Newspaper Clips

November 29, 2010

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Clinical trials zoom in India

TIMES INSIGHT GROUP

If India is becoming a favourite destination for clinical trials, Maharashtra is the hub with Mumbai and Pune accounting for the largest number of clinical trials in the country. Maharashtra alone accounted for well over a quarter of all the clinical trials registered with the clinical trials registry of India till 2010. A study of the trials recorded in the registry, done by the Centre for Studies in Ethics and Rights, Mumbai, and published in the Indian Journal of Medical Ethics, reveals that the number of trials has been growing at an astounding 36% annually, from 2006-07 to 2010-11.

Even this may be an underestimation. This is despite the fact that the clinical registry could be an underrepresentation of the trials happening in the country as registration was made mandatory only in June 2009. Also, it is not mandatory to register trials that look into the rate at which or the degree to which a drug is absorbed by the body or becomes available at the site in the body where it is needed, explained Deepica Ravindran from the Centre for Studies in Ethics. She added that the study had shown that the increase in clinical trials had no correlation to the disease scenario in the country.

The largest proportion of the drug trials is for cancer drugs, at 13.4% of all trials. Cancer is not among the top ten killers in India. But it is definitely among the top ten in developed countries. Trials on perinatal conditions, a major cause for deaths in India, constitute just 2.9%. Similarly, though tuberculosis is a major reason for morbidity and mortality in the developing countries, only 0.6% of the clinical trials or seven in number are TB related, said Ravindran presenting the results of the study at the National Bioethics Conference in Delhi. Only 16 out of 1,078 clinical trials were on lower respiratory tract infections though they are among the biggest killers both in India and other developing countries.

The bulk of the small proportion of trials on infectious diseases and on perinatal conditions is funded by institutions and mostly by Indian sponsors, notes the study. The study also reveals that most trials by foreign sponsors and pharmaceutical companies are for cancer and circulatory system related illnesses. Most of the trials take place in cities and states with good infrastructure to conduct such research, like Mumbai, Pune, Bangalore and Hyderabad, which are also the seat of most of the contract research organizations. They have a ready network of doctors and institutions, which feed them the patients required for the various trials, explains Girish Ingle, one of the researchers who conducted the study.

TRIALS REGISTERED

Disease conditions	No. of trials till Jun 2010	% of trials registered
Neoplasms (cancers)	144	13
Infectious diseases	129	12
Endocrine, metabolic diseases	123	11
Diseases of circulatory system	112	10
Diseases of nervous system	68	6

Drug trial setting by state	No. of trial settings till Jun '10	% of total trial setting
Maharashtra	1,116	26
Karnataka	617	14
Andhra Pradesh	444	10
Gujarat	417	10
Tamil Nadu	389	9
India	4,293	-

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'International ban on endosulphan essential'

India's opposition to a ban on the use of endosulfan at the Persistent Organic Pollutants Review Committee meeting in Geneva in October has revived the long-drawn-out controversy over the pesticide. Twenty-four of the 29 countries that attended the meet pressed for the ban and ironically many of them cited reports of endosulfan-caused health problems from Kerala to back their demand. Kerala banned the use of endosulfan after a state panel proposed so in 2001. A Achuthan, an environmental scientist and a former president of the popular science movement, Kerala Sasthra Sahithya Parishad (KSSP), who headed the panel spoke to T Ramavarman:

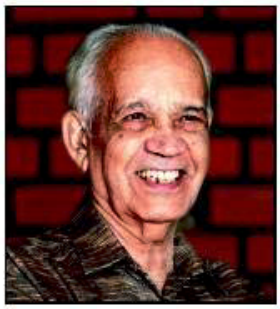
■ Can you give us a broad picture of the reported ill effects caused by spraying endosulfan?

The reported health consequences of endosulfan in Kasaragod district are similar to those reported in several studies from all over the world. They can be grouped under five heads: neurological, endocrinal, reproductive, genotoxic and dermatological. The most commonly reported diseases are headache, nausea, quivering, convulsions, malfunctioning of kidney, thyroid gland and liver, menstrual cycle disorder, early menstruation and early menopause, genetic disorders, skin disorders, swelling and watering of the eyes and difficulty in breathing. The environmental ill effects reported are reduction in honeybee population, contamination of soil and water.

