7 Student Projects From IIT-Delhi's India International Science Fair That Will Inspire You


Indian Institute of Technology, Delhi, is playing host to its biggest science and technology fair till date. The India International Science Fair (IISF) commenced on 4th December and brought on board 4000 delegates including students, entrepreneurs and industry experts, who showcased over 500 projects. The fair was inaugurated by the Minister of Science and Technology Dr Harsh Vardhan.

We bring you a set of interesting projects straight from the heart of the expo.
Students from Jharkhand's Deoghar district showcased a hydraulic crane they designed using syringes. When asked what inspired them to build this, one student answered: "It was there in a book of experiments."
2. Kitchen Vermi-Composting

Anjali Bisaria

Pupils from Society for Environment and Development exhibited the importance and uses of vermi-composting that has wide uses in agriculture, gardens and nurseries, forests, and soil and water conservation.
Students from Pragati Vigyan Sanstha exhibited a simple kitchen experiment that turns a normal potato silver. The process works in three steps: put a potato on a flame till it turns black. Next, place it in a glass of water and then watch it turn silver.

For safety purposes, students weren't allowed to light a flame. But I tried the experiment at home and it worked!
4. All Roads Lead To Home

Anjali Bisaria

An interesting application of the property of ellipses, every time we hit at one end, it will always hit the striker on the other. The striker will always be reflected by elliptic boundary to the striker placed opposite to it.
5. Is Light Visible?

IS LIGHT VISIBLE?

Press the switch and observe whether the light inside the tube can be seen.

Now put your hand inside the tube to see your hand brightly illuminated.

Light in space is not visible by itself. One can see the light only when it gets reflected from any surface and reaches the eye. This is the reason why the space above atmosphere always looks black.
Another highly exciting experiment was that of 'Is Light Visible?'. Press the switch and see if the light inside the tube turns on. As the next step, put your hand inside and keep the switch pressed. You will see your hand get brightly illuminated.
Light is not visible in space. It's only when it's reflected off solid surfaces that we really get to see it.

6. Exploration of Modern Science for the Queries of Ayurveda

Anjali Bisaria

Students from Rajiv Gandhi Center for Biotechnology, Trivandrum, showcased the application of modern science to further the benefits of Ayurveda.
7. Implementation of Biogas Related Technologies

Anjali Bisaria
Students from the Biogas Development & Training Centre at IIT-Delhi have developed the following technologies related to biogas - such as water scrubbing-based Biogas Enrichment and bottling for vehicular application, and Biogas production optimisation from de-oiled cakes, to name a few.

Anjali Bisaria

BDTC, IIT Delhi also provides support to nodal agencies across Delhi, UP, Haryana and Uttarakhand.
These are just some of the projects that showcase a peep into India's future. And as I sign off, here is a group of schoolchildren who set a perfect example of how excited we need to be when our country makes giant strides forward.

Anjali Bisaria
IIT attempts world’s largest science lesson


Aiming to script a new Guinness World Record in conducting the “largest practical science lesson”, around 2,000 school students from Delhi and National Capital Region (NCR) came together at the Indian Institute of Technology Delhi (IIT-D) on Monday.

The existing world record is held by a group of 1,339 Irish school students.

Dressed in white lab-coats, students streamed into a giant tent that was pitched by the administrative block of IIT-Delhi.

The students took a shot at creating the world record of highest number of students conducting an experiment at the same venue.

The event was organised by Vijnana Bharati (VIBHA), the country’s largest science movement, as part of the India International Science Festival (IISF) 2015, which concluded on Monday ahead of its schedule.

The participating students were addressed by Union Minister for Science & Technology and Earth Sciences Harsh Vardhan and Union Human Resources Minister Smriti Irani ahead of the lesson.

“Two thousand bright young students are going to participate in the record-breaking science experiment and it has already set a lot of tongue wagging,” Ms. Irani said.

Expressing happiness over the IISF event, Ms. Irani said that efforts need to be made to hold similar festivals in all the States.

IIT JEE Mains 2016: Number of Attempts Increased to 3

IIT JEE Mains 2016: Here is some good news for all the IIT aspirants across the country. According to the official notification that the number of attempts an IIT candidate can make as now is increased than previous one.

The JEE (Joint Entrance Exam) Main 2016 is scheduled to be conducted on April 3, 2016 (offline) and April 9 and 10, 2016 (online). Earlier only two attempts were allowed to clear the exam, but now according to the new official notification, the number of attempts have been increased to three. The registration for JEE Main 2016 began on December 1 and will be ending on December 31. Also, a detailed information brochure for JEE Main 2016 is available at the official website.

