Newspaper Clips

July 21-22, 2012

July 21

Amar Ujala ND 22-Jul-12 P-13

जेईई में बदलाव पर कानपुर आईआईटी राजी

पर्याप्त समर्थन न मिलने पर विरोध का रास्ता त्यागा

अमर उजाला ब्यूरो

कानपुर। ज्वाइंट एंट्रेंस एग्जैम (जेईई) 2013 में बदलाव का रास्ता लगभग साफ हो गया है। आईआईटी काउंसिल के नए फार्मूले से अब आईआईटी कानपुर के एकेडमिक सीनेट के ज्यादातर सदस्य सहमत हो गए हैं। उन्होंने विरोध का इरादा भी छोड़ दिया है। 28 जुलाई को प्रस्तावित एकेडमिक सीनेट की विशेष बैठक में आईआईटी काउंसिल के बदलाव के प्रस्ताव पर मुहर लगने की उम्मीद बढ़ गई है।

आईआईटी कानपुर की एकेडमिक सीनेट के सदस्यों का कहना है कि इस मुद्दे पर अन्य आईआईटी का अच्छा सहयोग नहीं मिल रहा है। अकेले आईआईटी कानपुर और दिल्ली विरोध करके कुछ नहीं कर सकते हैं। बदलाव की प्रक्रिया से आईआईटी के शिक्षकों का नुकसान नहीं होगा। विरोध का खामियाजा देश के 42 स्टेट बोर्ड और सेंट्रल बोर्ड के अभ्यर्थियों को भुगतना पड़ेगा। सीनेट के सदस्य प्रोफेसर दीपक गुप्ता और प्रोफेसर वाईएन सिंह ने

28 जुलाई को एकेडमिक सीनेट की बैठक में होगी घोषणा

यह भी कहा कि जेईई में बदलाव का नया फार्मूला तभी मान्य होगा, जब सभी आईआईटी की एकेडमिक सीनेट की उस पर मुहर लगेगी। इस मुद्दे पर कानपुर की एकेडमिक सीनेट 28 जुलाई को होनी है। आईआईटी काउंसिल ने बदलाव के सभी बिंदु जारी कर दिए हैं। इसे देखने के बाद विरोध का प्रस्ताव फिलहाल स्थगित कर दिया गया है। कुछ बिंदुओं पर चर्चा के साथ बदलाव के प्रस्ताव को हरी झंडी मिलने की उम्मीद है। ज्यादातर सदस्य विरोध के मूड में नहीं हैं।

Hindu ND 22/07/2012 P-10

HRD makes ombudsman mandatory in technical institutions

Special Correspondent

NEW DELHI: Every technical institution in the country, approved or recognised by the All-India Council for Technical Education (AICTE), will have to provide for an ombudsman, as part of its grievance redressal mechanism.

The grievance could include those related with the standards of education, irregularity in the admission process adopted by the institute, refusing admission in accordance with the declared admission policy, withholding or refusing to return any document, and demanding money in excess of that specified in the declared admission policy.

According to the All-India Council for Technical Education (Establishment of Mechanism for Grievance Redressal) Regulations, 2012, issued by AICTE, each technical university shall appoint an ombudsman whose order would be mandatory, and failure of compliance could lead to withdrawal of AICTE approval and withdrawal of grants or financial assistance from the Council.

The regulations have been issued even as two Bills related to curbing malpractices — Prohibition of Unfair Practices in Technical, Medical Educational Institutions and Universities Bill that seeks to make educational malpractices like charging capitation fee, and overpricing of prospectus a criminal offence — and the Educational Tribunals Bill for dispute redressal — are pending in Parliament.

The ombudsman, who would be a retired judge, not below the rank of a District Judge, or a retired professor who has at least 10 years of experience, can also recommend the affiliating university for withdrawal or affiliation or withdrawal of status as a university of a Technical university, if established under a State Act.

The ombudsman will also hear the complaints of alleged discrimination by students from Scheduled Castes, Scheduled Tribes, OBC, women, and minority or disabled categories. Harassment and victimisation of students, including sexual harassment, will also fall under the purview of the ombudsman.

However, no application for revaluation or remarking of answer sheets shall be entertained by the ombudsman.

S. Vaidhyasubramaniam, Dean (Planning and Development) of Sastra University, said the proposed ombudsman regulation seems to be a backdoor entry, as the two Bills related to it are still pending in the Parliament.