Q&A

■ What evidence do we have to link these effects to endosulfan spraying?

Prior to 1980, prevalence of such illnesses was not reported, which means that the problem was not serious. But between 1980 and 2000, when aerial spraying of endosulfan was done in the area, these diseases



were reported on a large scale. Many studies have shown that the prevalence of such diseases in these areas is three to four times higher than those found in similar locations.

■ How important is the cashew plantation in Kasaragod for Kerala's economy?

Only 5 to 6 per cent of the total cashew processed in Kerala comes from the Plantation Corporation of Kerala (PCK) plantations in Kasaragod. A small decrease in the productivity there is unlikely to have any notable effect on the industry. However, spraying endosulfan in plantations may affect export of cashews.

■ Pesticide industry and unions in the cashew sector claim that unscientific spraying methods are responsible for the ill effects.

The PCK entrusted aerial spraying of endosulfan to private helicopter operators. There was no effective supervision. The topography and hydrography of the area is unsuitable for aerial spraying. The PCK plantation area is uneven with a large number of small hillocks. In such an area, helicopters cannot fly at low altitudes and the spray will spread outside the target area. The National Spices Research Institute had suggested to rotate the pesticide and give a pesticide holiday after every two or three years. The advice was neglected.

■ What is the way out?

An international ban is essential. When sprayed from air, endosulfan spreads widely and will be transported across state boundaries. In water, endosulfan gets converted to sulfate, which will persist for a long time, and will be transported through surface and ground water. A review of the use of chemical pesticides is urgently needed.

In Third World countries, ill-informed farmers are likely to use pesticides indiscriminately. It is necessary to legally prescribe (as in the case of schedule H drugs) that 'all chemical pesticides should be sold only on the basis of written prescriptions from agriculture scientists and that such pesticides are sold only through sales-persons, who have a degree or diploma in agriculture or entomolo6+6+3

gy or a degree in chemistry'. A clause to this effect should be included in the Pesticides Bill pending before Parliament.

Hindustan Times ND
29/11/2010 P-3

IIT ASPIRANT CHALLENGES LAST-MINUTE CANCELLATION

Harish V Nair
harish.nair@hindustantimes.com

NEW DELHI: Thanks to a "mere inadvertent mistake" by Indian Institute of Technology, 19-year-old Nidhi Singla's is fighting a legal battle to fulfill her dreams to join the premier institute despite clearing the exams.

In April 2010, Nidhi appeared in the IIT entrance exams and scored a rank of 6,767. She was allotted a seat in IIT-Roorkee (architecture branch) and was asked to deposit a fee of ₹40,000.

When a thrilled Singla tried to access the admission letter online, she was shocked to see the IIT informing her that her admission had been cancelled.

However, it didn't cite any reason for the cancellation.

And, Nidhi is not alone in her battle. Fifty more candidates met a similar fate after their admissions were cancelled.

Thanks to the blunder, the girl lost a chance to pursue engineering courses.
VINAY KUMAR, victim's lawyer

IIT admits its mistake: Three months after Nidhi moved court, the IIT filed an affidavit, saying these students had not cleared the aptitude test and they were declared passed because of a "mistake in data processing".

"For the IIT it is a 'mere inadvertent' mistake. But thanks to the blunder, the girl lost a chance to pursue engineering courses in other prestigious institutions as well," Nidhi's lawyer Vinay Kumar told the court.

Kumar argued that "once a seat was allotted, the admission cannot be cancelled without giving any notice or justification".

The premier institute, in its defence, said Nidhi was given a second chance. "Due to lack of choices intimated by her ... she could not secure any seat in the available courses."

On the contrary, Nidhi said she had filled 97 choices and it was enough to grant admission.