Good News for all the IIT Aspirants in the country:

The Joint Entrance Exam (JEE) Main Examination 2016 is all set and prepared as on December 1st, the registrations for this JEE Main 2016 have been started and are to be closed by December 31st. The states of Madhya Pradesh, Uttrakhand, Gujarat, Haryana, Odisha and Nagaland have joined in JEE (Main) framework. In this way, the participants looking for admission to the establishments in these states those were understudies of
their State l level examination are now likewise encouraged to fill in the JEE (Main) 2016 application structure on the web portal.

Also read: ITBP Constable Driver Result 2015 and Merit List

Pattern of Examination:

JEE is divided into two sections that are Main and Advanced. JEE (Main) will be held for admissions to NITs (National Institutes of Technology), IIEST Shibpur (double degree program), IIITs (Indian Institutes of Information Technology) and CFTIs (Central Funded Technical Institute). And then JEE Advanced is for the admissions to Indian School of Mines Dhanbad (to be changed over into IIT) and Indian Institutes of Technology (IITs). Hopeful candidates who want to take admission to ISM or IITs can’t show up for JEE Advanced examination in the following year.

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**Economic Times ND 09/12/2015**

**There is No Ignoring Prez’s Choice of Words**

By Niranjan Mukhopadhyay

The post Bihar-verdict moderation of public tonality appears to be a cue that Modi has taken from the President. An enormous sense of loss is insensible for any journalist after walking through Shriram Ashram and sitting in the forecourt of Harijan, the mausoleum of the ‘half-exiled father’ and from where he plotted one of the most under-estimated political intrigues. This feeling stems from realisation that the Mahatma and his political symbolism shall remain perceivable only from history and his testament. This political shrine’s aura forces contemporary leaders to measure words and re-strict to nuances.

Because he is from a political stable distinct and even adversarial from the present regime, when Prime Minister Narendra Modi secured the historic mandate there was immense curiosity over how his relationship with President Pranab Mukherjee will play out. Because from 1987 onwards, terms of Presidents stopped being co-servi-

nism with the government’s there were past instances when the two top leaders were politically antago-

nistic. Because conflicts were known even when Gita Shankar Dube and Rajiv Gandhi were in their office and also because Mukherjee was more ‘political’ than at least two of his future Presidents who preceded him, keeping an eye on his statements wasn’t an important task for chroniclers.

If the year 2014 was indubitably the year of Modi, one of the dominant trends of 2015 so far has been the cautionary tone that Mukherjee has repeatedly sounded. Listening to him at Shriram Ashram recently, there was no escaping the conscious choice of the subject on which he chose to give a word of advice. Instead of highlighting other issues on which he may be feeling unsettled, the President opted to emphasise that cleanliness is not all about taking a broom and sweeping a designated space. “Green ICT” is not in the streets of India “but in our environment,” he began, and completed himself by adding that the fifth was the only realist to launch ideas that “divide society” into “them” and “us,” “pure” and “impure.” Because this was said while referring to Shriram Bhurial Mission and the fact that cleanliness and sanitation were central to Gandhi’s worldview, there couldn’t have been a subtler way of ‘braching’ Mukherjee’s concerns, voiced in several speeches since early October. Instead of saying that the wave of physical and verbal violence—also referred to in his speech—being witnessed for several months was resultant of official patronage of politics promoting social prejudice, the President just winked the scope of one this government’s flagship programmes.

The year began with worries on parliamentary shortfalls by speaking for Ordinances when there was little urgency and that too after the Winter Session, not a washout by any chance. In the third week of January, Mukherjee used a video address to students and faculty of Central Universities, IITs and NITs to assert that short circuiting of parliamentary procedure by government was against basic tenets of Constitution. He had been posed questions regarding remedy for checking parliamentary dis-

ruptions and Ordinance route to enact legislation. The power was raised because of a preceding de-

bate and then Mukherjee signed as many as nine Ordinances in quick succession.

In his Address to the Nation on Republic Day eve, he was more circumspect but contended that “en-

acturing areas without 44 discussion im-

acts the making major rules.” The coup d’etat of government abandoned the Land Acquisitions Bill, the cornerstone of the debate. To what extent this was dictated by assessment of Mukherjee’s response when asked to sign the notified text again, is speculative. Though the President has functioned within the limits laid down into the Constitution, the moral weight of his cautionary exercise of Ordinances—especially when faced with impossibility of passage in Rajya Sabha—could have been lost in government.

