Pallam nixes single college exam plan

ENTRANCE TEST Minister to opt for a ‘more nuanced’ format

Charu Kadur Kasturi
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NEW DELHI: One of India’s most ambitious and controversial education reform plans in recent years, to create a single national entrance test for admissions to college, could soon see a quiet burial.

The human resource development (HRD) ministry under M.M. Pallam Raju has decided to instead push a more nuanced blueprint for higher education admissions that will continue to allow state governments to conduct entrance tests and will share revenues earned from centra tests with them. The new plan will be unveiled at a meeting with state education ministers on April 2.

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The single test plan was pushed aggressively by Raju’s predecessor, telecom minister Kapil Sibal, with the aim of ending the multiple entrance tests students currently need to take to apply to different institutions across the country.

Sibal’s team prepared a proposal for a law to set up a national testing agency that would conduct a single aptitude test and subject specific tests.

But that plan faced strong opposition. Many institutions accused the government of infringing on their autonomy, and state governments alleged that the ruling UPA was encroaching on their Constitutional powers.

The new blueprint not only looks at creating the testing agency through an executive order instead of a law — something that the new minister mentioned at a press briefing last week — but also acknowledges the “intrinsic problems associated with the adoption of a single admission system.”
Smart classes: IIMs to share faculty online

DIGBHIJAY MISRA
Kolkata, 30 March

In a first-of-its-kind attempt, the Indian Institutes of Management (IIMs) are planning to introduce ‘smart classes’, which could be shared among all centres of the institute online. The move, aimed at beating the faculty crunch, is expected to involve global universities, too.

The proposal for these classes is going to be top on agenda when the directors of the 13 IIMs meet Human Resource Development Minister M M Pallam Raju in New Delhi next week.

The IIMs have currently been working with 30 per cent fewer faculty members than required. The meeting, to be chaired by Raju, will also discuss the draft Bill to convert IIMs into institutions of national importance through an Act of Parliament.

Ajit Balakrishnan, chairman of the board of governors, IIM Calcutta, says smart classes will be an innovative move and it help students get the best on a particular subject.

According to the plan, videos of lectures by a faculty member could be shared online or through video-conferencing. Besides, courses on various management subjects could be prepared in a way that students could access those online.

“This will help the IIMs and its students in a big way. If a particular faculty member is good with derivatives, that (his lectures) can be shared through the e-route among all IIMs,” Balakrishnan adds.

Though IIM-Bangalore currently provides a similar facility on its portal, it is at a much smaller scale. The Indian Institutes of Technology, too, have a similar project through the National Programme on Technology Enhanced Learning (NPTEL).

Balakrishnan confirms this endeavour will not be restricted within the country; plans are being evaluated to make it global.

“We are looking at the possibility of taking it globally, where content can be shared with other leading international universities and management institutes,” he added.

In India, some existing open universities also provide their educational content online for students who cannot attend the classes, but the quality of these study materials has been suspect. Experts, however, believe the idea of smart classes, if implemented successfully, will be very fruitful for the premier IIMs.

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Mars rovers to keep idling during eclipse

Vanita Srivastava
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NEW DELHI: Call it a spring break for the two Nasa’s Mars rovers. Opportunity and Curiosity will soon get a respite from their human operators on Earth as from next week the red planet will shine directly behind the sun from the earth’s perspective. This will prevent their ‘human bosses’ from sending signals or commands.

“During Mars-Sun-Earth alignments, the Sun can disrupt radio transmissions between the two planets,” Dr Amitabha Ghosh, chair of the Science Operations Working Group at Nasa Mars Exploration Rover Mission, told HT.

“This phenomenon is called solar conjunction. It is a cosmic event, just like any eclipse. The whole event will last for 3-4 weeks in April during which we will not send any command to the rovers so as to prevent an impaired command from reaching them.”

Every 26 months, the path between Mars and Earth is disrupted due to their orbits around the sun, hindering communication with other spacecraft.

“This is the time when the two rovers will have to fend for themselves,” Dr Ghosh said, adding: “They have inbuilt computers and can work without human interventions. Once the conjunction is over, we will be able to retrieve all the onboard data from the computers.”