Hindustan Times ND 29/11/2010 P-5 HT CITY

DON'T BAN THE NET

Delhi's students give their verdict on IIT Kanpur's plans to ban the Internet on campus after midnight

Shruti Dargan
shruti.dargan@hindustantimes.com

The country's iconic engineering institute, Indian Institute of Technology (IIT), Kanpur is set to ban the late night use of Internet by the students. The reason: Authorities think students spend too much time on the Internet in trivial pursuits during those hours. As a result, they don't get enough sleep, which results in lack of concentration, claims the management. It adds that this reflects poorly in examination results, and even leads to depression and suicide.

We asked city hostellers what they thought of such a ban. A poll involving 20 students from IIT Delhi, Delhi University, Jawaharlal Nehru University, Indian Institute of Mass Communication and Netaji Subhash Institute of Technology revealed that while 90% feel that the ban is a bad idea, some feel it may help curb over-indulgence.

Samarth Yadav
IIT Delhi

I don't think an Internet ban will prove to be helpful. As our classes are usually from 9-5, most of us start our assignments late at night, after midnight. So, even if a late-night Internet ban is intended for a good purpose, it will, in turn, hamper our studies. And, again, there are alternative technologies through which one can access the facility. So the banning idea doesn't work.

Gunjan Sangwan
Jawaharlal Nehru University

It's a stupid idea. It's just not worth it. The Internet is not just for fun, but work as well. So, banning it is a bad idea. Also, I don't see why the authorities think that such a step would help students focus more on studies and their grades. If you ban something, the urge to do it only increases. Also, I feel that students who need the Internet for studies will suffer the most.

N Anuranjani
Indian Institute of Mass Communication

I don't agree with this logic at all. As we stay in hostels, we know that night-time is most suitable to work, study and surf. Who can guarantee that banning the Internet will result in students sleeping early or studying better? When the connection went out in our hostel for a week due to some technical problems, it affected our assignments very badly.

Akshat Mittal
Netaji Subhash Institute of Technology

I think browsing the Internet at night does affect the performance of students, as they waste their time on social networking sites. So yes, this step aids marginally, but not so much. Those who want to do it will always do it one way or the other. The ones to suffer will be those who genuinely need the Internet for some project work.

Prashanti Subramaniam
Lady Shriram College, DU

You can't say that the Internet affects studies completely. A lot of us are addicted to social networking sites, but yes, the wee hours are when most of us study. We're mostly out during daytime, and at night, if the net is banned and the library is closed, we're hardly left with any other option!

Times of India ND
29/11/2010 p-7

Denied seat, girl files case against IIT

Abhinav Garg | TNN

New Delhi: A 19-year-old girl, who was first assured that she had made it to the prestigious Indian Institute of Technology (IIT) but later denied admission due to an "inadvertent mistake", has dragged the IIT to court.

Nidhi Singla, a resident of Gurgaon, is devastated after her admission was cancelled after a seat allotted to her in IIT Roorkee in architecture course. A consistently bright student who always had the ambition to study in IIT, Nidhi looked all set to convert her dream into a reality when in April this year she was offered a seat in IIT Roorkee. It seemed to justify the academically brilliant girls determination to crack the entrance despite being bedridden due to an accident. As per the result, Nidhi notched up a rank of 6767 and therefore became eligible to a seat in architecture.

But on the day when Nidhi had gone to deposit Rs 40,000 as admission fee, she was informed by the Roorkee administration that it had no information of her candidature and refused admission. A stunned Nidhi made frantic inquiries only to be told that it was an inadvertent mistake that led to inclusion of her name and the names of 50 other candidates in the list of successful candidates.

Then the Singla family decided to take the IIT to court and seek judicial redress. Invoking the jurisdiction of Delhi high court since the human resource development ministry is located in the national capital, Nidhi through her lawyer Vinay Kumar moved court, challenging the decision of IIT to revoke her admission and seeking compensation.

SHATTERED DREAMS

Kumar alleged the IIT had been extremely casual in dealing with the case of her client. Rueing the lack of transparency in the entire procedure, Kumar informed Justice R S Endlaw how IITs stand threatened to ruin Nidhi's career.