Times Of India ND 22/07/2012
P-6

Meta-university on track, first course by August

TIMES NEWS NETWORK

New Delhi: Delhi University is all set to launch its meta-college concept and introduce the first course under it from August. The academic council (AC) — the highest decision making statutory body in DU academics — on Saturday approved the concept in an emergency meeting.

The approval has paved the way for DU to launch a master's programme in mathematics education jointly with Jamia Millia Islamia. The AC also approved credit transfer, which will allow DU to accept and transfer credit for students under the meta-university. Now the matter will be placed before the executive council, for final approval on Sunday.

The AC on Saturday passed all three agenda items. Although a few elected representatives registered their dissent, the agenda was passed with 114 of 120 present members supporting it.

Speaking to TOI immediately after the meeting, DU vice-chancellor Dinesh Singh said: "While the BTech in humanities under the meta-college will start from August 15, we will plan its admission process from Monday. Under BTech in humanities, students can select subject options from the existing courses in any DU college. These will comprise

NOD FOR CREDIT TRANSFER

50% of the course while the rest will be specialization in media studies, art and design, historical tourism, education and counselling, among others. Students admitted to various colleges this year are eligible to apply for this course offered by the Cluster Innovation Centre."

Regarding the master's course in mathematics education, Singh said: "We have to offer this course jointly with Jamia Millia Islamia. In principle, Jamia has the approval. Now the ball is in their court to get the matter approved, and hopefully by August 15 we will be able to launch this course as well."

One of the dissenting members, Sheo Dutt, said they were not opposing change and innovation but the hurried implementation without proper discussion.

"All democratic forums of the university, right from the standing committee to the committee of courses, are being destroyed because of this culture of managing approvals via emergent meetings. My main concern is about the course structure which was presented to us. In mathematics education under meta-university, there is just one paper on mathematics and the rest are of various other subjects. Is it fair to offer a master's degree in mathematics when a student has studied just one paper in the subject?"

Times of India Chennai 21-07-2012 P-11

Lignite city turns IITians' cradle

1 In 4 Students From TN School Enters Premier Tech Institutes

Bosco Dominique | TNN

Cuddalore (TN): Patna's overachieving Super 30 faces serious competition from a school in Neyveli in Tamil Nadu. One of every four students, who graduates from the Jawahar Higher Secondary School (JHSS), Neyveli, makes it to the premier Indian Institutes of Technology (IITs).

It is unlikely to have anything to do with the lignite in the soil, but the school has consistently produced bright sparks since it opened in 2005.

Sixty-eight of the 236 students, who have graduated from JHSS in the past six years, have joined the IITs. Sixteen of 71 students aced the IIT's Joint Entrance Examination (JEE) in 2011. This academic year, the CBSE school did one better, with 25 of 63 students, including nine girls, or one in every three, making it to the IITs.

This academic year, Neyveli's Jawahar Higher Secondary School saw 25 of 63 students, including nine girls, or one in every three, making it to the IITs

The secret behind the school's success is its integrated JEE coaching centre, which is run by the Neyveli Telugu Samithi (NTS).

It is probably no coincidence that Andhra Pradesh has among the highest success rates in the extremely competitive entrance exam.

A committee formed by the Neyveli Telugu Samithi has experts who review the training at the coaching centre and periodically invite teachers from across the country for guest sessions.

Seventeen students this year joined the IITs in Chennai, Roorkee, Kharagpur and Jaipur, while others opted for the National Institute of Technology (NIT) and the Birla Institute of Technology and Science (BITS), Pilani.

Neyveli topper G Abhiram got the 601st rank at the all India level in the IIT-JEE, while G Abeynaya, who came second in Neyveli, stood 1,572nd at the national level.

Five of the total 22 girls from the state of Tamil Nadu who cleared the JEE last year were from JHSS.

Abhiram, who bagged a national talent search examination (NTSE) scholarship, has joined the electrical engineering course at IIT-Madras.

"Abhiram decided to join an IIT when he was in Class 8. He also bagged an NTSE scholarship that year," said his father, S Gnanasambandam. "The school played a major role in training him and other successful students."

Abeynaya, who has chosen to study chemical engineering in IIT-Madras, also credited her teachers with her success, saying they prepared her batch excellently for both the CBSE examinations and the IIT-JEE.

