Newspaper Clips
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IIT professor rues poor education scenario in Bihar

Aditya Vaibhav,TNN | Oct 1, 2014, 11.51 PM IST

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Patna: Eminent molecular biologist and Prof Syed E Hasnain of IIT-Delhi on Wednesday lamented the sorry state of education sector in Bihar and urged Patna University (PU) VC Y C Simhadri to revive PU's lost glory.

Recalling his student days, Hasnain while addressing the 98th foundation day of PU, told a gathering of PU teachers and students that the competition for a seat in PU was so tough that he could not secure a seat in Patna Science College even as he was selected for admission to Delhi University.

Hasnain said one could see in Bihar capital a large number of hoardings of different coaching centres, which also indicate that there is something lacking in traditional educational institutions here. Maintaining that emergence of coaching centres is always proportional to the condition of education sector, he pleaded for change in mindsets of teachers and students. The state lacks opportunities for meritorious students, he said and added the students were therefore forced to migrate to other states in search of better pastures.

Presiding over the foundation day celebrations, Simhadri reiterated his demand for central university status to PU and said the university deserves the status considering its glorious past. He also repeated his demand for including engineering and medical colleges in PU and hoped the demands would be conceded in near future.

At least 80 toppers of various undergraduate courses were to be felicitated on the occasion. However, 17 of them could not make it to the event.

Hindustan Times ND 2/10/2014   P-19

2 Indian varsities in world's top 300

Vanita Srivastava

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NEW DELHI: The Indian Institute of Science and Panjab University are the top universities in India, according to the Times Higher Education World University Rankings 2014-15 released on Wednesday.

While an Indian institute is yet to figure in the top 200, both IISc Bangalore and Panjab University have been ranked in the 276-300 bracket. Incidentally IISc made a debut this year.

California Institute of Technology holds on to the world number one spot for the fourth consecutive year, ahead of Harvard University in second and the University of Oxford at third place.

Panjab University vice chancellor AK Grover told HT, "We are sad because we have slipped by 50 points this year. But we are happy that we are put in the same bracket as IISc."

"It is good news that India now has two universities in the world top 300. But it should be a cause for serious concern that India does not yet have a top-200 entrant, and does not seem to be making enough progress up the rankings," Phil Baty, the editor of Times Higher Education World University Rankings, said.

The methodology for ranking the various institutes consists of 13 criteria in 5 categories which includes teaching (30% weightage), learning environment, research (30%), citation impact (30%), international outlook 7.5%), industry income(2.5%)

INDIA'S TOP RANKERS

Institution	2013-14	2014-15
Indian Institute of Science	Not ranked	276-300
Panjab University	226-250	276-300
Indian Institute of Technology, Bombay	Not ranked	351-400
Indian Institute of Technology, Roorkee	351-400	351-400

Times of India, ND 02/10/2014   p-27

Indian univs fail to make it to top 200 of Times list

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New Delhi: Asia has done well in the Times Higher Education World University Rankings 2014-15. India, however, has not only failed yet again to make it to the top 200, it has also dropped further down the list.

Panjab University, which dropped from 226-250 in 2013-14 rankings to 276-300 this year, continues to be India's top-ranked university on the list along with the Indian Institute of Science, Bangalore, which has made its entry for the first time. The second and third best Indian universities as per the rankings — IIT Mumbai and IIT Roorkee respectively — do not even feature in the top 350.

Japan has five universities in the top 200, Republic of Korea and Hong Kong have four each, China has three and Singapore has two.

"It's good news that India now has two universities in

IISc BANGALORE ENTERS ELITE CLUB

Top Indian institutions

Rank 2014-15	Rank 2013-14	Institution
276-300	Not ranked	Indian Institute of Science, Bangalore
276-300	226-250	Panjab University
351-400	Not ranked	Indian Institute of Technology, Bombay
351-400	351-400	Indian Institute of Technology, Roorkee

Asian institutions in top 50

23	23	University of Tokyo
25	26	National University of Singapore
43	43	University of Hong Kong
48	45	Peking University, China
49	50	Tsinghua University, China
50	44	Seoul National University, Rep. of Korea

the world top 300, compared to just one last year, thanks to the participation for the first time of the Indian Institute of Science, which can now be included in the analysis after starting to admit undergraduate students," said Phil Baty, editor of the rankings. "IISc joins Panjab University in the 276-300 group. But it should be a cause for serious concern that a country of India's size, growing economic strength and great intellectual history, does not yet have a top-200 entrant."