Times of India ND
29/11/2010 p-11

Teachers showcase innovative methods at global forum

Manash Pratim Gohain | TNN

Cape Town: Over 500 teachers and educators from 60 countries came together at Cape Town, South Africa, to celebrate the impact of innovation and technology in education.

Teachers from India, Ghana, Seychelles and Northern Ireland were among the 125-odd participants who made it to the sixth annual Worldwide Innovative Education Forum Partners in Learning following a tough contest among 2,00,000 teachers.

Krishna Sharma is a case in point. A teacher from Vidisha, Madhya Pradesh, she took a personal loan to buy a laptop and use it to teach in her class. That was her only means to counter the perpetual blackouts in her school. Samuel Avornyo from Ghana, winner in the Innovation in Community category, on the other hand, is using a local server to give his students a real-life internet browsing experience. Jeffrey Nanty is from Seychelles, an island country where the landmass is diminishing due to erosion. He is now helping his students use computers and initiate a campaign against deforestation.

The five-day forum, an annual event organized by Microsoft, aims to drive innovation and creativity among teachers. As part of the event, the participants spend a week in Cape Town convincing the jury of their innovation and use of technology in education for community learning despite pressing socio-economic hurdles.

The highlight of this year's forum was the launch of the strategic partnership, Shout, by the Smithsonian Institution and TakingITGlobal.

(The writer was in South Africa at the invitation of Microsoft)

Times of India ND 29/11/2010 p-17

Sugar cube-sized supercomps?

Prototype Built; Massive Shrinking To Make Future Devices More Energy Efficient

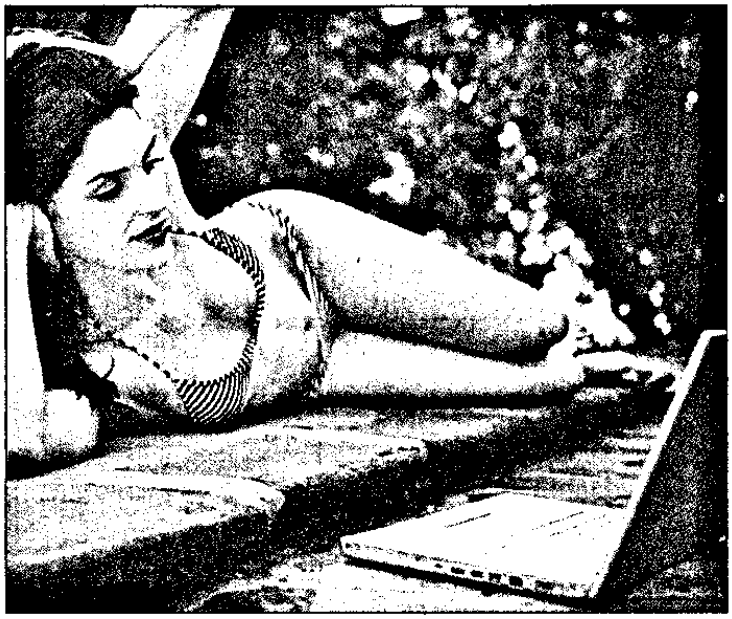
London: IBM scientists have said that a pioneering research effort could shrink the world's most powerful supercomputer processors to the size of a sugar cube.

The approach will see many computer processors stacked on top of one another, cooling them with water flowing between each one.

The aim is to reduce computers' energy use, rather than just to shrink them. Some 2% of the world's total energy is consumed by building and running computer equipment.

Bruno Michel said future computer costs would hinge on green credentials rather than speed.

Michel and his colleagues have already built a prototype to demonstrate the water-cooling principle. Called Aquasar, it occupies a rack larger than a refrigerator. IBM estimates that Aquasar is almost 50% more energy-efficient than the world's leading supercomputers.



SMALL IS BEAUTIFUL: The new approach will see several computer processors stacked on top of one another

"In the past, computers were dominated by hardware costs – 50 years ago you could hold one transistor and it cost a dollar, or a franc," the BBC quoted Michel as saying at IBM's Zurich labs.

