT for them.

IIMs also plan to hive off CAT into a separate entity. "But that will be taken up in a year or two, since this year, we intend to focus only on strengthening the test. By having a separate entity for CAT, IIMs can focus on management education, while the former will take care of conducting the premier test," said Moorthy.

As part of consolidation and to offer convenience to more candidates, three new cities - Bhillai, Jammu and Dehradun - have been added to the previous 33 test locations. This will help bring CAT closer to the northern states. Now, candidates will also be able to

purchase CAT vouchers from 201 Axis Bank branches, an increase of 30 outlets, said Moorthy. CAT registrations which began this month are open till September 28.

This year, CAT will be conducted under a new format, with only two sections instead of three. The first section will focus on quantitative ability and data interpretation; the second on verbal ability and logical reasoning. These two sections will be implemented sequentially with separate time limits. The examination will be for 140 minutes, where candidates will have 70 minutes to answer 30 questions within each section, which will have an on-screen countdown timer. Once the time ends for the first section, they will move to the second and will no longer be able to go back.

"With the introduction of the new format, we want to see how it helps candidates to focus on specific content. Under the new format, candidates can concentrate on whichever section they are working on and it won't give an undue advantage to candidates strong in a particular section," said Moorthy.

Times of India ND
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Times of India ND 01/09/2011
P-17

DU plans new 4-yr maths-IT degree to push innovation

Neha Pushkarna | TNN

New Delhi: Taking college education beyond classrooms and textbooks, Delhi University is planning a four-year course that will focus on innovation and hands-on learning through industry-based projects. The proposed degree programme in mathematics and information and communication technology (ICT) will be interdisciplinary as well.

"The four-year programme will encourage students to take up innovations in diverse areas. The course will train them to go into research, engineering, signal processing, electronics and computer science. There will be lots of projects connected with indus-

► Hands-on learning, P 4

try," said a senior DU official.

The course will give 60% weightage to projects and innovations and 40% to classroom learning. DU plans to place the new programme before the executive council and academic council soon for approval so that it can be opened for admissions later this year.

Green funeral: Now, dissolve bodies in water

London: A UK-based company has developed what it claims is probably the world's best green alternative to cremation — an "alkaline hydrolysis" unit, which has been installed at a funeral home in Florida, US.

The unit by Glasgow-based Resomation Ltd works by dissolving the body in heated alkaline water; it has been installed at Anderson-McQueen funeral home in St Petersburg, the BBC reported.

The makers claim the process produces a third less greenhouse gas than cremation, uses a seventh of the energy, and allows for the complete separation of dental amalgam for safe disposal.

Mercury from amalgam vaporized in crematoria is blamed for airborne mercury emissions.

"Resomation was developed in response to the public's increasing environmental concerns. It gives them that working third choice, which allows them to express those concerns in a very positive and I think personal way," company founder Sandy Sullivan was quoted as saying.

The installation was only made possible after the state legislature in Florida approved use of the technology.

In fact, the system works by submerging the body in a

The system works by submerging the body in a solution of water & potassium hydroxide. The process produces a third less greenhouse gas than cremation, uses a seventh of the energy and allows for the complete separation of dental amalgam for safe disposal

solution of water and potassium hydroxide which is pressurised to 10 atmosphere and heated to 180C for between two-and-a-half and three hours.

Body tissue is dissolved and the liquid poured into the municipal water system. Tests have proven the effluent is sterile and contains no DNA, and poses no environmental risk.