On the news that a Nasa official had advised to pray on how to handle a large asteroid headed towards New York City, he said, “Nasa has made a mapping effort but the efforts are not very comprehensive. India still has to make an effort to be prepared in this direction. As a matter of fact, not just India but no other country is geared for it. There is actually no ready solution to the threat.”

Explaining the scientific findings made so far, he said that a potentially habitable environment had been detected on Mars. “This means it could have been possible for life to survive in that environment. Curiosity has also uncovered in Maritan rocks, the presence of sulphur, nitrogen, hydrogen, oxygen, phosphorus and carbon — all of which are building blocks.
Delhi University, which opens its doors to nearly 58,000 undergraduate students every year, is all set for a massive make-over. Come June, in a first-of-its-kind initiative by any university in the country, it will convert its coveted three-year undergraduate course into a four-year course. The Hindu here examines the change and what it means....

A make-over for Delhi University

Vijetha S.N

NEW DELHI: Anyone wishing to enter Delhi University from June onward should better prepare for a whole new perspective on college education. There will be no B.Com. (Hons.), no B.Com. and not even a B.A. degree waiting for the students at the end of three years. In fact, there will be no three-year degree.

The four-year undergraduate programme, a soon-to-be reality and the only type of undergraduate course on offer in all of the Delhi University’s 77 colleges, is so different from what is being offered in the rest of the country that even the traditional nomenclatures will not be used.

No drop-outs

Now students would be able to just leave at the end of two years and not be considered a college drop-out but an "Associate Baccalaureate." On studying up to the end of three years, a student would become a Baccalaureate and after four years a Baccalaureate with honours in whichever subject he or she chooses like Psychology or Physics. But there will no longer be a cohesive stream degree like B.Sc. or BA.

There will also be no compartmentalisation of stream work, only majors and minors, in which students can choose to mix some Humanities and Commerce subjects, while majoring in one stream.

Major subjects will be called Discipline One and minor subjects will be called Discipline Two. So, if a student wants a degree in say English, he or she will have to choose it as their major subject and choose to minor in any Discipline Two subjects. This would allow for interesting hooling of streams, wherein they could have English or History as a major and Mathematics or Accounts as the minor. There will also be five "applicatiion courses" which are practical courses relating to Discipline One subjects.

"Traditionally, an honours degree has 70 per cent weightage in one subject, it will be the same way in the four-year course, where Discipline One will have about 20 papers over four years and Discipline Two will have six papers over four years," said S.K. Garg, a member of the committee, which has been entrusted with the task of turning the vision of the four-year undergraduate course into reality.

Apart from this, there is a compulsory course, "Inventing mind and body", for the first two semesters. Another compulsory subject, "cultural activities," will be there for all eight semesters.

'No scope for failure'

The greatest advantage of the new structure is that there is no scope for failure. "Even if a student gets a zero for a subject, we won't fail him. He has to be present at the exam, that's all. The only thing that matters is that students have an overall score of 45 per cent from all the theory papers for the two-year associate degree or the three-year degree," added Mr. Garg.

The admission procedure remains unchanged, except that SC/ST admissions will be decentralised with the colleges bringing out a separate cut-off list for those students. However, certain courses in some streams will be withdrawn and certain courses will be added. The number of seats will remain the same but they can be re-arranged.

Some colleges want to open new honours courses and depending on the teaching strength the number of seats available for each course will be decided," said South Campus director Unmesh Rai.

Mr. Rai added that the committee meeting was yet to finalise all the modalities of the four-year scheme and that a few changes could be expected in courses and even the foundation courses might change.

"Everything will be clear and final only after mid-April when the Academic Council is scheduled to vet the final plan. A letter explaining the issues in detail about the four-year undergraduate course will then be sent to all the colleges.

GRADUATES: Jubilant graduating students at Delhi University's Annual Convocation last year.