Now when the sums are done, he said, the cost of a transistor works out to 1/100th of the price of printing a single letter on a page.

The overwhelming cause of those energy costs is in cooling, because computing power generates heat as a side product.

"In the future, computers will be dominated by energy costs," said Michel.

Until recently, the supercomputer at the top of that list could do about 770 million computational operations per second at a cost of one watt of power.

The Aquasar prototype clocked up nearly half again as much, at 1.1 billion operations. Now the task is to shrink it. ANI

Times of India ND p-17
29/11/2010

Speed guns can help cops detect suicide bombers

London: Radar guns used by police to spot speeding motorists could help identify would-be suicide bomber in a crowd, say researchers.

A radar gun fires microwave pulses at a car and measures the Doppler shift of the reflected signal to calculate its velocity. However, the strength and polarisation of the reflected signal – the radar cross section – can provide additional information about the size and shape of the reflecting object and the material it is made from.

Researchers wondered whether the wiring in a suicide vest would alter the radar cross section of a bomber enough to allow a radar gun to pick him or her out in a crowd, reports New Scientist.

To find out, William Fox of the Naval Postgraduate School in Monterey, California, and John Vesecky of the University of California, Santa Cruz, used software to simulate how radar signals at 1 gigahertz and 10 gigahertz would be reflected by the most common arrangements of looped wiring typically used by suicide bombers.

They found that the clearest reflected signals were in the 10 gigahertz range.

Together with colleague Kenneth Laws, they then fired low-power 10 gigahertz radar pulses at groups of volunteers, some wearing vests wired up like suicide vests.

About 85% of the time, telltale factors in the polarisation of the reflected signals allowed them to correctly identify a "bomber" up to 10m away.

CAUGHT IN THE ACT

Researchers say that the wiring in a suicide vest would alter the radar cross section of a would-be bomber enough to allow a radar speed gun to pick him out

The team now hopes that the US army will fund further development of the system, allowing them to boost the detection rate and include refinements to avoid false alarms being triggered by metal parts in underwired bras, jewellery and earphone leads.

The researchers suggest military checkpoints would be major users of such a system – but it could also be installed alongside CCTV cameras in shopping malls, railway stations, airports and high streets. ANI

Times of India ND 29/11/2010 p-17

Recreating Ice Age in Siberia to fight warming

Chersky (Russia): Wild horses have returned to northern Siberia. So have musk oxen, hairy beasts that once shared this icy land with woolly mammoths and saber-toothed cats. Moose and reindeer are here, and may one day be joined by Canadian bison and deer.

Later, the predators will come _ Siberian tigers, wolves and maybe leopards. Russian scientist Sergey Zimov is reintroducing these animals to the land where they once roamed in millions to demonstrate his theory that filling the vast emptiness of Siberia with grass-eating animals can slow global warming.

"Some people have a small garden. I have an ice age park. It's my hobby," says Zimov, smiling through his graying beard. His true profession is quantum physics.

Climate change is felt most sharply in the Arctic, where temperatures are warming faster than anywhere else on the planet. Most climate scientists say human activity, especially industrial pollution and the byproducts of everyday living like home heating and driving cars, is triggering an unnatural warming of the Earth. On Monday, negotiators representing 194 countries open a two-week conference in Cancun, Mexico, on reducing greenhouse gases to slow the pace of climate change.

Zimov is trying to recreate an ecosystem that disappeared 10,000 years ago with the end of the ice age, which closed the 1.8 million-year Pleistocene era and ushered in the global climate roughly as we know it.

