

Newspaper Clips August 7, 2014

President to review IITs in detail

DC | N. ARUN KUMAR | August 07, 2014, 05.08 am IST

<http://www.deccanchronicle.com/140807/nation-education/article/president-review-iits-detail>

Chennai: In his capacity of ‘Visitor’ (head) of 16 IITs, President Pranab Mukherjee has called for a day-long meeting with the chairmen and directors of all the institutes on August 22 in New Delhi.

The meeting may not be just a formality now as the President will be discussing various issues with an eye on improving the quality of IITs, besides reviewing their functioning.

Speaking to Deccan Chronicle on Wednesday, former Anna University vice-chancellor and chairman (board of governors), IIT Kanpur Prof. M. Anandkrishnan said that the President had started the series of reviews of centrally funded institutes to understand their functioning.

“The President wants to know what we are doing, the goal we have set for the institute, how government has to support us and how the institutes are handicapped in various fronts,” he said.

Pointing out that the President had given 15 minutes time to each director to present the overall picture about their institute, the IIT-Kanpur chairman said that the President would also discuss several other issues that he might think are pertinent in today’s context.

IIT Madras director Prof Bhaskar Ramamurthi added that he would outline the steps the institute has taken to rise in world rankings, besides bringing up other initiatives taken recently in various matters.

Once the President completes review of IITs he would continue to assess the performance of 30 National Institutes of Technology, followed by 40 Central Universities.

The President heads all the centrally funded institutions, including IIT, NIT and central universities as Visitor (head).

Underperforming UGC set for restructuring

Wednesday, 6 August 2014 - 7:15am IST | Agency: DNA

<http://www.dnaindia.com/mumbai/report-underperforming-ugc-set-for-restructuring-2008354>

Upset over the University Grants Commission's gross failure in curbing fake universities and haphazard growth of private and deemed varsities, the union government has appointed a high-level committee to suggest ways to restructure the commission.

The committee will be headed by former UGC chairman Hari Gautam. An order in this regard was passed by the Ministry of Human Resources and Development (MHRD) on July 30 which also seeks to amend the UGC Act, 1956, in order to re-organise the UGC to bring out reforms in the higher education sector. The commission's grant distribution system will also be revamped. The decision is in sync with BJP's manifesto for the Lok Sabha election 2014.

What does the order say?

Listing the failures of the UGC on many fronts, the four-page MHRD order states, "There is a realization that the UGC is not able to do justice to its mandate in light of massification of higher education...UGC's entire funding continues to be oriented towards grant giving rather than regulation and enforcement of minimum standards."

Pointing out to a private university which was been in controversy last year for selling PhD/MPhil degrees, the order further reads, "It is imperative than an urgent review of the UGC in its entirety is conducted." UGC Chairman Ved Prakash didn't respond to calls and messages.

Why has UGC drawn flak?

UGC is an autonomous body, which is headquartered in Delhi, runs its operations through six regional centres in Pune, Hyderabad, Kolkata, Bhopal, Guwahati and Bangalore. It was formed in 1956 as a statutory body. The commission has drawn flak from every quarter over years for its mishandling of the affairs related to higher education. Ved Prakash also courted a controversy when he reportedly retired himself as an employee of the commission at the age of 62 and fixed his pension and got reappointed himself as its chairperson till 2017.

How will the overhaul help?

The MHRD move is supposed to be a step towards restructuring underperforming higher education bodies, a long-pending demand of the educationists who have been pointing out at the mess in higher education including uncontrolled growth of colleges with no check of quality of education for many years. No Indian University figuring in top 100 world universities ranking was another sore point which hurt the image of Indian higher education system despite being one of the largest in the world.

What are limitations of UGC?

The UGC act was enacted in 1956 when only 20 varsities and 500 colleges with 0.21 million students were there across the country. This has now grown to 726 varsities and 38,000 and 28 million students. "The UGC has no mechanism to ensure follow up on compliance. These limitations can only be overcome by a thorough review and amending the UGC Act," said an official of MHRD.