- FILE PHOTQ: SANDEEP SAXENA
IIT-Gn new campus reflects Ahmedabad’s old city

Four architectural firms inspired by colours of walled city and traditional architecture have designed new elements of the permanent campus accordingly

Ahmedabad Mirror Bureau
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A look at the final architecture plans of Indian Institute of Technology-Gandhinagar’s new campus unveiled on Thursday gave a peek into a designing thread that reflects Ahmedabad’s old city. Colours of the walled city and traditional architecture are reflected in the designs of the permanent campus to be built on the banks of River Sabarmati near Palej. Four firms have worked together to design four elements of the permanent new campus.

The four architecture firms made presentations on the master plan of IIT-Gn, the academic area, the hostel and faculty and staff residence at a meeting of the Board of Governors (BoG). The underlying design sentiment was “to build the new campus for human beings and not just constructing a good building”.

Rajeev Kathpalia of the Vastu Shilpa Consultants which is designing the staff residence said, “The use of scales of spaces and the way chowks were seen in old walled city houses will be replicated here. The architecture of the buildings is such that they cast shadows on the lanes and thereby provide natural shade. But the width of the lanes is enough for ambulances and heavy vehicles to pass through in case of emergency situations.”

The firm is also making use of jaalis as seen in old house windows. Rajeev said, “Jaalis not only diffuse light but also break the intensity of light. Sharing of space as seen in combined lobbies is another factor we have borrowed while creating these houses. We have to create spaces where residences can come out of their houses, meet people and are not just plugged to social networking sites. One needs to know their neighbours.”

HCP Design, Planning and Management Pvt Ltd, the other firm has also paid attention to creating the new campus keeping in mind the existing old architecture. They are handling hostels and infrastructure and landscape services of the building. Bobby Desai of the firm said, “These were concerns shared by IIT students, faculty and staff when we were discussing the designs. With changing times, students are no more limited to the confines of the rooms but sit on benches or in cafes to exchange information. The old values of sitting with each other are being brought back and we have tried to incorporate this aspect.”

The master plan is a joint venture by Space Design Consultants (Delhi) and Upalghosh Associates (Delhi). Upal Ghosh said, “We are planning to have jaamnadas which are basically deep wells; this is a technique used in places with hot climate like Rajasthan. The water will be used in the hostel and for agricultural purposes.”
When spammers attacked Spanhaus, a European spam-fighting group in what was billed as the “biggest cyber attack in history,” they managed to temporarily slow down the Internet.

But what if dedicated attackers succeeded in shutting down the Internet for a longer time, maybe a few days? What would be the potential impact of such a scenario in a world where crucial data is stored on shared networks, most financial transactions have shifted online and an entire generation has grown up not realizing what life was like without the web?

“Without Internet, life becomes uncomfortable but it still goes on. This is because in India, the Internet is used by just about 20% of the population. At the most, one can argue that since this 20% also constitutes the elite of the country — bureaucrats, politicians, businesspeople, media, etc., any disruption in their work could also affect the remaining 80% of the country indirectly.”

Even though complete shutdown of the Internet is believed to be virtually impossible — since it is made up of thousands of interconnections which ensure its infallibility — hackers haven’t stopped trying, as the latest cyber attack shows. Internet security consultant Ankit Fadia points out that the only way somebody can bring down the Internet is if a few million hackers combine together as part of a sustained project. “Even then, it’s a remote possibility that they can pull it off,” he says.

If it does happen, though, remember to polish up your letter-writing skills and go over to your friend’s house if you want to chat.

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VIJAY MUKHERJEE
PRESIDENT, FST

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Situation Vacant

Autonomy and research are the mantra to revamping the IITs

The recent revelation in Parliament that almost half of the teaching positions in the premier IITs are lying vacant is shocking. As the country's foremost institutes of technical learning, the sorry state of affairs in the IITs exemplifies the rot pervading the higher education sector in general. It is hardly surprising then that Indian universities consistently fail to make it to the annual top 100 rankings of global varsities. For a country that hopes to reap the fruits of its demographic dividend and boost growth through a knowledge economy, the facts are indeed jarring. Even the old, established IITs face a shortfall of 41% in their sanctioned teaching staff, while IIT Bhubaneshwar doesn't have a single regular teacher.