The bones are then removed from the unit and processed in a 'cremulator', the same machine that is used to crush bone fragments following cremation into ash. Metals, and artificial joints and implants are recovered. P11

आगे आएंगे आईआईटीयन: सूरि

भ्रष्टाचार मुक्त भारत निर्माण

ड्यूरो @ नई दिल्ली

जनलोकपाल बिल के बहाने भ्रष्टाचार के खिलाफ देश के आमजन को जाग्रत कर सामाजिक कार्यकर्ता अन्ना हजारे ने पूरी व्यवस्था व कार्यप्रणाली को पारदर्शी बनाने का प्रयास किया है। अब देश के सजग नागरिकों का कर्तव्य है कि वह न केवल स्वयं इसको आत्मसात करें बल्कि सभी क्षेत्रों में इसे किस तरह सम्पूर्णता में अमल में लाया जाए, इसका पुरजोर प्रयास भी करें। इंडियन इंस्टीट्यूट ऑफ टेक्नोलॉजी

(आईआईटी) खड़गपुर के एल्युमनी एसोसिएशन की ओर से संस्थान के 61वें स्थापना दिवस पर आयोजित समारोह में नार्थ इंडिया के अध्यक्ष वाईपीएस सूरि ने यह विचार व्यक्त किए।

आईआईटी दिल्ली में हुए समारोह में उन्होंने संस्थान के पूर्ववर्ती छात्र और वर्तमान में विभिन्न सरकारी व निजी कम्पनियों के साथ-साथ बड़े कारपोरेट घरानों में विशिष्ट पदों पर तैनात प्रोफेशनलों का भ्रष्टाचार मुक्त देश बनाने में अपना सर्वस्व योगदान करने का आह्वान किया।

फिनलैण्ड की जानी मानी स्टील कम्पनी ओटोकम्पू के इण्डिया प्रमुख

सूरि ने बताया कि संस्थान के तीन हजार से अधिक आईआईटी एल्युमनी उत्तरी भारत में बड़ी सरकारी व निजी कंपनियों में शीर्ष पदों पर हैं। वे अपने अपने कार्य क्षेत्रों को भ्रष्टाचार मुक्त करने के लिए प्रयास कर सकते हैं।

टाटा स्टील के रेजिडेंट डायरेक्टर भरत वखलू ने कहा कि कंपनियों को अपना कारोबार बढ़ाने के लिए रिश्वत देने की प्रवृत्ति से बचना चाहिए। उन्होंने इसके लिए फिनलैंड के ट्रांसपेरेन्सी सिस्टम का हवाला देते हुए बताया कि वहां बिल्कुल भी भ्रष्टाचार नहीं है। कोई भी बगैर रिश्वत न केवल कारोबार बल्कि बेहतरी के लिए वैल्यू एडिशन भी कर

सकता है। आईआईटी खड़गपुर के निदेशक प्रोफेसर दामोदर आचार्य ने टीम अन्ना के प्रमुख सदस्य और संस्थान के छात्र रह चुके अरविंद केजरीवाल की भूमिका की सराहना की।

समारोह में बड़ी संख्या में उपस्थित आईआईटी दिल्ली के छात्रों ने भ्रष्टाचार को जड़ से उखाड़ फेंकने का संकल्प लिया। समारोह में हिन्दुस्तान लीवर के पूर्व निदेशक गुरदीप सिंह, हेडस्ट्रांग के चेरमैन अर्जुन मल्होत्रा और फिननोड के निदेशक और भारत में फिनलैंड दूतावास में काउंसलर रिकू मकेला मौजूद थे।

नॉन इंजीनियरिंग गल्स को सात अतिरिक्त प्वाइंट, इंजीनियरिंग के अलावा अन्य स्ट्रीम लाने पर जोर

आईआईएम में छात्राओं को मिलेगा ज्यादा मौका

अमर उजाला ड्यूरो

नोएडा। आईआईएम संस्थान में लड़कियों की संख्या बढ़ाने और क्लास को इंजीनियरिंग बैकग्राउंड के छात्रों की बादशाहत से मुक्त कराने के लिए कदम उठाए हैं। केट-2011 में शामिल होने जा रही छात्राओं को ज्यादा मौका देने के लिए आईआईएम ने अपनी दाखिला प्रक्रिया में बदलाव किया है। 2012-14 बैच के एडमिशन में छात्राओं को अतिरिक्त प्वाइंट देने का निर्णय लिया गया है।