15 of top 20 are from US

Despite a slight drop, the US has continued its dominance in the Times Higher Education World University Rankings 2014-15.

Seventy-four of its universities are in the top 200, compared to 77 last year. Of the top 20 universities, 15 are from the US. California Institute of Technology has retained the top slot, followed by Harvard and Oxford universities. Asian institutions have continued to rise, with 24 universities in the world top 200, up from 20 last year. **Manash Gohain**

The World University Rankings are considered among the most comprehensive global league tables, using 13 indicators to examine a university's strengths against its core missions.

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

BAD MARKS

Just four Indian universities in world's top 400: THE ranking

Panjab University and IISc, Bangalore, are best placed universities in India with a rank in 276-300 grouping

BY PRASHANT K. NANDA
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NEW DELHI

India's poor show in world university ranking continues with just four institutions from the country making it to the top 400 and none to the top 200 in the Times Higher Education (THE) World University Ranking for 2014-15.

The California Institute of Technology (Caltech) in the US is the top-ranked university in the world.

According to THE, the British ranking agency, Panjab University and the Indian Institute of Science (IISc), Bangalore, were the best placed universities in India with a rank in the 276-300 grouping. After 200, THE does not award individual ranking but groups institutions in blocks.

The other two were Indian Institute of Technology (IIT), Bombay, and IIT Roorkee that were in the 351-400 bracket.

"It is good news that India now has two universities in the world's top 300, compared to just one last year, thanks to the participation for the first time in the rankings this year of the Indian Institute of Science, which can now be included in the analysis after starting to admit undergraduate students," said Phil Baty, editor of THE World University Rankings.

"IISc joins Panjab University

BEST PERFORMER

The US continues to dominate the rankings, taking seven of the top 10 places and has 74 universities in the top 200 list.

2014-15 Ranking	University name	Country
1	California Institute of Technology	US
2	Harvard University	US
3	University of Oxford	UK
4	Stanford University	US
5	University of Cambridge	UK
6	Massachusetts Institute of Technology	US
7	Princeton University	US
8	University of California, Berkeley	US
9	Imperial College London	UK
9	Yale University*	US

Indian institutions among the top 400

2014-15 Ranking	University name
276-300	Indian Institute of Science, Bangalore
276-300	Panjab University, Chandigarh
351-400	IIT Bombay
351-400	IIT Roorkee

*Joint 9th   Source: Times Higher Education World University Ranking

in the 276-300 group, but it should be a cause for serious concern that a country of India's size, growing economic strength and great intellectual history, does not yet have a top-200 entrant, and does not seem to be making enough progress up the rankings," Baty added.

Though Panjab University scores better than IITs, its ranking has fallen from 226-250 bracket last year. Lalit Bansal, dean (research) at Panjab University, said: "It's a serious concern that our university has fallen in the ranking but it does not reflect poorly on our quality. We are still number one along with IISc in (India) in the THE ranking."

He added that his university hasn't analysed why it consistently outdoes the IITs in the ranking, and said he couldn't comment on this.

India's continued poor performance in educational rankings comes in the background of the country's government working towards addressing this issue over the past 18 months. India's human resource development ministry held discussions on improving the ranking of Indian universities and asked the IITs to work towards this. It had also a meeting with THE in Delhi in 2013.

"The world rankings are extremely competitive, as many countries put serious resources into improving the global profile and performance of their universities as part of their economic growth plans, and India needs to ensure it does not fall too far behind," Baty said.

The human resource development ministry has also asked the IITs to create an India-centric ranking system, said an HRD ministry official who spoke on condition of anonymity. *Mint* couldn't independently confirm this move.