AP

PAST PERFECT: Russian scientist Sergey Zimov with bones of woolly mammoths, in Siberia. Zimov believes filling the vast emptiness of the region with grass-eating animals can slow global warming

He believes herds of grazers will turn the tundra, which today supports only spindly trees and shrubs, into grasslands. It would take millions of animals to change the landscape . But left alone, Zimov argues, the likes of caribou, buffalo and musk oxen multiply quickly. Wherever they graze "new pastures will appear... beautiful grassland." AP

Times of India ND 29/11/2010

Now, a laser blast to clear clogged arteries

p-17

London: In what could drastically reduce operation time and hospital stays, UK scientists have developed a high-powered laser which they say unblocks clogged arteries in just minutes.

POWER TECH

The new procedure involved fitting a special catheter or tube to a new laser called the Excimer that blasts tissues into particles so small they can only be seen under a microscope.

Trials at University College Hospital in London have proved the procedure a major success as it not only reduced operating times but also dramatically sped up patients' recovery time.

The first two patients were treated at the hospital in July and discharged the next day, instead of spending weeks in hospital.

The current procedure to unblock artery can trigger exaggerated healing response leading to renarrowing of the artery. PTI

Times Of India ND 29/11/2010
(Education Times) P-1

EXCLUSIVE

Independent agency to conduct CAT

Manash Pratim Gohain/TNN

THE Indian Institutes of Management (IIMs) are now working towards creating an independent agency to conduct Common Admission Test (CAT). So far the CAT has been conducted by the IIMs and each year one IIM take charge of the tests. The IIMs are also looking at taking the competitive exam to international students as well.

CAT 2010, the entrance test for admission to seven Indian Institutes of Management and 100-odd other B-schools across the country, has been conducted by IIM, Lucknow. Post success of CAT, director of IIM, Lucknow, Devi Singh said, "Eventually CAT should be a global offering and should be web based like the GRE or GMAT. We are working on the process to finally create CAT as an independent system where a team of professionals would manage the test. A committee under professor Pankaj Chandra, director IIM, Bangalore is working on it and some progress has been made. It can take six to 12 months."

On the immediate changes one can see in CAT 2011, convener of CAT 2010, Himanshu Rai of IIM, Lucknow said,"Two things we are definitely going to improve on in CAT 2011 is the sale of vouchers. We will make the sale online wherein candidates can purchase it using credit, debit cards and internet banking. Another change is substantially reducing the 90-minute waiting time as students have complained about the long waiting right from entering the centre and sitting on their computers before actually taking the test."

On dissociating CAT from the IIMs and making it a globally recognised competitive exam for admission to B-schools, Singh said that the time has come to make it an independent identity as the number of IIMs is also increasing. "Some B-schools in France are already accepting CAT scores. So the acceptance is there, just that we need to take it offshore. Moreover, we have seven IIMs and six more are coming up making it 13. There will be other areas where IIMs would need to coordinate among themselves. So it is better we let the CAT be managed by a dedicated group of professionals whose focus would be exclusively on CAT," he explained.

A total of 2,04,267 students registered for CAT 2010 of which over 99%of the candidates were tested.

The exam was conducted over a period of 20 days from October 24, across 33 cities involving 78 test centres and 246 laboratories and 9,139 computers. Delhi had the highest number of registration with 20,341 candidates followed by Bangalore with 18,837 candidates.

The unwarranted experience of CAT 2009 seems to have been buried as so far CAT 2010 was completed without any glitches. On CAT 2010, Rai said, "We have learnt our lessons from 2009 and this year we ensured a thorough site readiness, improved service to candidates and overall enhancement of quality. We are certainly going to analyse our experience this year and concerns and areas that need to be addressed would be addressed."

The number of CAT aspirants has seen a dip for the second consecutive year. Compared to 2008, the number of aspirants came down by over 70,000 in 2010. According to Singh, the dip is a global trend. "The trend of pursuing an MBA is going down globally. Not that candidates have lost interest in IIMs, but earlier even students who did not aspire to go to the IIMs used to take the test," added Singh.

Times Of India ND 29/11/2010
(Education Times) P-8

IAS prelims in new avatar

By Pradeep Menon

CANDIDATES appearing for the civil services preliminary exam will, from next year, have to clear a paper that will test their general aptitude instead of their knowledge in a subject of their choice. However, the other paper on general studies will remain the same. The entrance test will be rechristened as Civil Services Aptitude Test (CSAT).

