Kanpur: The Joint Entrance Exam (JEE)-Advanced will be held on May 25 and its result would be declared a month later.

IIT-Delhi would conduct the test along with six other IITs under the directives of the Joint Admission Board for admissions to the undergraduate programmes.

Students qualifying the JEE Advanced will get a chance to take admission to 16 IITs and ISM Dhanbad. The test would be conducted for only top 1.5 lakh candidates. Based on their scores in paper-1 of JEE (Main)-2014, they will be eligible to appear in JEE (Advanced)-2014. TNN
37L migrated for education within India in a decade

Maximum Movement Directed At Karnataka, Maharashtra

Hemali Chhapia | TNN

Mumbai: When we speak of migration, it’s mostly about people looking for jobs. Fact is, millions migrate in search of a better education.

Even within education, our attention tends to be focused on Indians going abroad for studies. We don’t look as closely at the multitudes who move within the country – from one state to another, or within the same state. In the last 10 years alone, 37 lakh youth have migrated within India for a degree/diploma.

Men outnumber women when it comes to this kind of mobility – 26 lakh compared to 11 lakh. Of them, 6.2 lakh (or 17%) moved to a new state, 16.8 lakh to another district within their home state. Karnataka received the largest number; 2 lakh, while UP sent out the largest number, 1 lakh. A January 2014 research paper, ‘Internal Migration for Education and Employment among Youth in India’, commissioned by UN-HABITAT’s Global Urban Youth Research Network, begins a conversation on whether or not Indian states must worry about internal brain drain.

“Migration is an old story. But the most important phenomenon we are seeing today is people moving for education,” said author S Chandrasekhar, professor at the Indira Gandhi Institute of Development Research. “With uneven distribution of educational facilities, there are clearly going to be winner states and loser states. My paper maps the trends in migration, but also leaves you with a question, should we worry about brain drain at the sub-national level?” The study looks at students who moved purely for reasons of education. “For example, if a family moved to Delhi because the bread earner got a new job and the child joined a Delhi college, he or she is not included in this survey,” said Chandrasekhar.

Historically, marriage has been the biggest driver of migration – 77.5 million out of 110 million in the age group of 15-32; that’s 70%. Nearly 10% have shifted in search of jobs and over 8.5% on account of education. “The share of educational migration has increased. As far as I can see, for education, more migration happens from AP to Karnataka, UP to Delhi, and UP to Maharashtra,” said Anil Kumar, professor at the Tata Institute of Social Sciences.

Chandrasekhar said most people in the 1980s moved not for education, but for career opportunities. “Then there wasn’t a Noida then, nor were there large private universities. The new IITs and IIMs were not yet up. Only recently have so many new AICTE approved technical colleges come up,” he said. Expansion of higher education has only fuelled migration.

“The most important states from the perspective of migration for education are Delhi, Maharashtra, Karnataka, UP, Bihar, Andhra, Kerala, Bengal and Rajasthan. Of these states, Delhi, Maharashtra, Karnataka are the key destinations (attracting migrants) whereas Bihar, UP, Kerala, Andhra, Bengal and Rajasthan are the key source states of migrants,” the paper noted. “In the next five years, we will see the Haryana effect where new universities are coming up; that will give migration a new meaning,” said Chandrasekhar.
Another name emerges for MS CEO – he’s also Indian

Google’s Pichai In Race With Insider Nadella

Sujoy John & Shilpa Phadnis | 19

SUNDAAR VERSUS SATYA

It looks to be Indian vs Indian for the top spot at Micro-

sft. A day after international media reported that the

$76-billion software giant was most likely to name 46-year-

old Hyderabad born Satya Na-

della as its CEO, SiliconAngle, a popular California online

technology publication, said Micro-
sft is actively in talks with 41-

year old Chennai born, Sun-
dar Pichai, the boss of Google

Chrome, Android (the world’s

biggest smartphone operating system) and apps like Gmail.

SiliconAngle’s editor John Furrier tweeted that talks with Pichai “are so tight under

wraps” that it could explain why Pichai’s name had so far not surfaced for the CEO’s job. Furrier retweeted that a sec-

ond source had confirmed that

Pichai “is the dark horse com-

ing from front runner”. MostSil-

icon Valley tech writers and

pundits, however, believe Na-
della is still leading the race.