Our higher education system in dire need of reforms

By Venu Narayan

Delhi University's controversial four year undergraduate programme introduced in 2013-14 has been called off. It was introduced by a determined administration against much opposition from the teaching community and at least some sections of the students. The opponents felt at that time that the change was ill-conceived, insufficiently debated and its social and academic implications poorly understood. The opposition was to no avail. The administration was unmoved. The UGC seemed to stand solidly behind the vice chancellor, dismissing dissent from its own members. What a difference a year makes! The UGC has discovered that the programme violates current norms after all. And the welfare of the students has now been declared to be paramount. The vice chancellor and the administration, humbled by powerful political opposition and the regulator's volte face, have retreated.

Does the Indian higher education system need reform? On this, there seems to be little disagreement. Most people, academics, students and policy makers alike will agree that the system is broken. This is

true not just of under-resourced colleges in some distant backwaters, but even of the elite colleges that boast of admission cut-offs close to a hundred per cent. The symptoms of dysfunction are all too familiar - rigid and ancient curricula, uninspiring teaching, bemused students perhaps driven to distraction by monotony. The examination treadmill liberally rewards rote and punishes imagination. Organisationally, public universities and their constituent colleges have slowly morphed into bewildering masses of red tape and even corruption.

Regulatory systems are less than effective and often overcome by a bureaucratic penchant for procedural control and enforcing conformity rather than for support and facilitation. One may protest, using the familiar mantras that India has many world class research institutions, has one of the largest population of scientists and engineers on the planet and our graduates are in demand all over the world. These stories of success are often true but misleading. It is clear to any unbiased observer that the higher education system short-changes the majority of its students and produces conformity and mediocrity;



above all, the impressive numbers of scientists and engineers have not translated into excellence in research and teaching. Far too many good students are driven to emigrate to better universities abroad. Far too many of the disadvantaged are left with near worthless degrees, poor skills and even poorer prospects.

The consensus on the need for reform breaks down quickly when specific measures are discussed. Therefore, without advocating any specific reform as a silver bullet, it suffices to suggest that reform is required in all the three crucial areas al-

luded to above - curricular, organisational and regulatory. There is sufficient understanding of the principles of good educational practice that lead to learning and empowerment.

Critical, independent thinkers

Students should be prepared as critical and independent thinkers and self-directed learners. Our colleges should contribute to students' growth and maturation, not just in academic learning but in their sensibilities as citizens and human beings capable of facing global, local and personal challenges. Translating this into a curricular vision, particularly by dismantling the existing morass of examination driven rote, has been more difficult. It is here that a renewed organisational vision for higher education may help. Universities and colleges, new and old ones alike, have continued to replicate the structure of the centralised colonial hierarchy. Power vests in a few individuals who are often distinguished only by length of service and strength of political connections and by little else.

Collegial dialogue and democratic functioning is conspicuously absent. Organisational and curricular reform therefore

need to proceed in parallel, mutually supporting each other. This change has to happen with due respect to the diversity of social and cultural contexts in which education takes place. No single curricular initiative can claim to be the key.

Unless political and regulatory regimes enable and catalyse this change, very little progress is possible. Our universities like many other institutions that produce crucial public goods are often captives of political and economic vested interests. Change of the kind I have advocated, we are assured, is a pipe dream. But the consequences of not reforming are far too serious. The fruits of economic growth in the last two decades have devolved largely to a smaller segment of the population than hoped for. The ranks of this growing middle class clamour for and receive new choices in education through the market - be they in foreign lands or in a rapidly expanding private sector in our country. The public education sector faces the dim prospect of being reduced to a provider for those without any other recourse. This trend is clearly visible in school education and is gathering momentum in higher education. The implications for social justice

and cohesion are obvious. India has long been an unequal society. The hope that modernity and its rewards will lead to greater dignity and opportunity for the millions who live in penury, if belied, is a recipe for social upheaval and chaos.

It would be unfortunate if the Delhi University fiasco gives four-year undergraduate programmes a bad name. Many private and public Universities in India already offer or are on the road to offering such programmes as standard fare. They view the nature of education more broadly, are more flexible, and have curricula that emphasise not just job readiness but a deeper initiation into citizenship and ethical living. These programmes and innovating institutions need to be supported. The least that a well-known public central university could have done is to demonstrate the capacity for well-articulated and executed change. Delhi University has faltered at this crucial step. The government and the regulator have not helped matters either. It is all the more important that it does not vitiate the debate and diminish the appetite for reform.