आईआईएम लखनऊ और काशीपुर में 2012 के बैच में चयनित छात्रों की शैक्षणिक पृष्ठभूमि में विविधता लाने के लिए पॉलिसी में कुछ बदलाव किए हैं। 100 प्वाइंट वाली चयन प्रक्रिया में आर्ट, कॉमर्स, फाइन आर्ट्स, जर्नलिज्म, इकनोमिक्स, बैंकिंग, चाटर्ड अकाउंटेंसी, एजुकेशन, लॉ, फार्मसी, मैनेजमेंट और साइंस बैक ग्राउंड के छात्रों को 3 से 5 अतिरिक्त प्वाइंट मिलेंगे। आईआईएम लखनऊ-नोएडा के एडमिशन चेरमैन अरुणभ

मुख्योपाध्याय ने बताया कि हर गल्स कैडीडेट को 2 और नॉन इंजीनियरिंग गल्स कैडीडेट को 7 अतिरिक्त प्वाइंट दिए जाएंगे। नॉन इंजीनियरिंग बैकग्राउंड के सभी छात्रों को 5 प्वाइंट तक मिलेंगे। दसवीं-बारहवीं कक्षा के अंकों को 2 प्वाइंट और प्रेजेंटेशन के अंकों को 3 प्वाइंट दिए जाएंगे। उन्होंने बताया कि कक्षा में विविधता लाने के लिए नॉन टेक्निकल को भी बढ़ावा दिया जा रहा है। आईआईएम रोहतक में 600 प्वाइंट वाली दाखिला

प्रक्रिया में नॉन इंजीनियरिंग गल्स को 40 अतिरिक्त प्वाइंट और आईआईएम रायपुर 30 अतिरिक्त प्वाइंट देगा। दरअसल इस साल 2011-12 के बैच में

आईआईएम बंगलूरू में 22 फीसदी, आईआईएम लखनऊ में 14 फीसदी और आईआईएम अहमदाबाद में सिर्फ 11 फीसदी छात्राएं हैं।

पिछले साल केट की स्थिति

केट-10 में 2 लाख 4 हजार 267 छात्रों ने आवेदन किया। जिसमें से 74 फीसदी यानि 1 लाख 50 हजार 535 छात्र 26 फीसदी यानि 53 हजार 732 छात्राएं थी। इसमें इंजीनियरिंग और टेक्नोलॉजी बैकग्राउंड के 1 लाख 22 हजार 837 स्टूडेंट्स थे। कॉमर्स-इकनोमिक्स के 30 हजार 248, मैनेजमेंट के 21 हजार 809, साइंस के 12 हजार 69 और आर्ट्स-ह्यूमैनिटीज के सिर्फ-1828 छात्र थे।



बदलाव की बयार: सिस्टम को और बेहतर बनाने की कोशिश में जुटा केंद्रीय माध्यमिक शिक्षा बोर्ड

सीबीएसई ने ग्रेडिंग सिस्टम पर छात्रों से राय मांगी

• एक सितंबर तक छात्र दे सकते हैं राय

नई दिल्ली, जागरण संवाददाता : 'शिक्षा दिवस' को सुधार एवं सशक्तिकरण के अवसर के रूप में प्रयोग करते हुए सीबीएसई ने ग्रेडिंग पद्धति (सीसीई) पर छात्रों की राय मांगी है, ताकि इसे और बेहतर बनाया जा सके। सीबीएसई के शिक्षा अधिकारी ने बताया कि 11 नवंबर को मानव संसाधन विकास मंत्रालय ने देश के पहले शिक्षा मंत्री मौलाना अबुल कलाम आजाद की जयंती के अवसर पर राष्ट्रीय शिक्षा दिवस घोषित किया है। इस वर्ष बोर्ड ने शिक्षा दिवस को 'छात्र केंद्रित गतिविधियों' से जोड़ने का फैसला किया है।