Reputed tech writer Hans Swisher, who was the first to put

out Nadella’s name on Friday, tweeted that her sources were clear Pichai’s

name. Pichai Sundararajan

was not in the running for the

Microsoft CEO’s job.

“Face cannot get bigger than this for India’s technology talent: a storied tech giant looking at two Indian-origin execu-
tives to head the company at a time when it is losing mind-

share to rivals Apple and

Google and needs urgently to reinvent itself.

Nadella, as The Times of India reported in its front-

page lead on Saturday, is a

22-year Microsoft insider who now heads the compa-

ny’s $30-billion cloud and

tech group. Pichai got a BTech from IIT Kharagpur before going to the US for an MS from Stanford Uni-

versity and an MBA from Wharton School.

Under Pichai, Chrome has had an extraordinary

run. In May 2012, Chrome be-

came the most-used browser in the world, surpassing

Microsoft’s Internet Explor-
er, which had been the lead-

ing browser ever since it ousted Netscape from that

position in the late 1990s.

Pichai’s big advantage is the huge successes he’s had in

the consumer space of in-

ternet and mobile devices — where Microsoft has lagged behind and needs to play serious catch-up with the likes of Google.

Nadella’s experience is mostly in enterprise, but his big plus is the 22 years and the variety of roles he’s had in Microsoft, a sprawling gi-

ant of 100,000 people (to be

120,000 once Nokia’s mobile

phone business is merged), that doesn’t accept outsiders in

top jobs easily.

Nicholas Carlson of Business Insider, a business

news site, wrote an article in

September last year about Google’s culture, where he said, “Pichai made his ca-

reer at Google convincing computer manufacturers to install the Google Toolbar, which put a Google search window on the desktop of hundreds of millions of computers worldwide. Pi-

chail is a dealmaker, a con-

cious builder. Perhaps his ascension is a sign of the kinder, gentler, more coopera-
tive buildier to come.”

But Pichai and Nadella are just two among thou-

sands of Indians who are making a difference to the global tech industry.

Meanwhile, Nikesh Arora is senior VP and chief busi-

ness officer at Google and Vi-

sak Pandit, who’s called Google’s Social Curz, is the man behind Google+.

Many of these names are from the IITs, as indeed are thousands of others in se-

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dom. Sanjay Mohrtra, who co-founded SanDisk, and Preetish Nijhawan, who co-founded Akamai, are both BITS alumni.

A study by the US-based Ewing Marion Kauffman Foundation found that Indi-

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countries combined,” the report said.

Kawal Rekhi, Indian

American entrepreneur and

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IIT-B to set up entrepreneurship centre

TNN | Feb 2, 2014, 12:55 AM IST

MUMBAI: IIT-B will establish an entrepreneurship centre on its campus, with funding received from Syntel Co-founders Bharat Desai, a 1975-batch alumnus, and Neerja Sethi, under the aegis of The DS Foundation (Desai Sethi Family Foundation).

The centre, which will be named 'Desai Sethi Centre for Entrepreneurship', will encourage entrepreneurship and technology innovation through new programmes for education and research, multidisciplinary courses, research laboratories and partnerships. Students will receive instructions and mentorship from IIT-B faculty and guest faculty from leading international institutions. Devang Khakhara, IIT-B director, said, "The centre will enable IIT-B to become the hub of entrepreneurship in the region, similar to the role played by Stanford University in the Silicon Valley."

The centre will focus on emerging technology areas like nanotech and biotech. Prototyping facilities will enable students to convert innovative ideas into proofs of concept. Its activities will cover the entrepreneurship value chain to include mentoring, micro-grants and networking with established entrepreneurs and industry leaders. It will be managed by a board comprising faculty members, student representatives, industry professionals and two international entrepreneurship experts.

"Entrepreneurship and innovation are critical for economic empowerment," said Desai. "This centre offers a new channel to convert breakthrough ideas into viable business ventures." The centre establishment was announced on Saturday during the inaugural session of the Entrepreneurship Summit, whose theme is 'Dream, Discover, Disrupt'.