The recently-introduced CSAT was proposed by the Report of the Civil Services Examination Review Committee, 2001, also known as the Professor Yoginder K Alagh Committee Report. The committee recommended an aptitude test with emphasis on comprehension, logical reasoning, problem-solving and data analysis.

NEW SYLLABUS

The new syllabus will now comprise two compulsory papers of 200 marks and of two hours duration each. Paper I will be General Studies (current events of national and international importance, history of India and Indian National Movement, Indian and world geography and the world, Indian polity and governance, economic and social development, general issues on environmental ecology, bio-diversity, climate change and general science). As far as paper I is concerned, there will be no significant change in its syllabus, except inclusion of topics on environmental ecology, bio-diversity and climate change.

Paper II, which will be the aptitude test, will include aptitude skills including comprehension, interpersonal skills and communication skills, logical reasoning and analytical ability, decision-making and problem-solving, general mental ability, basic numeracy, data interpretation and English language comprehension skills.

As per the new syllabus, paper II will have eight types of tests.

THE PATTERN

Comprehension: In this section, questions may be based on certain real-life situations. The aim will be to test how good a candidate is at fact-finding, sifting through information, interpreting text, predicting and inferring events and recognising implied meanings.

Inter-personal skills: Inter-personal communication implies face-to-face communication involving few people (typically two) rather than large groups. This section is aimed to test the candidate's ability to understand and manage the dynamics of social interaction.

Logical reasoning and analytical ability: Logical reasoning measures your ability to understand, analyse and evaluate arguments. Each question is based on a short passage, graph, table or a set of conditions. Analytical ability questions are aimed at measuring your ability to analyse a given structure of arbitrary relationships and to deduce new information from that structure.

Decision-making and Problem-solving: This section measures your ability to use logic in solving problems. The question will generally relate to situations that require you either to take some action, to explain why an action has or would be taken or interpret what the action implies. Questions based on some law and order situations or administrative deadlocks also can be expected.

General Mental Ability: In the old pattern, General Mental Ability (GMA) Tests were included in the General Studies Paper. Now it has been shifted to Paper-II. The aim of the GMA Test is to evaluate your cognitive abilities — how proficient are you at learning and finding solutions.

Basic Numeracy: This section includes numbers and their relations, orders of magnitude etc, which are of class X level. The questions will test your ability to use numbers and solve simple numerical problems. The numerical knowledge you need for these tests is school level mathematics.

DATA INTERPRETATION

Data Interpretation (DI) questions tests one's ability to interpret data presented in tables, graphs and charts. It usually requires two basic steps. First, you have to read a chart or graph in order to obtain certain information. Then you have to apply or manipulate the information for an answer.

This section also includes data sufficiency. Each question is followed by two statements — (1) and (2). Your task is to analyse each of the two statements to determine whether it provides sufficient data to answer the question.

Comprehension: This section tests your ability to read and understand written material. Questions in this section will be of class X level and will be tested through passages. The Reading Comprehension test requires a good grasp over the English language. The passage will be followed by multiple-choice questions.

(The writer is director, JTS Institute)

Pioneer, ND 29-Nov-10 p-14

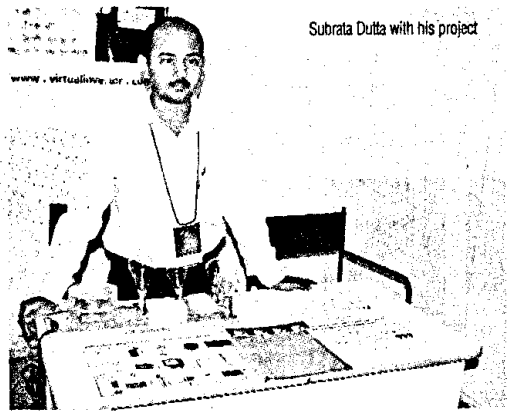
Bright ideas light the future

More than 50 participants from across the country displayed their out-of-the-box inventions at the India Innovation Initiative Awards recently. ILA SANKRITYAYAN talks to creative minds

Collecting clippings from newspaper is a hobby for this Pune based digital engineer Mandar Ramesh Thite. It was when it became difficult to retain some 30-year-old clippings that an idea to convert them into a digital format came into his mind. "Converting them into a digital format will save both — the physical space and the cost of paper. This was precisely what encouraged me to develop a mechanism that could preserve my valuables for an infinite period," said Thite about the inspiration that led him to invent Photo Clipping Machine.