Globally, Caltech retains its place at the top for the fourth consecutive year, with Harvard University retaining second place. University of Oxford slips one place from joint second to third, Stanford University holds fourth place and the University of Cambridge moves up two places to fifth. The Massachusetts Institute of Technology (MIT) is at sixth, Princeton University (seventh) and the University of California, Berkeley, is at eighth place. Imperial College, London, and Yale University (sharing ninth place) complete the top 10, THE said.

Overall, the US continues to dominate the rankings, taking seven of the top 10 places and has 74 universities in the top 200 list. UK has 28 universities among the top 200 and Germany is at third with 12 universities among the top 200. China has three and Singapore two. University of Tokyo (23rd) is the best ranked Asian institution in the world.

THE ranks universities based on 13 parameters in four key segments—industry income, teaching-learning environment, research, and international outlook.

Deccan Herald, ND
02/10/2014   p-6

US offers help to set up IIT in Goa

NEW DELHI, DHNS: Over half a century after US offered its assistance to set up India's third Indian Institute of Technology in Kanpur – IIT-Kanpur - the Obama administration has, once again, offered its expertise in establishing a new Indian Institute of Technology in Goa.

The US also backs India's proposal to establish the Global Initiative of Academic Networks (GIAN) under which India would invite and host up to 1,000 American academics each year to teach in centrally-recognized Indian universities at their convenience.

In a joint statement issued on September 30 after the summit meeting in Washington, US President Barack Obama thanked Prime Minister Narendra Modi for his offer to have US institutions partner with a new IIT that is proposed to be set up.

The National Democratic Alliance (NDA) government had earlier announced the setting up of five new IITs - one each in Jammu and Kashmir, Chattisgarh, Goa, Andhra Pradesh and Kerala. According to sources, apart from the Goa IIT with which India wants US universities to be involved, the government also wants to set up the other four technical institutes in collaboration with foreign institutes. However, the partner countries and the institutions are yet to be identified.

In 1959, a consortium of nine leading US universities, including MIT, University of California, California Institute of Technology, Princeton University, Carnegie Institute of Technology, University of Michigan, and Ohio State University, helped set up IIT-Kanpur. They helped set up research laboratories and academic programmes at the technical institute and continued giving support for about ten years as part of the "Kanpur Indo-American Programme" (KIAP).

FEWER APPLICANTS

Is the IIM charm fading?

Only 189,759 have applied to appear in the Common Admission Test this year, the lowest since 2007

BY PRASHANT K. NANDA
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NEW DELHI

Is the famed appeal of the Indian Institutes of Management (IIMs) waning?

This year, only 189,759 aspirants have applied to appear in the Common Admission Test (CAT), the lowest number since 2007 when around 250,000 did.

Back then, there were six IIMs. There are currently 13. And the government wants to add six more by 2015. That means the 189,759 aspirants are seeking a place in one of 19 schools.

"This year, the number of applicants is 189,759. I won't answer any further question," said Rohit Kapoor, convenor of CAT 2014 and a professor at IIM, Indore.
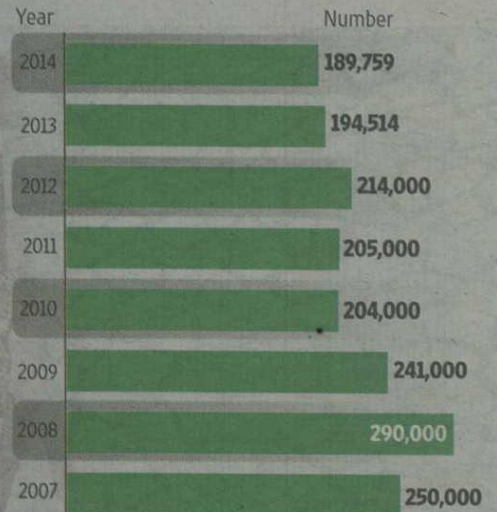
The number of aspirants has fallen despite an improvement in business sentiment.

Some educationists say the charm of a management degree has certainly waned largely on account of the government insisting on opening more schools without any emphasis on quality.

Pritam Singh, a former director of IIM, Lucknow, said the falling number of CAT appli-

cants suggests that people are realizing that they can get by without going to a B-school by simply choosing vocational training, and also that the increasing number of IIMs has affected "Brand IIM".