(The writer is with the Azim Premji University)

Scrap four-year course, UGC tells IISc, others

NEW DELHI: After Delhi University, the Indian Institute of Science, Bangalore, has been asked by the University Grants Commission (UGC) to scrap its four-year undergraduate programme.

The higher education regulator has also issued a similar directive to Shiv Nadar University, Noida, and Symbiosis International University, Pune, which also offer four-year undergraduate programmes (FYUP), Human Resource Development Minister Smriti Irani said in a written reply to the Lok Sabha on Wednesday.

IISc an autonomous institution: Prof

When asked to comment on the UGC directive, Chandan Dasgupta, professor, department of Physics and dean, undergraduate studies, said that the IISc is an autonomous and deemed institution under the Ministry of Human Resource Development, reports *DHNS*.

"I have not received any notification or information pertaining to the matter," he added. IISc Director Anurag Kumar refused to comment.

The Indian Institute of Science (IISc), a deemed university under Section 3 of the UGC Act, 1956, has been offering a four-year undergraduate programme in science (BS) since 2011. Shiv Nadar University and Symbiosis In-

ternational University offer four-year BA and BS programmes. "These institutions have been asked to discontinue such programmes and follow the UGC notification on specification of degrees," the minister said. Soon after forcing the Delhi University (DU) to scrap the FYUP in July, the UGC came up with a gazette notification on July 5, specifying the nomenclatures and duration of degree programmes for universities and other higher educational institutions.

The higher education regulator notified that general un-

dergraduate honours or general degree programmes, like BA, BSc and BCom should be of three years' duration, MPhil one to one-and-a-half years duration and doctoral 2 years.

After scrapping of the FYUP by DU, the commission sought information from O P Jindal University, Sonapat; IISc, Bangalore; Shiv Nadar University, Noida; Symbiosis International University, Pune; B R Ambedkar University, New Delhi; Ashoka University, Sonapat and Azim Premji University, Bangalore.

DH News Service

UGC finally gives in, bans animal dissections in colleges

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Chennai: After dithering for years, the University Grants Commission has finally buckled under pressure from activists to ban dissection of animals for academic purposes at the undergraduate and post-graduate levels on college campuses.

In a new notification, the apex body has asked colleges and varsities to stop dissection and experimentation on

The move comes after UGC observed that many of the animals were caught from their natural habitats, which disrupts the biodiversity and ecological balance

animals for life sciences courses. "No animal from any species shall be dissected, either

by teachers or students for any purpose," the order said. The move is an improvement on the partial ban issued in 2011.

"Those were just guidelines, which had several loopholes," said Dr Chaitanya Koduri, science policy advisor for People for Ethical Treatment of Animals (Peta), India. Peta had taken part in the UGC deliberations pushing for a ban.

For the full report, log on to www.timesofindia.com

IIT Bombay developing mobile apps to help patients in rural areas

[Janani Sampath](#), TNN | Aug 6, 2014, 10.12 PM IST

<http://timesofindia.indiatimes.com/tech/tech-news/IIT-Bombay-developing-mobile-apps-to-help-patients-in-rural-areas/articleshow/39768693.cms>

CHENNAI: Strengthening basic infrastructure at district level hospitals and increasing mobility coupled with formation of telemedicine units would go a long way in making healthcare accessible and affordable in the country, said Dr Arnab Jana from the Center for Urban Science and Engineering, IIT Bombay, on Wednesday.

Delivering a lecture on "Ensuring equity in healthcare accessibility: Need for a demand driven approach" at the IEEE R10 HTC Conference in Chennai, Dr Jana said several people in rural areas had access to mobile phones and it was important to focus on that aspect and develop methods to make healthcare accessible to them.

"It is essential to understand what people want in healthcare and the interaction between demand and supply to match their needs," he said.

In a study conducted in the rural areas of West Bengal, it was found that though many people had mobile phones, most of them did not have access to internet. Many of them had to rely on public transport systems and this cost them high out of the pocket expense.