Since he could not afford the price of paper scanning which turns out to be around Rs100 a page, he decided to capture the image and create clippings through a digital camera. "Since the digital camera takes too long, I developed a retrofit attachment for digital camera at home with which it is possible to take photographs of papers and named it the Photo Clipping Machine," he said.

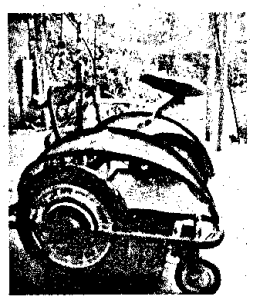
Thite's project was a part of The second India Innovation Initiative (i3) Awards that were given recently at the IIT-Delhi campus. The event witnessed more than 50 participants, selected from over 900 entries from all over the country. While Thite thought of preserving newspaper, Subhav Sinha, a Delhi College of Engineering graduate created a one seat vehicle to cut short the distances. "The idea came out of the need of excessive walking while going to attend classes at the college. Testing of vehicles on roads exposed newer areas of improvements," revealed Sinha. His battery operated personal mobility vehicle called *Mitra* — Personal Mover is suitable for narrow lanes. The vehicle is self balanced, eco-friendly and can easily move on different roads.



Subrata Dutta with his project

Vinod Marathe, a doctor by profession, came up with an integral treatment called Sharp-Suved for the treatment of heart diseases. "The meaning of integral lies in the use of best of allopathy, ayurveda, meditation and nutrition," said Marathe. Marathe who himself suffered from heart attack 17 years ago created this medicine as a result of his unwillingness to bear the prolonged treatment. "Being a doctor, I got the best attention possible; but it was of no help to my condition after the acute first few days were treated with conventional systems. I did not respond to medication and hence discontinued. I then began a journey of research, trials on self; and today, I am a living proof that complete functional recovery can be achieved with Sharp Suved," he explained. The entire treatment includes *aahar* (nutrition) *viihar* (life style modifications) *veechar* (stress management) *vyayam* (essential body work and exercise) and *aaushadh* (ayurvedic suved medication), and nutrient supplements.

Kishore Rajendram, who is pursuing Masters in Advanced Medical Electronics, on the other hand, designed a system called Pulse Wave Velocity Measurement, which at present is the only way to find if there is a block in the blood vessels. This is a computer based biomedical device which measures the velocity of the pulse. The doctor holds the wrist of a person to identify the pulse rate for diagnosis. "In a similar way, two sensors are placed on the arm at the locations of wrist and near the lower end of the biceps muscle. These are the locations that correspond to radial and brachial arteries. The sensors pick up the vibration of the pulse, converts it into an electrical signal that is displayed and stored in the computer. For a normal person, if there are no blocks in the arteries, the velocity will range from 7 to 10 m/s whereas for a person having a major block, the velocity will be more than 12 m/s," explained Rajendram. The device can be used at home without skilled technicians. "Also, diabetic patients who don't feel pain during cardiac abnormalities can find this device useful, since it can help them identify whether they have an arterial block. The device does not use any radiations. It simply detects the vibrations felt at the skin surface," he informed.



Mitra by Subhav and Rishabh Sinha

Where on one hand there are remedies for health problems, on the other side there are solutions for power crisis. Kolkata based Subrata Dutta has made a virtual inverter costing ₹500 that can restrict the power usage in every household. "It saves the energy by maintaining a balance between demand-supply ratio and can form an alternatives to power cuts by controlling the distribution of electricity," he concluded.