Amar Ujala ND
22-Jul-12 P-16

आईआईएम-ए में इंजीनियरिंग छात्रों का दबदबा कायम

अहमदाबाद। इंडियन इंस्टीट्यूट ऑफ मैनेजमेंट-अहमदाबाद (आईआईएम-ए) के मैनेजमेंट के पोस्ट ग्रेजुएट प्रोग्राम में इंजीनियरिंग पृष्ठभूमि वाले छात्रों का दबदबा बरकरार है। 2012-14 के बैच में 381 छात्रों ने प्रवेश लिया है। 364 छात्र इंजीनियरिंग पृष्ठभूमि वाले हैं। नए बैच में 96.54 % छात्र ऐसे हैं, जिन्होंने इंजीनियरिंग की पढ़ाई की है।

Amar Ujala ND 22-Jul-12
P-7

40 इंजीनियरिंग कॉलेजों को नहीं मिले छात्र

नोएडा (ब्यूरो)। यूपी राज्य प्रवेश परीक्षा (एसईई) की बीटेक काउंसलिंग में प्रदेश के 41 इंजीनियरिंग कॉलेजों को एक भी छात्र नहीं मिला है। काउंसलिंग में 97 कॉलेज ऐसे हैं जिनमें सीट अलॉटमेंट दहाई के आंकड़े में सिमट गया हैं। लेकिन नोएडा और गाजियाबाद के इंजीनियरिंग कॉलेजों का दबदबा रहा। प्रदेश के 300 से ज्यादा इंजीनियरिंग कॉलेजों के लिए हुई काउंसलिंग में कुल 32,025 छात्रों ने ही सीट अलॉट कराई हैं। इनमें से 25,812 छात्र निजी कॉलेजों में गए हैं, जिनमें से 13 हजार 273 यानी 50 फीसदी से ज्यादा छात्र नोएडा और गाजियाबाद के कॉलेजों को मिले हैं।

July 22

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Skills for freshers

The Mentorship Review Committee (MRC) of the student mentorship programme at IIT-Delhi will be offering skill development classes to freshers this year. **Vishakha Sharma** reports

The student mentorship programme of the Indian Institute of Technology, Delhi (IIT-D), in its third year, is going for a new approach to ensure a seamless induction of freshers into the IIT-life.

After having conducted the 'new format' orientation programme for freshers this year (July 19-21), the Mentorship Review Committee (MRC) of the student mentorship programme is set to conduct various classes to upgrade basic skills of freshers coming from different backgrounds.

Student mentorship programme is a student-initiative, run by IIT Delhi. Every fresher joining IIT D is assigned a mentor who becomes a friend and guides freshers. There are around 160 mentors at IIT-D and each mentor ideally has six to eight freshers to mentor.

Praharsh Chandra, coordinator, MRC, says, "The orientation programme earlier used to comprise a presentation on IIT-D along with an interaction facilitated between the freshers and professors. But this year, apart from the formal interaction, we have introduced an informal interaction between the freshers and seniors. We also put up various stalls on campus like sports and cultural activities stall, academic stall and social foundation stall, among others. These stalls gave students an insight into the various options that they may have at different points of an IIT-life."

As to the skill development classes, this year, the mentors will be conducting English language and computer classes for freshers who need it.

> MRC is set to conduct various classes to upgrade basic skills of freshers coming from different backgrounds

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CONTEST

The 2012 edition of ACM International Collegiate Programming Contest (ACM-ICPC) Finals were recently held in Warsaw, Poland. This year, two Indian teams from IIT Delhi and IIIT Hyderabad have been ranked 18th. This is the first time any Indian team has crossed the 20th position. ACM-ICPC is an annual competitive programming competition among the universities of the world. Headquartered at Baylor University, US, it operates under the auspices of the Association for Computing Machinery (ACM).

Ashwani Kumar for tie-up between MIT, IIT-Ropar

GURDASPUR: Union minister of state for planning, science and technology and earth sciences Ashwani Kumar has held talks with deans of the Massachusetts Institute of Technology, Cambridge, US, for a possible collaboration to advise and mentor the Indian Institute of Technology, Ropar, which has been set up recently. MIT provost Claude R. Canizares assured Kumar of deputing a team of senior staff to engage with the Indian negotiators. **HTC**

New IIMs cry 'bias' against the old ones

By **Ritika Chopra** in New Delhi

IN WHAT points to a divide within the IIM family, the new institutions are no longer hiding their unhappiness over the "discriminatory" and "elitist" attitude of the old IIMs towards them.