The official reasons given for the acute shortage are the lack of PhD candidates in engineering and the propensity of engineering graduates to opt for corporate jobs over teaching. There is no denying that higher education in India is hobbled by the absence of a proper research culture. Even at the IITs the emphasis is on churning out degree holders rather than piloting cutting-edge research projects. The shortage in teaching staff further aggravates this problem. The Anil Kakodkar committee report on revamping the IITs has recommended scaling up PhD graduates to 10,000 per year from the current 1,000. This would not only require enhancing research infrastructure to attract talent but also perhaps a revision of pedagogy at the IITs.

As models of educational excellence, the IITs must become founts of industrial innovation. A greater degree of institutional autonomy is imperative for this. Making the IITs financially independent of the government's non-plan budget is a good idea. Instead, autonomous boards ought to be tasked with finalising management structures and recruitment policies, injecting much-needed institutional vibrancy required to match global standards.
‘81% of teachers’ posts filled in IIT Bhubaneswar’

In the article headlined “43% of teaching slots in IITs lying unfilled”, published in TOI on March 30, it was stated that “IIT Bhubaneswar does not have a single regular teacher against sanctioned strength of 90”. In fact, 73 out of 90 (81%) sanctioned posts have been filled. This includes 13 professors, four associate professors and 56 assistant professors. The website of the institute indicates the name, designation and professional profile of each of the faculty, in position. Further, the annual reports of the Institute which are laid in the Parliament also indicate the status of the faculty position of each year.

B K Ray, Registrar, IIT Bhubaneswar

Our reporter responds: The report was based on the answer given by the minister of state for HRD, Shashi Tharoor, to a question raised in the Lok Sabha on March 13. The data was provided by the minister in an annexure to the written reply to unstarred question No. 2699. The link to the relevant Lok Sabha question is as follows:

http://164.100.47.132/LssNew/psearch/QRresult15.aspx?qref=136758
Govt reworks IIM council proposal after opposition

ANUBHUTI VISHNOI
NEW DELHI, MARCH 31

While Indian Institutes of Management again opposing the Centre's attempt to set up an overarching pan-IIM council on the ground that it would undermine their autonomy, the HRD ministry has come up with a more palatable proposal.

The proposal for the council was revived in the draft Indian Institutes of Management Bill, which promises degree-granting powers to IIMs. The council was first mooted by R C Bhargava Committee in 2008 and IIMs had promptly shot it down.

The council, to be chaired by the HRD minister, was envisaged to "coordinate activities of" all 13 IIMs, "deliberate on matters of common interest, review achievement of policy objectives and make reports on each institute and recommend appropriate action that will be acted on by the government". It was to have over 50 members, all of them government officials except three persons of eminence. The institutes, however, saw the council as an attempt to curtail their autonomy and opposed it.

Now, the ministry has factored in their concerns over the unwieldiness of a 50-member council and proposed, in a consensus document, that technical secretaries from the 13 states that host IIMs need not be part of the council since they are on their respective IIM's Board of Governors.

It has clarified that the council would have no powers that could threaten autonomy of IIMs and would only serve as a mechanism for coordination and exchange of ideas.

The ministry has agreed to accommodate IIM-Ahmedabad and IIM-Bangalore's concerns on dissolution of IIM Societies as proposed in the draft Bill. IIMs often accommodate their prominent donors in these societies. The ministry has agreed to insert a clause to ensure some members of the societies could be accommodated in the IIM Boards.

Centre plans new body for NET, GATE

NEW DELHI: The HRD ministry plans to set up a National Testing Agency to conduct NET and GATE from 2014. The proposal would be discussed by the Central Advisory Board of Education next month. HRD Minister M M Pallam Raju last week had announced that eligibility norms would be relaxed in 13 states to meet the huge shortfall of teachers required for implementation of the Right to Education Act. States are expected to implement RTE by March 31.
नैशनल एज्जाम स्कीम पर कल होगी बात
केब की बैठक में आएंगे राज्यों के शिक्षा मंत्री, शिक्षाविद्या मंत्री।

Navbharat Times ND 01/04/2013
P-9
Innovate, Pitroda tells IIM students

Jyotindra  
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RAIPUR: Sam Pitroda’s advice to graduating students of Raipur unit of the Indian Institute of Management (IIM) on Saturday was to learn to unlearn things and be fresh in ideas and innovation. The biggest challenge to the country was to set up technological infrastructure as “we have to provide jobs to the youths and not to take them away,” he added.