"To make the better of the resources, IIT Bombay is in the process of developing apps that will help people in rural areas get quality healthcare at affordable costs," he said.

The apps will help people fix appointments in hospitals so the waiting time can be saved and there are also apps that would deliver the results of tests through text messages so the patients don't not have to travel all the way to the hospital just to pick up the results.

"Though it may not work for major illnesses, people with diabetes and kidney problems can benefit from it," said Dr Jana.

NGT adjourns IIT- Madras case

<http://www.thehindu.com/news/cities/chennai/ngt-adjourns-iit-madras-case/article6284872.ece>

The National Green Tribunal Southern Bench on Tuesday adjourned the case pertaining to construction of buildings on the Indian Institute of Technology – Madras (IIT-M) campus to August 22. When the petition, filed by E. Seshan, against the construction of buildings by felling trees on the campus came up for hearing, his counsel, M. Santhanaraman, said waiving prosecution against IIT-M and condoning its environmental violations would set a bad precedent in the State.

The counsel for IIT-M submitted that new batches of students were living in cramped conditions.

Hindustan Times (Indore),

Nalanda University set to open its doors from Sept 1

NEW DELHI: Nalanda University, an international centre of learning coming up in Bihar, is all set to start its academic programme from September 1.



FILE PHOTO

Temporary campus of Nalanda University.

The orientation will be organised on the August 29 and it will be an intimate interactive session between faculty members and students. A larger event is also planned in mid-September when external affairs minister Sushma Swaraj would visit the campus. The varsity may invite all the ambassadors of the East Asian countries given Nalanda's inter-Asian footprint.

More than 1,000 students from 40 countries have sought admission in the university, which will provide a subsidised fees structure according to students' needs. The ministry of external affairs has decided to support six students from Cambodia, Myanmar, Laos and Vietnam.

“At present, we have a total of eight faculty members in both schools and some are in the process of freeing themselves from other commitments and will join us soon. Applications have come from the US, Russia, England, Spain, Germany, Japan, Myanmar, Austria and Sri Lanka, as also from West Asian and Southeast Asian countries among others,” Dr Gopa Sabharwal, vice-chancellor of the university told HT.

Nalanda University came into being in 2010 following the passing of the Nalanda University Bill in both the Houses and a government notification specifying that the act will come into force on November 25, 2010.

The admissions are still open, she said, adding that: “We have one student from Japan and are in the process of getting some students from the some east Asian countries.”

Firm stand needed

It is now weeks since a section of Civil Services aspirants went on agitation, demanding some changes in the preliminary test pattern adopted three years ago. The agitators initially focussed on what they contended to be a poor quality Hindi translation of the English version of Civil Services Aptitude Test (CSAT) question paper that carries 50 per cent of the 400 marks allotted for the two papers to be taken in the preliminary qualifying test. This, according to them, put those taking the tests in Hindi language at a disadvantage. They then escalated their case against the CSAT claiming that the entire paper, not just its English comprehension segment that carries 20 marks, is loaded against aspirants from rural India, asserting that the kind of objective questions put to the aspirants weighed heavily in favour of those who crack IIT and IIM entrance tests. So, scrapping the CSAT paper from the preliminary test became their next demand.

The Union Public Service Commission (UPSC), the constitutional body in-charge of conducting the recruitment process for the country's elite service, has rejected these claims outright. As such, the Narendra Modi government, which came under pressure from the agitators, does not have many options to address the perceived grievances of the agitators. Yet, the government gave the agitators a false hope that their complaints would be addressed in a week's time. In between, however, a government-appointed panel of three experts went into the grievances and came out with its conclusion that there was nothing wrong in the preliminary exam pattern.

Notwithstanding the panel's conclusions, the government chose to make a concession to the agitators by offering that the 20-mark English comprehension segment of the CSAT would not be considered for preparing the qualification cut-off marks for the next round of test – the main exams. Emboldened, the agitators are not willing to settle for the concession. Having tasted some success and secured support of our populist politicians from all sides, they want more. With the preliminary tests less than three weeks away, the continuation of the agitation will only create an atmosphere of confusion among lakhs of other aspirants who are preparing for the tests. While the merits or otherwise of the agitators' grievances may be considered, now is not the time for settling the issue as the preliminary tests are fast approaching. The Modi government must put its foot down and convey this message to the agitators.