The e-Summit session included an address by Alexander Blass, CEO of Innovative Institution of America, and an Oxford and Wharton alumnus. Speaking to aspiring entrepreneurs, Blass said, "Being sensitive to what people (customers) value is important than market research. Customer may not always be able to articulate needs, it is your responsibility as innovators/entrepreneurs to understand requirements. But avoid know-it-all attitude."
Indian Institute of Technology (IIT), Bombay to set up a research park in its Powai campus for the purpose of Research and Development (R&D), which will act as an incubator for companies. This will be launched in 2014 and the institute has sought Rs 100 crore of initial funds from the Ministry of Human Resource Development (MHRD).

"We have received in-principle approval from MHRD for this purpose. The outer limit for the project is Rs 400 crore, and in the initial phase we will need Rs 100 crore," said Professor Devang V Khakhar, Director, IIT Bombay.

Khakhar explained that they are building a 2000 square feet building where companies will set up their R&D units. These companies, whose founders need not necessarily be from an IIT, will also get an opportunity to interact with the IIT faculty. This research park will also provide space for incubators, where start-ups can be nurtured.

"While there are several incubation and research centres in other institutes, the speciality of this research park will be that they will be provided all the technology-related support that it vital for the upcoming companies," added Khakhar.
Bamboo frames for multi-storey housing in India?

Engineers from Trinity College Dublin and the Indian Institute of Technology (IIT) Delhi have joined forces to develop bamboo frames for multi-story housing in India. The research aims to establish whether a bamboo composite could work in high rise housing in earthquake zones in India. During the five-week project, the team worked with Professor Roger West and Professor Ravindra Dhir from Trinity’s Department of Civil Engineering. Using static and cyclic loading, the durability of the frames was measured to establish their collapse strength and stiffness. Bamboo is well known for its tensile strength and flexibility. A special composite of bamboo and epoxy could provide an answer to the chronic shortage of low cost renewable medium density housing. It may also satisfy the need for ductility and durability for its use as the primary structural material in earthquake zones for housing of up to four storeys. The project forms part of an ongoing research collaboration between Professor Suresh Bhalla of IIT Delhi and Trinity College on testing bamboo columns. Trinity signed an MoU with IIT Delhi in 2011.
JICA’s ₹1,336 cr loan for building IIT Hyd campus

The Japan International Cooperation Agency (JICA) has signed an agreement with the government of India to provide 23,035 million Japanese yen (₹1,336 crore approximately) of Japanese Official Development Assistance (ODA) loan for building of part of the campus of newly established Indian Institute of Technology (IIT) Hyderabad. The agreement was signed in New Delhi by Shinya Ejima, chief representative, JICA India Office, and Rajesh Khullar, joint secretary (Bilateral Cooperation), ministry of finance, government of India. The loan is at concessional rate of 1.40% and carries a repayment period of 30 years with a grace period of 10 years. The project is to be executed by IIT Hyderabad and the expected date of completion is 2018.
आईआईटी बॉम्बे में बनेगा एंटरप्रियंयोरशिप सेंटर

विज्ञान के उभरते हुए क्षेत्रों जैसे नैनोटेक्नोलॉजी और बायोटेक्नोलॉजी को बढावा देने के लिए आईआईटी बॉम्बे एक एंटरप्रियंयोरशिप सेंटर की स्थापना करेगा। इस सेंटर का नाम देसाई सेटी सेंटर फार एंटरप्रियंयोरशिप होगा। यह सेंटर एजुकेशन, रिसर्च, मल्टी डिस्प्लीनरी कोर्सेज, रिसर्च लेब्स व पार्टनरशिप्स के लिए नए प्रोग्राम्स के माध्यम से एंटरप्रियंयोरशिप व टेक्नोलॉजी इनोवेशन को मजबूत बनाएगा। इसके तहत छात्रों को आईआईटी बॉम्बे की फैकल्टी और गेस्ट फैकल्टी के जरिए मार्गदर्शन मिलेगा। नया एंटरप्रियंयोरशिप सेंटर उभरते हुए टेक्नोलॉजी जैसे नैनोटेक और बायोटेक पर फोकस करेगा। प्रोटोटाइपिंग एक्टिविटीज छात्रों को अपने आइडिया को साकार करने में मदद करेगी। इस केंद्र का प्रबंधन एडवाइजरी बोर्ड के माध्यम से होगा, जिसमें फैकल्टी मेंबर, छात्र प्रतिनिधि, इंडस्ट्री प्रोफेशनल और अंतरराष्ट्रीय विशेषज्ञ शामिल होंगे।
Microsoft, Nadella talks enter last lap; Google’s Pichai emerges dark horse