Despite their request, the six new Indian Institutes of Management or IIMs — in Ranchi, Rohtak, Trichy, Udaipur, Kashipur and Raipur — are not part of the Common Admission Test (CAT) 2012 preparation process; a decision that has not gone down well with them.

"People in the (HRD) ministry, too, were aware of our request. Unfortunately, it seems we have been kept out even this year. The new IIMs are as good as the old ones. About 1.7 lakh candidates had applied to IIM Ranchi for the year 2011-12, that says something about us. But the old institutes do not have the same confidence in us as the students do," B.J. Xavier, director of IIM Ranchi, said.

MAIL TODAY EXCLUSIVE

The directors of the new institutes had expressed their interest in participating in the conduct of CAT 2012 during a meeting of the Human Resource Development (HRD) minister Kapil Sibal with the heads of all IIMs in Lucknow last month.

However, on Wednesday only the directors of the old IIMs — Ahmedabad, Calcutta, Bangalore, Kozhikode, Lucknow and Indore — were invited for the meeting in Kochi to discuss the future roadmap for CAT.

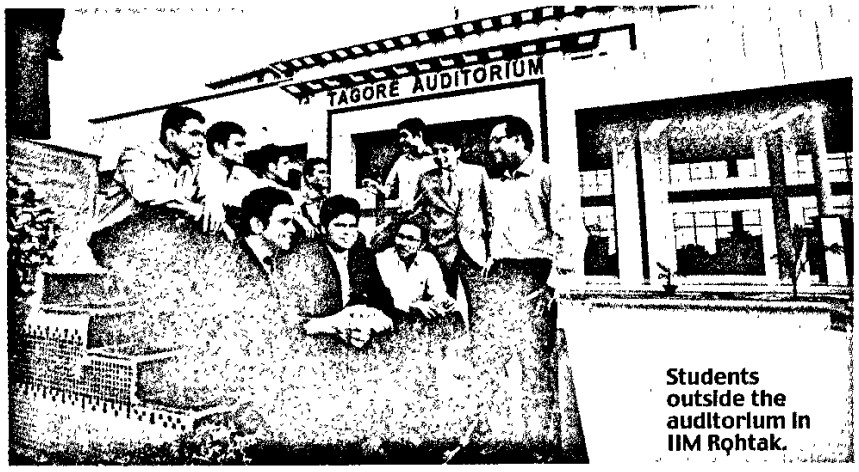
"It's true that there is a bit of reluctance on their (old IIMs) part to include us in the process. It seems that it will take time and till then we will only have to use CAT score and have nothing to do with its preparation," the director of another new IIM, who did not wish to be identified, said.

Shhekar Choudhury, director, IIM-Calcutta said: "This is an internal matter and I don't think this should be discussed outside," he told MAIL TODAY.

This is the second instance when the new institutions have felt snubbed by their older counterparts.

In November last year, Sibal had announced at a press conference that the old IIMs had agreed to share their final admission lists with the new IIMs so that the latter can manage their waitlists better and reduce stress on applicants. But, eventually only IIM Calcutta, Lucknow and Kozhikode kept their word.

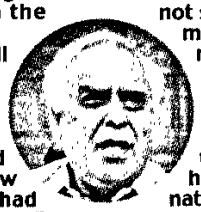
"IIM-Ahmedabad had said it won't share its information. We wrote to the others (Bangalore and Indore), but we were shunted from the director's office to the admission coordinator," Xavier said.



Students outside the auditorium in IIM Rohtak.

WORRIES OVER FACULTY QUOTA 'RIDER'

THOUGH keen on awarding management degree instead of diploma to students, the IIMs are worried this power may only come with the obligation of introducing reservation in the teaching faculty.



Last month, HRD minister Kapil Sibal had informed reporters, right after his meeting with the 13 B-school directors in Lucknow, of a consensus among the IIMs to award degrees. However, it has now emerged that the directors had also expressed their "concern" on whether such a move would make the government expect IIMs to reserve faculty positions like the IITs.

IIM directors want to preserve their model of teacher recruitment, which is completely merit-based, though most of the directors MAIL TODAY spoke to were not willing to go on record.