"A panel ruled that there is nothing wrong in the pattern."

CBSE-like Board on Cards for Skills Training Standard

Exam board will make process more robust, transparent & up to global benchmarks

YOGIMA SETH SHARMA
NEW DELHI

The government is working to set up an examination board to benchmark vocational training in the country as it seeks to bring skill development in line with international standards.

The labour and employment ministry is framing the structure and role of the proposed board, drawing from the experience of the Central Board of Secondary Education, which

sets the curriculum, conducts examinations and regulates the quality of secondary education in the country.

India is short on skills as only 2.5% of the employees have any certified abilities

"Examination system is most critical to benchmark skilled and semi-skilled workers against the best in the world," a senior official of the ministry told ET. "We plan to set up a separate examination board to make the entire process more transparent, robust and match the international standards for vocational training, and eventually enroll youths in the Skill Development Initiative."

Once the central board is in place, it would be entrusted with the responsibility to decide on curriculum, mode of examination and certification at different levels of training.

In his budget speech, finance minister Arun Jaitley had announced a new national programme, called Skill India, to impart employability and entrepreneurship skills to youth by merging various schemes from across ministries.

India has the world's youngest workforce with over 12 million



new entrants in the labour market every year but it is short on skills as only 2.5% of the employees have any certified abilities. As a result, the country's demographic dividend has not materialised because industry is unable to find employable workers, a situation that could lead to socio-economic unrest if youth remain unemployed and have no training avenues.

The labour ministry has already introduced the semester system of examination to avoid negligence both on the part of teachers and students, majority of whom had been enrolling themselves only towards the end of the courses. Besides, it has made re-affiliation of trades compulsory every five years, revamped curriculum and provided rigorous training to principals and teachers to professionalise the exam system, along with introducing flexi MoUs for employers to decide on the kind of skills needed.

'Inland waterways project will prove a death blow to Ganga'

Sandeep Joshi

VARANASI: The Centre's plan to develop the Ganga as waterways for commercial activities would give a "death blow" to the river that is already struggling for survival, feels experts and activists who have been working for the revival of the holy river.

They agitated over this "unpragmatic" move and have even threatened to launch agitation if this project is not scrapped.

"The Ganga is already dying a slow death due to severe pollution and upstream check of its flow. The government is now talking of constructing dams at every 100 km. Between Varanasi and Hooghly, which is around 1,600 km stretch, there will be 16 dams...This will kill the living river...It will be converted into 16 huge ponds, each with 100 km and 600-800 metres dimension," says Prof V.N. Mishra, who teaches in IIT-BHU and heads the Sankat Mochan Foundation, a trust that works for cleaning and revival of the Ganga.

Incidentally, Prof. Mishra, who is also the 'Mahant' or head priest of famous Sankat Mochan temple, was in Delhi in June this year when Union Surface Transport Minister Nitin Gadkari announced plans to develop inland waterways in the Ganga from Varanasi in Uttar Pradesh to Hooghly in West Bengal via Bihar and create multi-purpose terminals for commercial use. This Rs.6,000-crore project will be the part of Rs.1-lakh crore 'Clean Ganga' project that the Modi government plans to undertake.

'Struggling for survival'

"I was horrified to hear how the government was planning to kill a river which is already struggling for its survival...Has the government studied the adverse environmental impact the river will suffer? What will happen to its aquatic life that is already struggling for survival? What will happen to the mandatory ecological flow in order to call it a river? Are we trying to force a model similar to Suez or Panama canals on the Ganga? All these questions need to be answered," he says.

Warning that any further human interference with the flow of the Ganga would be disastrous, Prof. Mishra, who plans to petition Mr. Modi against the move, says: "The Ganga is the lifeline of 40-crore people, so leave it alone. Just make efforts to clean it...By just ensuring that not a single drop of sewage water and pollutants go into the river, we will address 90 per cent problems of the river."