In a series of interventions since October, Mukherjee has made his opinions clear on the issue of intoler-

ance. On the one hand he has evoked metaphors like a function in his native West Bengal during the Durga Puja and on the other he has also shared his concerns that writers and artists were not being enriched by awards and recognition to the extent they should. In all his speeches Mukherjee has not been hiding a “po-

titical president” but has not acted in a partisan manner.

The art of walking along this thin line that Mukherjee has perfected since January holds lessons for every po-

titical leader, most significantly for the prime minister. The post Bihar-verdict moderation of public tonality appears to be a cue that Modi has taken from the President. If he re-

mains firm on this path, Modi will demonstrate that he has picked up the ability to learn from anyone—even a natural adversary.
गंभीर सवालों में शिक्षा
कोटा में आईआईटी की तैयारी कर रहे छात्रों की आत्महत्या के बदले मामलों के लिए शिक्षा के नीति-नियमों को दोषी मान रहे हैं प्रेमपाल शर्मा

शर्मानाक रेखा
• बड़ी आत्महत्याओं से भी शिक्षा के नियमों के चेहरे पर कोई शिकन तक नहीं, क्योंकि इससे वो एक फसल पर कोई असर नहीं होगा

इंजीनियरिंग की इतिहास में पूर्व सिंह आईआईटी, पुनियाबाई इंजीनियरिंग की तरीके की तरीका को बदलने के लिए है। इसे किसी स्कूल या कॉलेज के लिए कोई भी पर्याप्त नहीं है। आईआईटी के लिए कोई भी पर्याप्त नहीं है।

कई बार लोगों के निकट, जिसमें पूर्व की तरीके की तरीका का भी है, हमें उसके साथ इसका समायोजन करने की आवश्यकता है। हम इसे नाना आत्महत्याओं के लिए रिपोर्ट किया जा रहा है।

शास्त्री और राजनीति का जोड़
• इसी समय, जब वो इंजीनियरिंग की इतिहास में पूर्व सिंह आईआईटी, पुनियाबाई की तरीके की तरीका को बदलने के लिए है। इसे किसी स्कूल या कॉलेज के लिए कोई भी पर्याप्त नहीं है।

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आईआईटी के छात्र ने विकसित किया पोर्टेबल पैथोलॉजी लैब

नई दिल्ली, 8 दिसम्बर (ब्लूरो): भारतीय पौधोगिकी सरस्थान (आईआईटी) रुडकी के एक पूर्व छात्र ने अत्यंत कम खर्च में देश के गांवों एवं दुरुस्त इलाकों में बीमारियों की जांच की सुविधाएं उपलब्ध कराने की पहल करते हुए पोर्टेबल पैथोलॉजी लैब विकसित किया है जो अपनी तरह का दुनिया का संभवतः पहला मोबाइल लैब है।

इस मोबाइल लैब का विकास करने वाले अभिमत भटनागर ने 2003 में आईआईटी, रुडकी से मैकेनिकल इंजीनियरिंग में बोर्ट करने के बाद कई साल तक अमरीका में अपने खासे पैकेज पर नीकरी की लेकिन देश के लोगों के लिए कि लगने लेकर 2008 में जवाबदेह बाप्स लौट नवा मोबाइल लैब का विकास किया। उन्हें इस लैब के विकास के लिए भारत सरकार के प्राइवेट्सी नवाचार बोर्ड (टीआईबी) की ओर से क्लियर सहायता भी मिली और इस लैब को राष्ट्रपति प्रणव मुखर्जी के हाथों सर्वश्रेष्ठ चिकित्सा उपाद का पुरस्कार भी मिल चुका है।

इस मोबाइल लैब का इस्तेमाल पहले बर्फीली चोटियों से लेकर अत्यंत गर्म रेगिस्तानी इलाकों में भी हो सकता है और इस लैब की मदद से बहुत कम लागत वर्ष विभिन्न बीमारियों की जांच की जा सकती है।

इस लैब को अमरीका में चलने के लिए अधिक देशों में पेंटेक हासिल हो चुका है और इसे अमरीका के खास एवं आधिकारिक विभाग (एफडीए) से प्रामाणित किया जा चुका है। अभिमत भटनागर ने बताया कि इस मोबाइल लैब का इस्तेमाल सीमा सड़क संगठन (बीआरसी), भारतीय सेना, सी आर पीएफ, हरियाणा, एनआरएचएम, कर्नाटक एनआरएचएम, उत्तराखंड सरकार के अन्य लोकरक्षकों, हेल्पलेब्ज इंडिया, अमर उजाला फाउंडेशन, जैसी अनेक स्वयंसेवी संस्थाओं को तरफ से इस्तेमाल किया जा रहा है। इसका इस्तेमाल लैब और कार्यालय से लेकर दिल्ली, राजस्थान, उत्तराखंड, झारखंड एवं केरल में मोबाइल चिकित्सा वाहनों में इस्तेमाल हो रहा है।