Addressing the students on the occasion of 2nd annual convocation of the IIM, Raipur, the technological advisor to the Prime Minister, Sam Pitroda said the key to the problems facing the country was to promote multinationals in the country.

“It is heartening to learn that the multinational companies are introducing new technology and infrastructure. We have to open more hospitals and schools with their assistance,” he added.

Giving degrees to 41 graduates, the architect of modern telecom revolution during the regime of then Premier Rajiv Gandhi, the technologist counselled the passing out students to explore otherwise they would be reduced to robotic and routine lifestyle.

He stressed the need to focus on work culture, discipline, positive attitude and learn to exercise leadership and lead. “You should learn to communicate, read a lot and devise ways to manage money and never forget that it is necessary to do crazy things also,” Pitroda said.

He announced that 70 new townships like New Raipur would be built by 2030 and the 7% GDP has to be achieved from the contribution of the cities of the country.

Earlier, gold medal named after the chairman of the IIM was awarded to Kandika Khandelwal and that of the director was bagged by Navjeet Sidhu. Chiarman Bhartia and Director IIM, Raipur BS Sahay also spoke on the occasion.
Sibal’s common entrance test plan may get junked

Charu Sudan Kasturi
charu.kasturi@hindustantimes.com

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आईआईटी टॉपर के परिवार ने लगाई राष्ट्रपति से गुहार

नई दिल्ली। आईआईटी संयुक्त प्रवेश परीक्षा (जेईई) और एआईईईई में 2009 के टॉपर नितिन जैन के परिजनों ने राष्ट्रपति प्रणब मुखर्जी से न्याय की गुहार लगाई है।

उन्होंने कहा है कि कोचिंग संस्थान व्यावसायिक फायदे के लिए उनके बेटे के नाम का दुरुपयोग कर रहे हैं। राष्ट्रपति को बीते दिनों भेजे एक पत्र में नितिन के पिता एन.सी. जैन ने आरोप लगाया है कि कुछ कोचिंग संस्थानों ने उनके फायदे के लिए सोशल नेटवर्किंग साइट्स पर उनके बेटे के नाम का प्रयोग कर रहे हैं। शिक्षायत के बाद उनके परिवार के सदस्यों को जान से मारने की धमकी मिल रही है। (वार्ता)
आईआईटी टापर के परिवार

ने राष्ट्रपति से लगाई गुहार

भीतर मामले को जोखिम करने के उच्च न्यायलय के 27 सितंबर 2012 के आदेश के बावजूद कोई जवाब नहीं दिया। जैन ने लिखा है कि कोचिंग माफिया संस्थान के नेता उनके बेटे की तस्वीरें का इस्तेमाल अपने आथिक फायदे के लिए कर रहे हैं। जैन ने लिखा है कि कोचिंग माफिया संस्थान के नेताओं ने केवल उनके बेटे की तस्वीरें का उपयोग कर रहे हैं।

पत्र में लिखा गया है कि आईआईटी दिल्ली में कम्युनिटी साइड की पहाड़ी कर रहे निवासी को पूरी तरह संस्थान के इस फायदे के साथ की वसीयत है। साथ ही उन्होंने लिखा है कि उनका बेटा नेता आदेश के खिलाफ निर्देशित संस्थान के हादसे के लिए जुल्मी प्रकोपवाद के लिए कर रहे हैं।

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NEW LEARNING WAYS

Can it succeed?

The very high tuition and other costs of attending a traditional university is another factor going in favour of the new model.

By Alok Ray

The basic model of university education has remained the same since the days of Socrates. The students would sit in front of the professor who would lecture and answer queries. The essence of the model is the face-to-face interaction between the teacher and the taught.

The correspondence course model started by some universities (specially the so-called open universities) was a change. But the quality of education imparted through such courses is generally considered much inferior to that provided by the traditional universities. The students get a degree which is not valued highly by the prospective employers.