Echoing similar sentiments, U.K. Choudhary, an ex-IIT-BHU teacher and a well-known expert in river engineering, says 90 per cent the holy river is "killed" when it reaches the plains, and the rest when its free movement is further controlled. "Dams and barrages block the flow of the river...The originality of the river is lost as it passes through these dams. More the dams, more the quality of water is degraded, which is harmful for river's survival and all those dependent on it. It is high time we stop further degradation of the river and focus solely on improving its quality," he adds.

Govt Plans Three Major Revamps

RITIKA CHOPRA
NEW DELHI

The Indian medical education system could be in for a radical revamp if the Narendra Modi-led NDA government agrees with its newly-appointed advisors.

A group of experts, set up by Union Health Minister Harsh Vardhan, is in favour of a three-pronged strategy — common entrance examination, compulsory exit test for medical graduates and mandatory renewal of medical licences for doctors — to improve the quality of healthcare in the country.

In other words, if this committee were to have its way, medical aspirants will have to take only one entrance test to seek admission in any college; MBBS graduates will have to pass a compulsory screening test for permanent registration with the MCI; and doctors will have to keep updating their knowledge and skills to hold on to their licences and continue with their practice.

The three ideas were “discussed and accepted” at the second meeting of the group of experts, headed by renowned clinical pharmacologist Ranjit Roy Choudhury, this week. If the proposals find favour with the new government, then they could be introduced through amendments in the Indian Medical Council Act.

Explaining the rationale behind the proposed reforms, a source in the expert panel told ET, “The only way we can strive for quality healthcare in the country is by ensuring that the intake in educational institutions is of a certain

Three Plans

An expert panel is in favour of three-pronged strategy to improve the quality of healthcare

- 1 **Common** entrance examination
- 2 **Compulsory** screening test for MBBS graduates
- 3 **Mandatory** renewal of medical licences for doctors

UPA gov't had also tried to introduce a common entrance test, but SC shot it down last year

Gov't could now reintroduce these reforms by amending the Indian Medical Council Act

The exit test for MBBS graduates could be modeled on the lines of the Foreign Medical Graduates Examination

standard; young doctors joining the profession have minimum competencies and existing medical practitioners keep up with advancements in medicine.”

The proposed reforms are not entirely new. The UPA government, for instance, had tried its best to introduce a common entrance test for all medical aspirants, but couldn't as the apex court shot it down last year. In the past, there have also been attempts to implement the national-level exit test for medical graduates and compulsory renewal of medical licences.

CII, Human Resource Ministry in industry-academia initiative

Ashok Leyland, Nissan, Brakes India among firms to support programme

OUR BUREAU

Chennai, August 6

Industry and academia have come together to improve the quality of engineering education. The Confederation of Indian Industry (CII) and the Human Resource Ministry's Quality Enhancement in Engineering Education programme (QEEE) have announced a programme to provide practical and industry-oriented inputs by experts from various sectors.

CII will work as an industry knowledge partner with the QEEE team in IIT Madras and get the right resources through its industry membership.

Tech trends

Ashok Jhunjunwala, Professor at IIT Madras and Chair-

man, QEEE, said 15 industry-oriented lectures will initially be offered to students. The sessions will focus on technology trends in the industry in sectors such as information technology, software, electronic products, telecom, automotive, chemicals, speciality materials, aerospace and defence. The sessions are targeted at fifth and seventh semester students of the undergraduate engineering programmes in the 124 colleges that have signed up for the QEEE programme, according to a joint press release.

B Santhanam, Immediate Past President, CII (Southern Region), said the partnership will provide industry orientation with emphasis on practical applications with the help of experts.

Companies like Ashok Leyland, Nissan, Brakes India, Blue Star, Murugappa Group and Saint-Gobain Glass India have agreed to support this initiative.

Comprehensive reform

The mandate of QEEE is to comprehensively reform technical education. Three areas - direct-to-students, teacher training and policy changes - have been identified for this.

IIT-Madras implemented a pilot programme for direct-to-students from January to April. This offered 12 live course, two virtual labs, one tutorial and one massive open online course to 100 participating engineering colleges. The lectures were delivered live from IIT studios to all classrooms simultaneously through infrastructure designed and set up for this programme, said Jhunjunwala.