दिल्ली में एनडीएचसी चरक पालिका हासिल और अम आदमी पार्टी ने भी इस्तेमाल किया रहा है।

अभिमत भटनागर ने कहा कि हमारे देश में 95% लोगों को चिकित्सकीय जांच की सुविधाएं नहीं मिलती और बीमारियों की समय भर जांच एवं उनका इलाज नहीं होने के कारण 57 लाख लोगों की मौत हो जाती है। बीमारियों के प्रकार को रोकने में यह मोबाइल लैब महत्वपूर्ण भूमिका निभा सकता है।

इसे चलाने के लिये विजली की जरूरत नहीं होती।
FEW TAKERS

Brand name fails to attract students to newer IIMs

BY PRASHANT K. NANDA
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NEW DELHI

A prestigious brand name alone doesn’t help an institution attract students to its fold. That’s what the six new Indian Institutes of Management (IIMs) that enrolled their first batches this year have discovered.

Non of the six—locates in Sirmaur (Himachal Pradesh), Bodh Gaya (Bihar), Sambalpur (Odisha), Amritsar (Punjab), Visakhapatnam (Andhra Pradesh) and Nagpur (Maharashtra)—have managed to fill all the seats they offered.

Data from the human resource development (HRD) ministry shows that IIM-Sirmaur has just 22 students, IIM-Bodh Gaya 30, IIM-Sambalpur 48, IIM-Amritsar 45, IIM-Visakhapatnam 54 and IIM-Nagpur 55.

Each of these B-schools was supposed to enrol 140 students in their first academic session and raise the annual intake to 560 at the end of the sixth year. The HRD ministry later lowered its sights and reduced the student intake in the first year to 60, perhaps realizing that the original goal was too ambitious.

The fact that these six institutions haven’t been able to meet even the reduced target shows, for one, that just the name IIM, however elite a ring it has to it, isn’t enough to lure students.

"Just the name is no more a ticket to success," said Narayan Ramaswamy, partner (education practice) at consulting firm KPMG. "IIMs are brands, but government opening new ones in any part of the country is not going to help. Business schools coming up away from business hubs are definitely at a disadvantage."

The location, infrastructure and quality of faculty are equally important to students.

Instead of creating new IIMs from makeshift campuses with poor facilities, the government should have adopted a more far-sighted approach towards establishing the new institutions, experts say.

Since 2007, the number of IIMs has tripled from six to 19; yet another one in Jammu and Kashmir is in the pipeline. Of the original six, IIM-Ahmedabad, IIM-Cuttack and IIM-Bangalore remain the top draws for the best and brightest of the students who take the annual Common Admission Test for admission to these B-schools. IIM-Lucknow, IIM-Kozhikode and IIM-Indore are the other three.

For state governments, hosting an IIM gives them bragging rights to being home to a brand-name institution. It’s common for state governments to lobby the centrally funded institutions to be set up in their territories.

"The government seems to have fallen victim to political pressure from states," said a professor from an older IIM who didn’t want to be identified. "IIM-Kashipur, established by the previous government, should have been a learning experience for the new administration."

The HRD ministry faced a tough time in hiring faculty for the IIM in Kashipur, Uttarakhand, which opened in 2011.

The IIM in Odisha was to have been established in Bhubaneswar, the state capital, but was shifted to Sambalpur, nearly 300km away, because of political lobbying. IIM-Sambalpur completed its admission process only by September-end after a delay of several weeks.

Earlier this year, a government-appointed committee suggested to the HRD ministry that top centrally funded institutions should be opened only in accessible locations with good infrastructure and connectivity.
Who will finally be Delhi University's Vice-Chancellor?


Mathematician Dinesh Singh, Vice Chancellor of Delhi University, is to be be replaced by a right wing ideologue from the field science or information technology. The search committee for appointment of Delhi University Vice Chancellor has shortlisted 10 candidates for the post, all of whom are known to have affiliations with the Rashtriya Swayasevak Sangh or its associated bodies.

The front-runners in the race include Banaras Hindu University (BHU) Vice Chancellor GC Tripathi, professor Yogesh Singh currently the director at Netaji Subhas Institute of Technology (NSIT), professor Susham Yadav, pro Vice Chancellor at Indira Gandhi National Open University and professor Girishwar Misra of Delhi University.