The advent of the World Wide Web and the rapidly expanding access to internet all over the world is now making possible another model which has the potential to take away a large chunk of the business of the traditional universities. The very high tuition and other costs of attending a traditional university - specially in the developed countries - is another factor going in favour of the new model.

Now one can register for some courses offered by professors in top-rated universities like MIT or Stanford which are being made available on the internet free or at a cost which is a fraction of what the students have to pay if they wanted to physically attend the same courses at the campus. The course can be taken by thousands of students from different parts of the world at the same time. That is why such a course is being called a Massive Open Online Course (MOOC). The student also saves the cost of moving and living near the campus.

It has the additional advantage that the student can take the course at a convenient time (when it is offered in multiple time slots) while still working or looking after the household. But what about the quality of knowledge and the value that prospective employers (the market) would place on this kind of education?

Some believe that there can never be a substitute for face-to-face interaction in the classroom. The students learn from the fellow students as well as the teacher which can not be replicated in a virtual classroom. The students who would opt for such courses on the internet would be mostly those who do not have the qualifications to get admitted to such universities.

Moreover, since the cost is low, many would take the course more casually than otherwise. The evaluation of thousands of students would not be rigorous.

In addition, the lecture itself can be recorded and the student can listen to the lecture as many times as he likes for better absorption at his own pace which is not possible in a physical classroom. The questions and comments by students from all over the world with diverse backgrounds and experiences can be displayed on the computer screen which should be a more valuable tool of interactive learning than the standard classroom interaction between a small number of students from similar backgrounds.

The employers do not have to take the grade at its face value. They can devise their own tests to check the problem solving skills of these students. In other words, the employer would gain by being able to choose from a much bigger universe of students.

What do we conclude from the ongoing debate? Basically, the motivation of the student is the key to education. There are students with different degrees of motivation even in the same class in conventional universities. However, since the screening process of admissions is tougher and the cost is more, the chances of having students with better IQs and motivation are higher in higher ranked universities.

Therefore, the employers would have a bias towards regular students of such universities. Devising their own tests to filter out a few most-suited among thousands of job applicants is not easy, not to speak of the costs involved. Hence the students taking online courses offered by even top-rated universities would have a built-in bias against them.

What is likely to happen in future is that the brick-and-mortar universities would not go out of business but the design and delivery of many of the courses will have to undergo substantial changes, as a result of competition from cheaper and better designed online courses. The focus in the classroom would be more on problem solving, applications of information and questions-answers instead of lecturing (no matter whether using the old-fashioned chalk-and-talk method or the more tech savvy power point and laptop) and note-taking on the material contained in the textbooks.

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WHEN GREEN IS NOT CLEAN

Even though rating agencies say that green-certified buildings save energy and reduce water consumption by 20-30 per cent, they do not have corroborating data to verify their claims.

Building green is definitely important. But equally important is to know how green is a green building. Take the glitzy, glass-enveloped buildings popping up across the country. It does not matter if you are in the mild but wet and windy climate of Bengaluru or in the extreme hot and dry climate of Gurgaon, glass is the in-thing. I have always wondered how buildings extensively using glass could work in such varied climatic zones, where one needs ventilation. Then, I started reading that glass was green. Buildings liberally using glass were being certified green. How come?

Here the story becomes interesting. The Energy Conservation Building Code (ECBC) has specified prescriptive parameters for constructing an energy-efficient building envelope – the exterior façade of a building. The façade, based on the insulation abilities of the material used for roof and wall construction, will reduce heat loss. It will also reduce energy use if it allows daylight in. It is, therefore, important for any green building to have the right material for its exterior.

But this is not all that ECBC specifies. It goes on to set a wall-window ratio and fixes the area of the building envelope that can be covered with glass at 60 per cent. This implies that a building can be green and energy-efficient if it is covered by glass. The code then goes on to define the insulation and energy-efficiency specifications of glass that should be used. In this way, double-glazed or triple-glazed glass, which is solar reflective, is preferred as it provides superior thermal performance. In other words, glass built on certain superior and high specifications can reduce the heat gain of a building. ECBC, thus, endorses the extensive use of glass and promotes high-performance and expensive glass, which is manufactured by a few high-end companies.