Probe catches comet after 10-year chase

ROSETTA REACHES ITS STONE

EUROPE'S ROSETTA PROBE MAKES RENDEZVOUS WITH ITS TARGET, COMET 67P/CHURYUMOV-GERASIMENKO, AFTER TRAVELLING 6.4BN KM IN SPACE

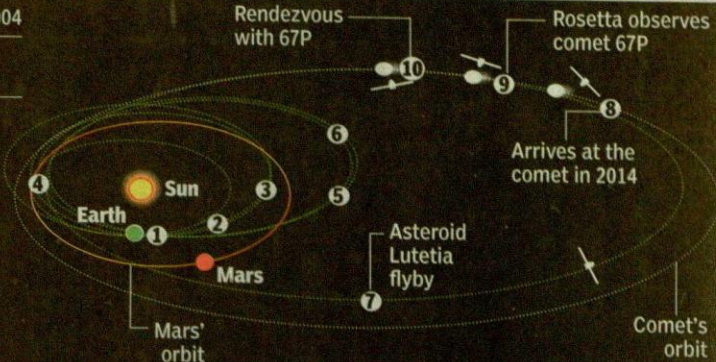
The probe, launched in 2004, will keep orbiting 67P through 2015 as it makes its nearest approach to the Sun more than a year from now

Currently 550m km from Earth. It takes 22 minutes for messages to reach Rosetta

In November, mission controllers will drop a lander, Philae, on 67P's surface

PHILAE WILL USE HARPOONS TO ANCHOR ITSELF AND CARRY OUT EXPERIMENTS, INCLUDING DRILLING INTO MATERIAL THAT MAKES UP THE COMET

1. Launch: Mar 2, 2004
2. First Earth flyby: Mar 3, 2005
3. Mars flyby: Feb 26, 2007
4. Second Earth flyby: Nov 14, 2007
5. Asteroid Steins flyby
6. Third Earth flyby: Nov 11, 2009



Mission Aims Besides getting to know about materials that make up a comet, mission hopes to shed light on the question: Did comets seed life on Earth?

ICY TARGET

- > Comet 67P/Churyumov-Gerasimenko was first observed in 1969 and named after scientists who made the discovery
- > Orbits the Sun once every 6.5 years, travelling between orbits of Jupiter and Earth
- > About 4km wide, its surface temperature appears to be around -70°C, warmer than expected



“After 10 years, five months and four days travelling towards our destination, looping around the Sun five times and clocking up 6.4 billion km, we are delighted to announce finally ‘we are here’”

JEAN-JACQUES DORDAIN, Director General, European Space Agency



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London: A European spacecraft has created history by reaching a comet after a 10-year chase to map its surface.

The European Space Agency's Rosetta spacecraft fired its thrusters for six and a half minutes to finally catch up with Comet 67P/Churyumov-Gerasimenko as it streaked towards the sun at around 55,000km per hour.

“We're at the comet” said Sylvain Lodirot of the Esa operations centre.

“After 10 years, five months and four days travelling towards our destination looping around the Sun five times and clocking up 6.4 bil-

lion km we are delighted to announce finally ‘we are here’,” said Jean-Jacques Dordain, director general of Esa.

Comet 67P/Churyumov-Gerasimenko and Rosetta now lie 405 million km from Earth, about half way between the orbits of Jupiter and Mars. The comet is in an elliptical 6.5-year orbit that takes it from beyond Jupiter at its furthest point to between the orbits of Mars and Earth at its closest to the Sun.

Rosetta will accompany it for over a year as they swing around the Sun and back out towards Jupiter again.

Comets are considered to be primitive building blocks of the Solar System and may have helped to ‘seed’ Earth

with water perhaps even the ingredients for life. But many fundamental questions about them remain and through a comprehensive in situ study of the comet Rosetta aims to unlock the secrets within.

Images taken by the OSIRIS camera between late April and early June showed that its activity was variable. The comet's ‘coma’ — an extended envelope of gas and dust — became rapidly brighter and then died down again over the course of those six weeks. In the same period, first measurements from the Microwave Instrument for the Rosetta Orbiter suggested the comet was emitting vapour into space at 300 millilitres per second.