RACE FOR CEO Two Indians in fray, software giant likely to announce Ballmer’s successor this week

HT Correspondent

WASHINGTON: With Satya Nadella said to be in contract negotiations to head global IT giant Microsoft, a new report suggests another India-born could be in the running too — Google’s Sundar Pichai.

Microsoft is expected to announce its new CEO this week, five months after Steve Ballmer said he was retiring, giving the company a year to look for a successor.

Multiple reports in US media over the last few days indicated Nadella, a 46-year-old from Hyderabad and a senior Microsoft executive, was close to clinching the coveted position.

The company has neither confirmed nor denied those reports. It also did not comment on a report that Pichai, senior Google vice-president in charge of Android, Chrome and Apps, has emerged a strong candidate from outside the company.

He was called the search team’s “top choice”, by SiliconAngle, a tech news site, which said, citing sources, negotiations with Pichai were in “full swing”.

Forty-one-year-old Pichai is a rising star at Google, a member of co-founder and CEO Larry Page’s inner circle called the L-Team. He received a major career bump in April 2013 when he was given charge to steer Android, the world’s leading operating software for smartphones.

There were reports subsequently that he could be leaving for a senior position at Twitter and that Google paid him an extra $40 million to make him stay.

“Sundar has a talent for creating products that are technically excellent yet easy to use,” Page wrote about Pichai at the time of the Android move.

Pichai was born and raised in Tamil Nadu, and moved to the US after passing out from IIT Kharagpur. He went to Stanford and Wharton business school. He joined Google in 2004.

Pichai soon became a member of the leadership team, joining a galaxy of others of Indian origin: Nikesh Arora, Amit Singhal, Sridhar Ramaswamy and Vic Gundotra.

“And he loves a big bet,” Page had written about him then.

Microsoft is indeed a big bet, as big as it gets.

Though the SiliconAngle story was picked up by many IT blogs and reports, there hasn’t yet been a ny official corroboration.

In contrast, there were multiple reports on Nadella — in Bloomberg, New York Times and the Wall Street Journal — all based on information from separate, independent sources.

But SiliconAngle was standing by its report.

Microsoft dominates the Indian enterprise software market space with a 31.1% market-share, according to IDC.
COLLABORATIVE RESEARCH

Deakin University entered into an agreement with the Indian Institute of Technology Madras (IIT-M) for collaborative research and development projects. They have announced the signing of a Memorandum of Understanding (MoU) that is expected to result in the wider dissemination and practical utilisation of inventions generated by IIT Madras faculty, students, and staff. This engagement will encourage students to enrol themselves in intense research and PhD programmes that will address important engineering and technology problems. The MoU will not only be limited to collaborative research and development projects in the areas of materials and engineering but will also extend to joint PhD. Ten students would be enrolled in the joint supervision programme.
Super 30 whiz wants fair shot at IIT for poor

ACCLAIMED mathematician and Super 30 founder Anand Kumar has called for the IITs to broaden their admission criteria to give students from poor families, especially those in rural areas, a fair chance.

“Students from poor families in rural areas start off at a serious disadvantage, they need an additional chance. They don’t lack talent, but they do lack opportunities,” Kumar said, addressing an entrepreneur summit at IIT-Bombay on Saturday.

“Education means empowerment. It has to be non-discriminatory. It requires a level-playing field for all. Talent is no preserve of the privileged,” he added.

Anand said the poor condition of government schools was for all to see. “Those who can afford it, send their wards to private schools. After Class VIII, or even before, parents spend a huge sum on coaching their wards. But spare a thought for the poor, who

“Education means empowerment. It has to be non-discriminatory. It requires a level-playing field for all.”

— Anand Kumar,
Super 30 founder

don’t even have books or copies. If their parents manage it somehow, they don’t know if they will get teachers to teach in the schools,” he added.