"The government is only focusing on quantity. Instead, it should focus on building few global schools. IIMs should not be opened in rural areas but in places where there is enough industrial development as it will help both the schools and the companies," Singh added.

Many of the new IIMs face challenges related to both physical and intellectual infrastructure. Most have been operating from temporary campuses and have between 15%

and 25% less faculty than they ideally need.

India's gross domestic product (GDP) is expected to grow 5.6% in the current financial year and further 6.5% in 2015-16, buoyed by strong investments and political certainty, rating agency **Fitch Ratings Inc.** said on Wednesday. The Reserve Bank of India, too, has projected 5.5% GDP growth for the current year and 6.3% for 2015-16, and this along with a stable government is expected to boost the job market as well.

India has witnessed sub-5% growth in the previous two years. It grew 4.5% in 2012-13 and 4.7% in 2013-14.

A professor at one of the older IIMs did accept the view that

the increasing number of IIMs is affecting the equity of the brands, but added that the real reason for the decline in the number of aspirants could be that "only the serious students are applying now". This person, who asked not to be identified, argued that irrespective of the number of IIMs, the aspirants would try to get into the top IIMs, and that consequently, the poor quality of some of the newer IIMs should not affect the number of aspirants.

This year's CAT is scheduled for 16 and 22 November. The results will be announced in the third week of December. Other than IIMs, several dozen B-schools admit students based on the CAT results.

CAT ASPIRANTS

Year	Number
2014	189,759
2013	194,514
2012	214,000
2011	205,000
2010	204,000
2009	241,000
2008	290,000
2007	250,000

Source: IIMs, Mint research

SARVESH SHARMA/MINT

छह संस्थान बढ़े हैं लेकिन परीक्षार्थियों की संख्या पांच हजार कम हुई

आईआईएम की संख्या बढ़ी पर कैट के आवेदक कम हुए

नई दिल्ली | अनुराग मिश्र

भारतीय प्रबंधन संस्थानों (आईआईएम) की संख्या में तो इजाफा हो रहा है लेकिन इसमें दाखिले के लिए आयोजित होने वाली प्रवेश परीक्षा कॉमन एडमिशन टेस्ट (कैट) में शामिल होने के लिए आवेदन करने वालों की संख्या लगातार कम होती जा रही है। इस बार जहां छह आईआईएम बढ़े हैं वहीं परीक्षार्थियों की संख्या में पांच हजार की कमी आ गई है।

प्रबंधन मामलों के जानकार डी. पद्मनाभन का कहना है कि बीते तीन सालों में नॉन आईआईएम संस्थानों से प्लेसमेंट बहुत कम हुआ है, जिससे छात्रों का रुझान प्रबंधन में कम हो गया है। इसका सीधा प्रभाव इस वर्ष के कैट अभ्यर्थियों के आवेदन पर देख सकते हैं। यह कमी लगातार हो रही है। कैट के संयोजक और आईआईएम इंदौर के प्रोफेसर डा. रोहित कपूर का कहना है कि इस बार 1,89,759 उम्मीदवारों ने कैट परीक्षा के लिए आवेदन किया है। उन्होंने कहा कि संख्या में कमी हुई है लेकिन इसे आईआईएम की लोकप्रियता में कमी कहना सही नहीं है।

नियुक्ति करने वाली फर्म टीम लीज की सीनियर वीपी रितुपर्णा चक्रवर्ती कहती हैं कि कमी आने का एक कारण यह भी है कि कई क्षेत्र जैसे कि इंश्योरेंस, बैंकिंग, एनीमेशन, एविएशन

कमी आने के पीछे प्रमुख कारण

- पैकेज व फीस में असमानता है। एमबीए की पढ़ाई करने के लिए औसतन आठ लाख रुपये खर्च करने पड़ते हैं। कई बार नौकरी मिलना मुश्किल हो जाता है। शीर्ष 200 बी स्कूलों में औसतन छात्र को तीन लाख का पैकेज मिल पाता है

- दो वर्षों में नॉन आईआईएम संस्थानों में प्लेसमेंट में कमी आई है। नौकरी न मिल पाने का भय भी छात्रों को दूर कर रहा
- प्रबंधन के 2500 स्कूल हैं, शीर्ष 200 बी-स्कूलों में ही पर्याप्त संसाधन और प्लेसमेंट का बेहतर रिकॉर्ड