Cigarette butts to power gadgets

Used Filters Can Help Store Energy

Kounteya.Sinha@timesgroup.com

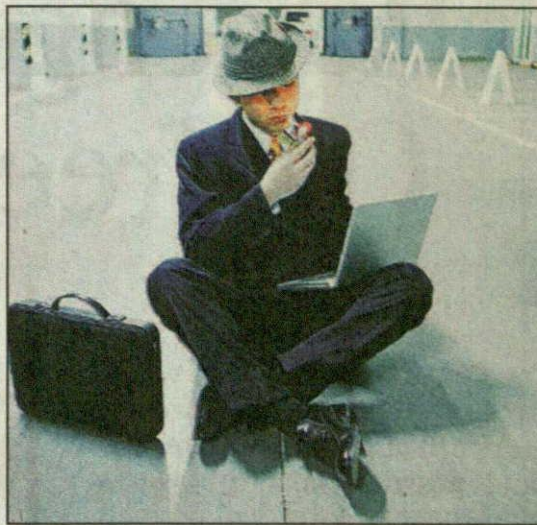
London: A group of scientists from South Korea have converted used-cigarette butts into a high-performing material that could be integrated into computers, handheld devices, electrical vehicles and wind turbines to store energy. The researchers have demonstrated the material's superior performance compared to commercially available carbon, graphene and carbon nanotubes.

It is hoped the material can be used to coat the electrodes of super capacitors—electrochemical components that can store extremely large amounts of electrical energy—whilst also offering a solution to the growing environmental problem caused by used-cigarette filters.

It is estimated that as many as 5.6 trillion used-cigarettes or 766,571 metric tonnes are deposited into the environment worldwide every year.

In their study, the researchers demonstrated that the cellulose acetate fibres that cigarette filters are mostly composed of could be transformed into a carbon-based material using a simple, one-step burning technique called pyrolysis.

As a result of this burning process, the resulting carbon-based material contained a number of tiny pores, increasing its performance as a super capacitive material.



SMOKING FOR SCIENCE?

“A high-performing super capacitor material should have a large surface area, which can be achieved by incorporating a large number of small pores into the material,” said Professor Jongheop Yi from Seoul National University.

“Our study has shown that used-cigarette filters can be transformed into a high-performing carbon-based material using a simple one step process, which simultaneously offers a green solution to meeting the energy demands of society. Numerous countries are developing strict regulations to avoid the trillions of toxic and non-biodegradable used-cigarette filters that are disposed of into the environment each year—our method is just one way of achieving this.”

'Russian hackers stole 1.2bn passwords'

Washington: Russian hackers stole 1.2 billion internet credentials from major US companies and others around the world in what is likely the biggest data breach ever, security researchers said Tuesday.

The US firm Hold Security said the gang, which it dubbed 'CyberVor', collected confidential user names and passwords were stolen from some 420,000 websites, ranging from household names to small internet sites. "As long as your data is somewhere on the World Wide Web, you may be affected by this breach," Hold said in a statement on its website.

"Your data has not necessarily been stolen from you directly. It could have been stolen from the service or goods providers to whom you entrust your personal information, from your employers, even from your friends and family."

The security firm, which special-



BIGGEST DATA BREACH EVER

izes in research on large data breaches, said the cybergang acquired databases of stolen credentials from fellow hackers on the black market, and then installed malware that allowed them to gain access to many websites and social media accounts.

"To the best of our knowledge,

they mostly focused on stealing credentials, eventually ending up with the largest cache of stolen personal information, totaling over 1.2 billion unique sets of e-mails and passwords," the researchers said.

"The CyberVors did not differentiate between small or large sites. They didn't just target large companies; instead, they targeted every site that their victims visited. With hundreds of thousands sites affected, the list includes many leaders in virtually all industries across the world, as well as a multitude of small or even personal websites."

The researchers dubbed the hacker group CyberVor, using the Russian word 'vor', for thief. The New York Times first reported the breach, and said the group of hackers based their operation in south central Russia, a flanked by Kazakhstan and Mongolia, the report said. AFP