Tripathi who openly speaks about his ideological affiliations was chosen from Allahabad University to head BHU. He took over as BHU VC in December last year. Tripathi’s affinity with the ministry and the government is also evident from the fact that HRD ministry cleared his name for the post of Chairman of BHU-IIT after setting aside the recommendations of the IIT Board of Directors.

Professor Yogesh Singh of NSIT, who is from the department of computer science has held several important positions in the Gujarat government. He has previously served as VC of Maharaja Sayajirao University of Baroda. Singh also holds the position of independent director of Gujarat State Petronet Limited and Gujarat State Petroleum Corporation Limited. He is known to enjoy close proximity with PM Narendra Modi and the Gujarat government. Singh also happens to be the youngest candidate in the race.

Girishwar Misra, current VC of Mahatma Gandhi Antarashtriya Hindi Vishwavidyalaya, Wardha, who has also served as a professor of psychology in Delhi University and has held office at ICSSR, is also in the race of the DU vice chancellorship.

Others aspiring for the post include Sushma Yadav of IGNOU and professor CS Dubey of the geology department of Delhi University. “Dubey was also in the race for vice chancellorship of Rajasthan University. But could not make it then,” informed a senior functionary of the HRD ministry.

Sources also informed that Professor Amitabh Mattoo, who is currently serving as the advisor to the Jammu and Kashmir chief minister and has also served as VC of Jammu University, could also be on the list.

The search committee headed by UGC chairman Ved Prakash had received 280 recommendations for the post. “From these 30 were shortlisted in the first round and then a final list of 10 names was prepared,” said a source. The committee will be holding an interview on December 13 to finalise three names to be submitted to the ministry. The ministry then sends the recommendations to the President of India for the finalisation of one name. President, who is the Visitor of the central universities, gives the final approval.

16 Indian universities among top 200 in BRICS ranking

Hindustan Times (Indore)

The Indian Institute of Science (IISc) Bangalore and Indian Institute of Technology (IIT) Bombay have made it to the top 30 in the recently published Times Higher Education BRICS & Emerging Economies Rankings 2016, with 16 Indian universities figuring in the top 200 universities.
HT PHOTO IISc Bangalore has made it to the top 30 in the Times Higher Education BRICS & Emerging Economies Rankings 2016

Among the BRICS nations of Brazil, Russia, India, China and South Africa, China has emerged as the most promising country with 39 of its universities making it to the list of top 200, followed by Russia with 24 and India with 16.

The IISc has been ranked number 16 and IIT-Bombay at 29 in the list that has China’s Peking University in the top position followed by Tsinghua University in the second and Lomonosov Moscow State University of Russian Federation in the third.

IIT-Madras and IIT-Delhi have been ranked 36th and 37th, respectively, followed by IIT-Kharagpur in the 45th spot, and IIT Roorkee in the 48th position.

President Pranab Mukherjee while speaking at the launch of the rankings at Rashtrapati Bhawan said the rankings are an acknowledgment of the potential which exists in the higher education sector in these five countries.

“Over and above a focused attention on cutting-edge research and an international orientation, world-class universities must possess other enviable features. Some of them, to my mind, are high-quality faculty members, meritorious students, an encouraging teaching-learning environment, a high level of resource availability, sound infrastructure, and existence of considerable autonomy and robust governance structure,” Mukherjee said.

Expressing his concerns over the parameters of global rankings, he said at times global rankings do not reflect the ground realities and socio-political conditions prevalent in various countries and so they adopt their own ranking mechanism with parameters more suited to the domestic setting.

“In the case of India, a National Institutional Ranking Framework has been developed recently to evaluate educational institutions. The National Assessment and Accreditation Council (NAAC) also operates in familiar territory, assessing and accrediting institutions of higher education in our country,” the President said.

“I believe these national counterparts of the international rankings system will only reinforce and concretise the push towards accountability and quality in educational institutions. At the same time, they will inspire better performance of institutions leading to improved international rankings.”

Speaking to HT Education, on whether a domestic ranking model would help India produce world-class institutions, Phil Baty, editor at large, Times Higher Education World University Rankings, said it is a positive idea as it created accountability for institutes and promoted a culture of maintaining data and monitoring progress.

“However, the institutes should not lose the global focus in the process and should not focus on just competing with the regional institutes but the institutes globally and should use the domestic rankings as a stepping stone to the global rankings,” Baty said.

He also emphasised on the government’s need to invest more funds on education institutions so that they can attract renowned academics as faculty, create better infrastructure and get huge research grants.