बोर्ड ने इस अवसर पर शिक्षा के क्षेत्र में सुधार के महत्वपूर्ण तत्व सतत समग्र मूल्यांकन पर नौवीं, दसवीं और ग्यारवीं कक्षा के छात्रों की राय मांगी है। इस उद्देश्य के लिए कुछ प्रश्न जारी किए हैं। छात्रों से पूछा गया है कि क्या सीसीई मूल्यांकन का सर्वश्रेष्ठ तरीका है। मूल्यांकन के इस तरीके से प्राप्त किए गए अंक क्या आपके व्यक्तित्व के सभी पहलुओं को उजागर करते हैं। क्या सीसीई से आपका आत्मविश्वास बढ़ा है। सीसीई के बाद क्या आप अब कम तनावग्रस्त महसूस करते

आज एनसीईआरटी हो गई 50 साल की

नई दिल्ली, जास : राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद (एनसीईआरटी) के कार्यवाहक निदेशक प्रो. गोविंद इस बात को स्वीकारते हैं कि कितनाबें समय से बाजार में नहीं पहुंचती हैं, नकली किताबें भी बाजार में मौजूद हैं। राष्ट्रीय पाठ्यक्रम की रूपरेखा के तहत किताबों को अपग्रेडेशन और उन्हें सभी राज्यों में लागू करने में वक्त लगता है, क्योंकि विभिन्न राज्यों के एजुकेशन बोर्ड्स की एक मसौदे पर सहमति बनवाने में समय लगता है। फिर भी एनसीईआरटी ने 50 सालों के दौरान शैक्षणिक सुधार को लेकर काफी कार्य किए हैं और निरंतर सुधार की दिशा में कार्यरत है। वे बृहदार को स्वर्ण जयंती समारोह से पूर्व संवाददाताओं के प्रश्नों के जवाब दे रहे थे।



एनसीईआरटी के कार्यवाहक निदेशक गोविंद। साथ में हैं प्रो. बीके त्रिपाठी।

उन्होंने बताया कि बृहस्पतिवार को एनसीईआरटी की स्थापना हुए 50 वर्ष पूरे हो जाएंगे। एनसीईआरटी की स्थापना सन 1961 में हुई थी।

है। अधिकारी ने बताया कि छात्रों से इसका कारण बताने को भी कहा गया है।

सीसीई पर अपनी राय एक सितंबर 2011 तक भेजने को कहा गया है। शिक्षा दिवस के अवसर पर बोर्ड ने छात्रों और शिक्षकों के लिए वि्वज प्रतियोगिता का आयोजन भी किया है ताकि शिक्षा से जुड़े महत्वपूर्ण आयामों के बारे

में जागरूकता बढ़ाई जा सके। किंवदंती में 20वीं शताब्दी के बाद भारत और शेष दुनिया के विषय को तवर्जो दी गई है। इसके अलावा छात्रों के लिए पोस्टर निर्माण प्रतियोगिता का आयोजन किया जाएगा, जिसे तीन श्रेणियों में बांट गया है। पहली श्रेणी में पहली से चौथी कक्षा, दूसरी श्रेणी में पांचवी से सातवी कक्षा

स्वर्णिम जयंती पर बृहस्पतिवार को केंद्रीय मानव संसाधन एवं विकास मंत्री कपिल सिब्बल, केंद्रीय राज्यमंत्री डी. पुरन्देश्वरी और ई. अहमद मुख्य रूप से मौजूद रहेंगे।

कार्यक्रम में सन 1961 से अब तक एनसीईआरटी के कार्यों पर एक लघु फिल्म दिखाई जाएगी। बच्चों के लिए एक मैगजीन 'फिरकी' का लोकार्पण किया जाएगा। एनसीईआरटी के संयुक्त निदेशक प्रो. बीके त्रिपाठी ने बताया कि राष्ट्रीय पाठ्यक्रम की नई रूपरेखा के तहत सारी पुस्तकें आ चुकी हैं। कक्षा ग्यारह और बारह की गणित और विज्ञान की पुस्तकों की सामग्री तैयार है, जो अगले शैक्षणिक सत्र से छात्रों के लिए उपलब्ध होगी।