He said considering the harsh ground realities, the JEE board should give its policy a re-look and not make 80 per cent percentile a deciding factor for eligibility.

“Today, there is greater dependence on coaching, contrary to what was expected, as students go for it at every level,” he added.

Kumar was among a host of speakers who addressed the two-day summit, which ended on Sunday, organised by IIT-Bombay at Powai. Prominent among these are Freecharge founder and CEO Kunal Shah; Innovation Institute of America CEO Alexander Blass; Flipkart founder and CEO Sachin Bansal; actress and activist Celina Jaitly; and Jim Beach, the faculty head at the US School for Startups.

Mail Today Bureau
Integrating IT and BT

Information Technology and Biotechnology need to come together to streamline manufacturing processes of biotech products

G. Padmanaban

Beyond the rhyming of the terms IT (Information Technology) and BT (Biotechnology), there can indeed be a valuable integration between the two — which is yet to be optimally exploited in the country. Many government departments deal with these sectors together, but essentially without any connection. IT, at least to start with, grew with initiatives in the private sector, whereas the growth of BT has been mostly due to government support. There was hype around BT at one stage to the extent that parents were prepared to pay expensive fees to get their children admitted to BT courses, only to find that their employment opportunities, unlike in the IT sector, did not hold much promise. The backlash led to such courses losing their sheen. There were not many industries to absorb the candidates, who were also found to be unemployable in terms of knowledge and training. However, the sector seems to have now stabilised and is on the growth path. The BT industry is growing at around 20 per cent which is quite significant in the context of a general industrial deceleration. The present turnover is estimated at $5 billion with a projection of $100 billion by 2025. The IT industry is valued at $100 billion with a projection of $300 billion by 2035. However, the scope of the BT sector is very large and can even eclipse the IT sector in terms of employment opportunities and reach to the economy and social sectors. The sector permeates health and disease, food and agriculture, environment and industry. A more appropriate strategy would be to integrate IT and BT seamlessly, wherever applicable, and aim for the $500 billion mark by 2025.

There is a fundamental difference between the two sectors in India. The IT/ITES (IT-enabled Services) industry has become a major growth engine for the country's economy. It is stated that it contributes to around 5.6 per cent of GDP and direct employment to 2.3 million people and much more indirectly. The projection is to provide jobs to 20 million people by 2020. The main verticals utilising IT are BFSI (banking, financial services and insurance), telecommunication, manufacturing, media, construction and utilities, airlines and transportation, health services, etc. The fulcrum is services, be it IT or ITes/BPO (Business Process Outsourcing based on Internet) or engineering services. India is identified with software services and there is now an effort to generate products (software) and work out strategies for the global and internal markets. To remain competitive, strategies like cloud computing and Platform-BPO strategies are becoming the options. The weakest link is hardware, be it the IT or electronics sector.

Academia-industry link

The limitations are raw material, technology and skilled human resource. Both raw material and technology need to be imported. Unlike the software industry, available human resource is not skilled enough to compete with the Asian giants in the field. Interestingly, BT is grounded in a hardware equivalent, be it vaccines or drugs, or diagnostics or monoclonal antibodies or agri-biotech or biomass-based products including the energy sector.

The establishment of the National Biotechnology Board in 1982 that led to the establishment of the Department of Biotechnology (DBT) in 1986 by the government of India is primarily responsible for the growth of life sciences and biotechnology in the country. The initial phase of building competence in academia is now leading to resurgence in the industry. The best thing that could have happened is the starting of the schemes such as the Small Business Innovative Research Initiative (SBIRI) and the Biotechnology Industry Partnership Programme (BIPP) in the last seven or eight years.

More recently, all these initiatives, along with additional ones, have come under the Biotechnology Industry Research Assistance Council (BIRAC), a Section 25 company set up by the DBT. There are around 400 biotech companies in the country and the numbers are growing. BIRAC supports around 300 projects with loans and grants to around 180 companies. A positive development is the evolving strong academia-industry interaction and intellectual property rights (IPR) filing in these projects, that has already led to development of some innovative products. A few representative examples are JE/pneumococcal/rotavirus vaccines, follicle-stimulating hormone for infertility treatment, a microPCR platform diagnostic kit for parasite/viral infections, integrated navigation and training platform for tumour ablation, and a software platform for using mobile phone to analyse blood glucose strips.