Unlike central universities and IITs, the IIMs do not award degrees as they were not set up through an Act of Parliament, but a charitable society route. The institutes are keen to confer degrees, keeping in view the difficulties faced by their graduates in pursuing education abroad. But to be able to do this, the 13 premier B-schools will have to be declared institutions of national importance via an Act.

Currently, the IIMs have no quota for professors. This may have to change once the institutes are given the tag of national importance, which comes with the obligation of completely following the government policy on reservation.

Ritika Chopra/New Delhi

Financial Express ND 23/07/2012 P-12

Empowering young India with digital education

CBSE has instructed affiliated schools to set up digital classrooms from primary to secondary level for every subject

Shantanu Prakash

Generations today are calculated at six-year intervals. An 18-year old is conceivably thought to be part of one generation while a 12-year old is part of another. This difference has been validated in light of the rapid use of technology and fundamental changes from the way kindergarten games are designed to the role that technology plays in classrooms.

Digital classrooms have modernised teaching by providing teachers a broad, flexible and agile methodology to streamline their teaching and make it more meaningful. For students, digital classrooms make learning more interesting and enjoyable. Their overall attitude towards learning becomes positive. Theoretical subjects like history and geography become more interesting with visual aids, and overall information retention becomes much higher. Audio-visual learning enables them to understand and retain even difficult concepts better.

The transition from paper to pixel is rapidly growing across the globe, primarily because there's a strong belief that digital classrooms are the way to the future. Over 90% of schools in developed countries like the UK, US and Australia are using technology-enabled interactive whiteboards. South Korea is taking huge steps in implementing educational technology for the younger K-12 segment. The South Korean government is making an investment of about $2.4 billion in K-12 schools to implement digital textbooks by 2015.

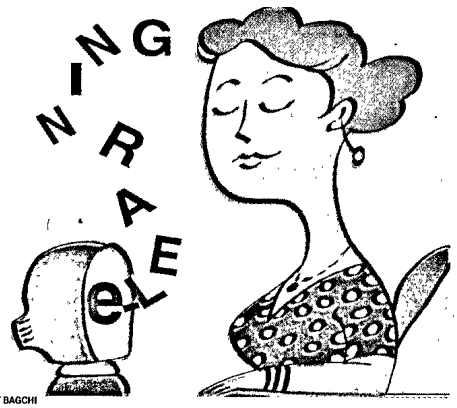
Public schools throughout Australia are benefiting from the federal government's $2.5 billion Digital Education Revolution initiative that provides up-to-date technology such as interactive whiteboards and virtual classrooms. Top 15 educational technology companies in the US are discussing how to make digital classrooms a reality in schools across America within the next five years.

In a twist to the traditional game of playing catch-up with the first world, India has been off the block much earlier than expected on this score. Call it providence, or chance or a result of the deeply ingrained value of education in our cultural milieu, our thrust was timely. But are tailwinds in our favour?

In India, too, many schools are experimenting with technology. Educomp has already established digital classrooms in over 12,000 schools spread across 560 districts in the country and the number is growing at almost 20 schools a day. Analysts expect this market to grow 10 times in the next five years.

And if you thought digital education was happening only in the privately-run schools, look more closely at government schemes. The objective of the central scheme ICT@Schools is "to provide opportunities to secondary stage students to develop Information and Communication Technology (ICT) skills and also for ICT-aided learning process. It enables widespread availability of access devices, connectivity to the Internet and promotion of ICT literacy." Under the scheme, the Union government provides 75% of financial assistance to the states/UTs. The balance 25% of funds are contributed by the state/UT governments. Most states have come up with their own vision, mission and implementation plans for ICT@Schools, and the work is on.

The case for digital education for young India is so strong that school boards too are taking concrete steps to increase the adoption of digital education in schools. For instance, the Central Board of Secondary Education has instructed affiliated schools to set up digital classrooms from primary to secondary level for every subject. The board issued instructions to all the school principals stating that after CCE evaluation system, the schools should now have digital classrooms.



ASIT BAGCHI

The board is also very clear on how it wants digital education to be embraced by schools and students. As per its directive, every student must have significant knowledge of computers and the internet. Every digital classroom should have a big screen projector for stress-free readability. Every classroom should have electronic interactive whiteboard system, along with a computer and UPS, and a digital library for every subject. Every class should have an electronic response system to calculate the time taken by students to understand the lesson and a resource person to help teachers in digital classrooms.