Small wonder glass manufacturers are making hay in this sunshine. Saint-Gobain Glass incidentally (or not) is also the founding member of the Indian Green Building Council, promoted by industry association CII. The green code is built for their business to thrive.

This would still have been acceptable had this prescription worked. But first, builders cut corners in the use of expensive reflective material. Glass traps heat, therefore, buildings require more air-conditioning. Energy requirement goes up. Secondly, even when double or triple glazed glass is used there is evidence that in India's extremely hot climate it does not work so well. A recent study by IIT-Delhi in Jodhpur, Delhi and Chennai found that energy use increased with increase in glazed area, irrespective of the glass type used in the building. The conclusion was that the glass curtain wall made of expensive reflective glass did nothing to cut energy costs as compared to ordinary glass.

We also forget that natural light in India is a glare, unlike in parts of the western world where glass is used to reduce energy use for lighting. So, even if theoretically the use of glass optimises daylight use, it remains a function of how much is used, where and how. For instance, the use of glass – of whatever glazing – in the south and west facades of a building will be bad in terms of thermal transfer. Then, even if you use glazed or tinted glass, where 50 per cent of solar heat gets reflected off the surface, 65 per cent of the visible light is transmitted into the building. Heat transfer may be reduced but the harsh light filters through. Buildings then need blinds to cut glare, again adding to the use of artificial light and consequently raising energy cost. What would work better is building protection against direct glare. Go back to the old fashioned methods of providing shades on windows. And do not build tight and sealed buildings, which do not optimise use of natural ventilation and breeze to reduce air-conditioning needs in certain periods of the year. In fact, glass necessitates air-conditioning, and buildings become energy guzzlers. The irony is that these buildings still qualify for a green tag when the air-conditioning system used in glass-based constructions is more efficient. Build badly and then sugarcoat it, is the principle. Clearly, we need more appropriate and inventive architecture.

What is worse, these codes are being pushed through government and municipal schemes without any evidence that green-certified buildings are actually working. Noida awards a five per cent extra floor area for green-certified buildings. MoEF provides fast-track clearance to such buildings. But the two main certifiers – LEED and GRIHA, by IGBC and TERI respectively – do not disclose data on the performance of the green buildings after they have been commissioned. So, even though rating agencies say that green-certified buildings save between 30 per cent and 50 per cent of the energy and reduce water consumption by 20-30 per cent, they do not have corroborating data to verify the claim.

In this way we make sure that green is not so green. But it is definitely good for business, if not for the planet.

On arrangement with Down to Earth magazine
Research update across the globe

Pain Free
Scientists at King's College London have demonstrated the ability to deliver a dried live vaccine to the skin without a traditional needle, and shown that this technique is powerful enough to enable specialised immune cells in the skin to kick-start the immunising properties of the vaccine. A cheaper alternative to hypodermic needles, it would also remove safety risks from needle contamination and the pain-free administration could lead to more people taking up a vaccination.

Under the Skin
Humans manufacture thousands of substances and transport them, via blood, throughout the body. Some of these substances can be used as indicators of our health status. A team of EPFL scientists has developed a tiny device that can analyse the concentration of these substances in the blood and a radio module transmits the results to a doctor over the cellular phone network.

Beat It
When it comes to depression, there is a lack of evidence about psychological treatments for people with learning disability. A team at the University of Glasgow and collaborators at Bangor University and the University of Lancaster have received £1,207,488 funding from National Institute for Health Research to test the effectiveness of a new treatment. The research trial is of a recently adapted version of a psychological approach called Behavioural Activation, named BEAT-IT. Behavioural Activation relies less on people having good communication skills than other commonly used psychological treatments, which means more people with learning disability may be able to benefit.

Picture Perfect
Once rhesus monkeys learn to associate a picture with a reward, the reward by itself becomes enough to alter the activity in the monkeys’ visual cortex. This finding was made by neurophysiologists Wim Vanduffel and John Arsenault (KU Leuven and Harvard Medical School) and American colleagues using functional brain scans.