New drug discovery can help India move beyond the production of generics and biosimilars into bioinformatics

The vaccine sector is growing very strongly with a potential for India to assume global leadership. As is the case with the drug sector, where generics (out of patent drugs) are our strength, the BT sector is dominated by Biosimilars (cyrtospoetin, growth factors, monoclonsal antibodies, insulin, industrial enzymes, etc) besides conventional and recombinant vaccines. The only product in agri-biotech is BT cotton. Many indigenous molecular diagnostic kits have been developed. There is perceivable activity in terms of medical instrument development.

Innovation

The integration of IT and BT will help India make a mark in the innovation space. New drug discovery is one such major area which will help India move beyond Generics/Biosimilars. Bioinformatics is one such area, which can help in drug design. Unfortunately, most IT professionals have very little appreciation of biology. There are a large number of steps that need to be taken before the molecule designed on the computer can become a drug. This needs a full appreciation of the biological/clinical aspects involved. But, with the evolution of systems biology (mathematical biology) and synthetic biology, an entirely new horizon is being made available to discover new drugs or do pathway engineering to design new microbial/plant products. This is perhaps the approach that would be needed to study brain function or evaluate biodiversity potential in nature.

An analysis of complex variables is needed for successful stem cell therapy or to understand cancer prognosis or evaluate QTL (Quantitative Trait Loci) in crops that govern yield, pest and drought resistance, etc. While BT can develop simple diagnostic tools, automation and telemedicine will be needed for village communities to reap the benefits. If stethoscopes can become outdated, the day is not far off when portable ECG and MRI machines can reach the bedside. IT and BT need to integrate to streamline the manufacturing process of biotech products. We need integrated manpower, since skilled human resource is scarce in the area. The need of the hour is the evolution of IT (Dry lab) and BT (Wet lab) integrated companies in the areas of health, agriculture and industrial products.

(G. Padmanaban is INSAs senior scientist, Department of Biochemistry, Indian Institute of Science, Bangalore.)
आपादाओं से निपटने को नासा से विमान खरीदेगा भारत

विषय: स्वास्थ्य, रोजगार, राजस्व, राजमार्ग, खाद्य, शिक्षा, आर्थिक वर्तमान

पहला मार्च 2015 के अनुसार, नासा ने भारत को विमानों का खरीदने का सूचना दी है। यह विमान अनेक प्रयोगों के लिए होगा। पुष्टि के लिए, यह विमान अद्वितीय है और आपादाओं से निपटने के लिए बहुत ही उपयोगी हो सकता है।

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कारोबारी शिक्षा
शिक्षा पर मोदी के विचार को नहीं मिली तवज्जो
भाजपा की सरकार बनने पर हरेक राज्य में आईआईटी, आईआईएम और एनएस स्थापित करने का मामला

कल्याण पाठक

भारतीय बनना पाठक (वचन) के पुराने संस्कारी डबल सूट मोदी ने कहा कि अगर आपने केवल सरकार के प्रयासों बनाने में सक्षम होते हैं तो तब गुणवत्ता दिखाने और विश्वविद्यालयें उन्नत करने का प्रयास करने वाले हैं। यह आईआईटी, आईआईएम और एनएस दीर्घकालीन संस्थान हैं जो शिक्षा के क्षेत्र में हिंदी भाषा की दीर्घकालीन संस्थान हैं।

नीतिकी और व्यावसायिक शिक्षा की स्थिति

आईआईटी रोपह में 38, आईआईटी डलहा में 39, आईआईटी त्रिवेणी में 17, आईआईटी गोरखपुर में 14 और आईआईटी हैदराबाद में 13 शिक्षकों की पद खाली हैं, जहां तक कि पुरानी आईआईटी में भी 41 पदों से ज्यादा पदों हैं। इसके अलावा, आईआईटी रोपह के चार विभागों और आईआईटी हैदराबाद के दो विभागों में 105 संकाय सदस्यों में से 102 पदों को भरने में कामशाला रहा है।

आईआईटी के निदेशकों का कहना है कि शिक्षा को और भी दीनता की दीनता के क्षेत्र में प्रवेश करने की राह आगामी करनी चाहिए।