और तीसरी श्रेणी में आठवीं से दसवी कक्षा के छात्र हिस्सा लेंगे। इसके लिए 16 अगस्त तक पंजीकरण कराया जा चुका है। बोर्ड ने संदेश भेजने की प्रतियोगिता के आयोजन की भी योजना बनाई है। इसे दो खंडों में बांट गया है। एक संदेश शिक्षकों के लिए और दूसरा सीबीएसई के लिए होगा।

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रेलवे ने विकसित किया डीजल बचाने का उपकरण

विनोद श्रीवास्तव/एसएनबी

नई दिल्ली। डीजल की बढ़ती कीमतों से आर्थिक बोझ तले दबते जा रहे रेल मंत्रालय ने डीजल बचाने के लिए एक ऐसा उपकरण तैयार किया है, जिसके जरिए मौजूदा समय में डीजल इंजनों में इस्तेमाल किये जा रहे डीजल में करीब 4.5 फीसद की बचत होगी। यदि इतनी भी बचत हो गई तो रेलवे को सालभर में 450 करोड़ रुपए की बचत होगी। इस उपकरण की जांच करने के बाद रेलवे ने अपने सभी 35 सौ डीजल इंजनों में धीरे-धीरे लगाने का निर्णय लिया है। इस साल सौ डीजल इंजनों में यह उपकरण फिट किया जाएगा।

रेलवे ने अपने संस्थान अनुसंधान, अभिकल्प एवं मानक संगठन (आरडीएसओ) और आईआईटी कानपुर के सहयोग से इलेक्ट्रॉनिक फ्यूज इंजेक्शन (ईएफआई) को विकसित किया है। यह भारतीय रेलवे में मौजूद सभी पुराने डीजल इंजनों में लगाया जा सकता है। इस उपकरण की कई स्तरों पर जांच करने के बाद इसे पहली बार एक पुराने डीजल इंजन में लगाया

► इलेक्ट्रॉनिक फ्यूज इंजेक्शन लगाने से सालाना बचेंगे 450 करोड़ रुपए

गया। जांच और परीक्षण के बाद पाया गया कि इस उपकरण के लगाने से डीजल इंजनों में ईंधन की खपत में करीब 4.5 प्रतिशत की बचत हो रही है। इसके बाद रेल मंत्रालय स्तर पर इस पर विचार-विमर्श किया गया और निर्णय लिया गया कि रेलवे के मौजूदा चार हजार डीजल इंजनों में से 35 सौ डीजल इंजनों में यह उपकरण लगाया जाएगा। यह उपकरण 3100 और 3300 हर्स पावर के दोनों तरह के डीजल इंजनों को लगाया जाएगा।

डीजल कीमतों में लगातार वृद्धि के कारण रेलवे पर आर्थिक बोझ बढ़ा है। रेलवे अपने चार हजार डीजल इंजनों को चलाने के लिए हर साल 250 करोड़ लीटर डीजल का इस्तेमाल करता है। इसके लिए रेलवे को प्रतिवर्ष दस हजार करोड़ रुपए डीजल की खरीद पर खर्च करने पड़ते हैं। यदि सभी डीजल इंजनों में यह उपकरण लग गया तो रेलवे को सालाना 450 करोड़ रुपए की डीजल बचत होगी। लिहाजा रेलवे ने इस उपकरण को लगाने के लिए क्रमवार योजना बना ली है और इस साल सौ डीजल इंजनों में यह उपकरण लगा दिया जाएगा। इसके बाद अगले साल से शेष बचे डीजल इंजनों में इस उपकरण को लगाने में तेजी लाई जाएगी।