The directives are clear indicators that at a broad level our policymakers have accepted the criticality of digital education and have, in fact, indicated a definite roadmap for the future. But, as always, the challenge is not the definition of the policy framework, it is the implementation and target outcomes that are a cause of concern.

A lot has been talked about digital education, digital classrooms, smart boards, etc. A lot is being done about the adoption of digital education at private, government and school levels but, unfortunately, this adoption is more cosmetic than deep. Most schools, including the privately-run chains in urban areas, still have only a handful of digital classrooms. At the government level, too, under the ICT@Schools scheme, the minimum eligibility criteria is the conversion of one school per district into a smart school, subject to the availability of funds.

But is this enough to impart wholesome digital education to our children? A no-brainer, we know it is not. The solution lies in converting every conventional classroom to a digital classroom. In effect, we need to plan for an overhaul, rather than aim for symbolic transition which may or may not happen depending on resources at the school level.

The challenge at hand is sizeable and requires significant investments in various aspects that will impact this transformation. And it can't happen overnight. To begin with, we need a couple of things. First is a qualified and stated intent to convert all classrooms into digital classrooms with a cut-off date. Second is to create a clear roadmap to implement it. Unless a school decides that, say, in next five years all its classrooms will be digital classrooms, the change will never happen. More than the cost of implementation, training and adoption of a completely new teaching methodology by a school is a huge decision, and a huge change. It can only happen if there is a buy-in of both the school management and teachers. Schools have to stop looking at digital classrooms as mere showpieces to be displayed to parents during admissions. A digital classroom has to become the bare-minimum teaching accessory in schools like a blackboard is today.

Apart from the initiative of schools, more explicit advocacy from state and central governments coupled with a sense of urgency and palpable pressure is also a pre-requisite. Parent associations, too, must demand faster conversion to digitalisation to ensure that no child is left behind. That done, I believe the industry is fully capable of rising to the occasion and playing its part in this transformational enterprise.

A few years from now, students who are not computer literate, despite having degrees and diplomas, will still be called illiterate, because by then the rest of the world would have moved much ahead with digital education, and our children will be left behind, despite having completed at least 14 years of school education.

What is required is that schools should go digital in the true sense and that students should get to learn every subject in a digital classroom. Only then can we say that a digital revolution has occurred. Only then can we claim our students to be on par with the rest of the world.

The author is CMD, Educomp Solutions

Hindu ND 23/07/2012 P-4

Delhi University nod for meta-college project

Loud protests by Leftist teacher and student organisations

Staff Reporter

NEW DELHI: Delhi University's Executive Council at an emergency meeting on Sunday gave its nod for the university's ambitious plans for a meta-college in which students can choose to study any subject from any course across any stream and a meta-university in which they can choose subjects from Jamia Millia Islamia with credits granted by Delhi University for their degree.

The decision, however, was taken among loud protests and allegations of foul play by Leftist teacher and student organisations who cried themselves hoarse at the "rampant commercialisation" which they said would result from the meta-college and university which sought to exclude the poor students. "The agenda of today's meeting is in tandem with the UPA-II Government's servile inclination to accommodate the commercial interests of its American partners," said a joint statement from the Leftist teacher and student organisations.

"Courses under fancy names like Innovation Management do not even offer the standard components or specialised faculty which will ensure employability or academic value to students. The University's doors have been opened for rampant commercialisation, private and foreign institutions and accreditation of colleges. We appeal to all teachers and students to wage united and organised struggles against the university's authoritarianism and callous disregard for teachers' working conditions, intellectual sovereignty and students' fortunes," said the statement.

The Executive Council had a quorum of about 24 members of which only one, Rajib Ray, expressed dissent. The Academic Council meeting held earlier on Saturday had a quorum of about 50 members in which six expressed their dissent.

The Delhi University Teachers' Association which was miffed at the calling of an emergency meeting of the Academic Council alleged that the meeting was called in haste to disallow intellectual debate or thought to the matter, while casting aspirations on the course material. "The DUTA strongly condemns the nefarious move to convene a special and emergent meeting to pass a slew of plagiarised, poorly designed and sub-standard syllabi," it said.

The DUTA also warned that if the university did not start to amicably resolve all their long-standing issues or it would be "left with no alternative but to take resort to stringent action, the responsibility whereof shall lie squarely with the university".

The university plans to start its admission process on Monday itself and start the meta-college and university come Independence Day. Under the meta-college, a B. Tech in humanities in on offer in which students can select subjects from the existing courses in any DU college which will comprise 50 per cent of the course while the rest will be specialisations in subjects like art and design and historical tourism among others. The meta-university course is being offered in Master's in Mathematics Education in which students from DU can opt for courses being offered in Jamia Millia Islamia.

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A supercomputer that can unravel secrets of universe

London: Renowned theoretical physicist Stephen Hawking has launched the most powerful shared-memory supercomputer in Europe.

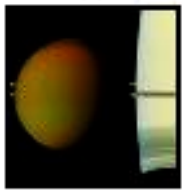
Hawking anticipates that the COSMOS supercomputer, manufactured by SGI and the first system of its kind, will open up new windows on the universe.

During the launch, which is part of the Numerical Cosmology 2012 workshop at the Centre for Mathematical Sciences at the University of Cambridge, Hawking said, "We have made spectacular advances in cosmology and particle physics. Cosmology is now a precision science, so we need machines like COSMOS to reach out and touch real universe, to investigate whether our mathematical models are correct," he said.

Hawking added, "I hope that we will soon find an ultimate theory which, in principle, would enable us to predict everything in the universe," he said. "Even if we do find the ultimate theory, we will still need supercomputers to describe how something as big and complex as universe evolves, let alone why humans behave the way they do," he said. PTI

'Saturn's moon Titan is Earth-like'

Titan, Saturn's largest moon is "a weirdly



Earth-like place" when it comes to geology, astronomers have claimed.

Titan boasts landscapes shaped by the flow of rivers, though they are rivers of liquid methane, not of water. And, like Earth, the surface of Titan is surprisingly free of craters, implying that geological activity is constantly reshaping the moon, as also happens here.

"It's a weirdly Earth-like place," Taylor Perron, assistant professor of geology at MIT said, "even with this exotic combination of materials and temperatures". PTI

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In a first, 'life' recreated in comp

Virtual Organism To Help In Better Diagnosis, Treatment Of Diseases

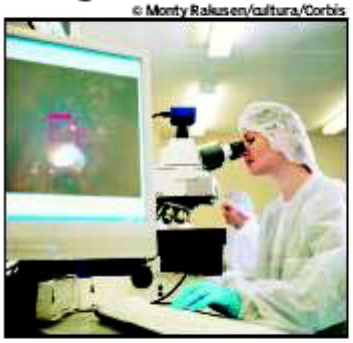
Washington: Scientists claim to have developed the world's first complete computer model of an organism, which can use computer-aided design for better diagnosis and treatment of diseases.

A team of Stanford researchers, including an Indian, used data from more than 900 scientific papers to account for every molecular interaction that takes place in the life cycle of Mycoplasma genitalium, the world's smallest free-living bacterium.

The model represents a stepping-stone toward the use of computer-aided design in bioengineering and medicine, according to the Journal 'Cell'.

"This achievement demonstrates a transforming approach to answering questions about fundamental biological processes," said James M Anderson, director National Institutes of Health Division of Program Coordination, Planning and Strategic Initiatives. "Comprehensive computer models of entire cells have the potential to advance our understanding of cellular function and, ultimately, to inform new approaches for the diagnosis and treatment of disease," he said.

Biology over the past two decades has been marked by the rise of high-throughout studies producing enormous troves of cellular information. A lack of experimental data is no longer the primary limiting factor for researchers. Instead, it's how to make sense of what they already know. "Many of the issues we're interested in aren't single-gene problems," said Covert, adding "they're the complex result of hundreds or thousands of genes interacting". "This situation has resulted in a yawning gap between information and understanding that can only be addressed by "bringing all of that data into one place and seeing how it fits together", said Stanford bioengineering graduate student and co-first author Jayodita Sanghvi.



SPECTACULAR FEAT

Mycoplasma genitalium is a humble parasitic bacterium known mainly for showing up uninvited in human urogenital and respiratory tracts. The pathogen also has the distinction of containing the smallest genome of any free-living organism — only 525 genes, as opposed to the 4,288 of E coli, a more traditional laboratory bacterium. The model will help to demonstrate a number approaches, including detailed investigations of DNA-binding protein dynamics and identification of new gene functions. PTI