इस बार परीक्षा में खास

- परीक्षा सिर्फ दो दिन होगी
- इस बार 600 से अधिक छात्रों को आईआईएम में दाखिला मिलेगा
- छात्रों को परीक्षा से पूर्व ट्यूटोरियल की सुविधा नहीं

मिलेगी, जबकि पिछली बार यह सुविधा मिलती थी
- इस बार हर सेक्शन में 50 सवालों के उत्तर देने होंगे, जबकि बीते साल उन्हें 30 प्रश्नों के उत्तर देने होते थे।

वर्ष	आवेदक
2014	1,89000
2013	1,94000
2010	2,04,000
2009	2,40,000
2008	2,90,000
2007	2,30,000
2006	1,90,000

केपीओ आदि ऐसे क्षेत्र हैं, जिसमें युवा प्रबंधन डिग्री के बिना ही आसानी से रोजगार हासिल कर लेता है। साथ ही नए आईआईएम में शानदार पैकेज की गारंटी नहीं है। वहीं, आम बी-स्कूलों से एमबीए करने के बाद छात्रों को स्नातक करने वाले छात्र जितना पैकेज मिल रहा है। बिमटेक के निदेशक डा. हरिवंश चतुर्वेदी का कहना है कि

गंभीर छात्र कैट और जीमैट जैसी परीक्षाओं में अभी भी आवेदन कर रहे हैं।

वहीं, प्रबंधन और इंजीनियरिंग में शत-प्रतिशत नौकरी मिलने की गारंटी भी खत्म हो गई है। मौजूदा समय में काबिल और अच्छे आईआईएम व बी-स्कूलों से पढ़ाई करने वालों को ही बेहतर पैकेज मिल पाता है।
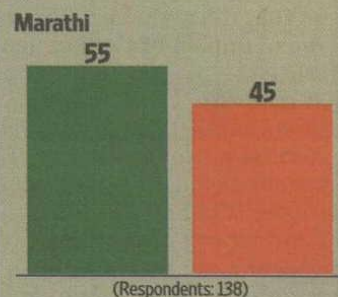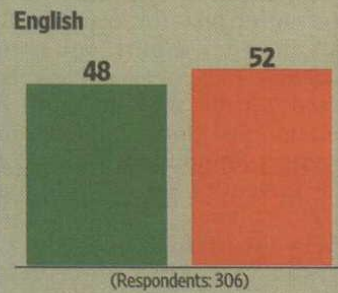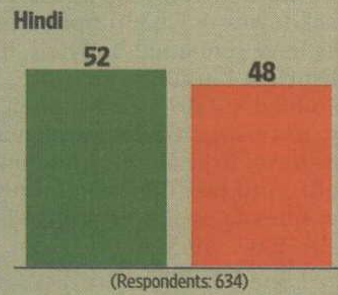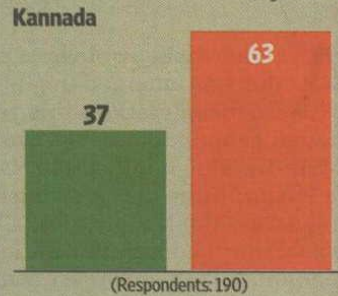
MINT ND 02/10/2014   p-24

SHOULD WE AIM FOR THE STARS?

■ Yes—more space missions
■ No—focus on development, poverty reduction

(Figures in %)

Kannada

63
37

(Respondents: 190)

Hindi

52
48

(Respondents: 634)

English

48
52

(Respondents: 306)

Marathi

55
45

(Respondents: 138)

An instaVaani poll conducted after the much-celebrated launch of India's Mars Orbiter Mission has thrown up a surprising result: more than half the respondents would rather have the government focus on economic development than spend money on space missions.

Of the 1,268 people polled in English, Hindi, Marathi and Kannada languages, 51% said the government should focus on development and poverty reduction instead.

"Indians are clearly pragmatic about where the government should be spending its funds," instaVaani said. "While investments on more space efforts like the Mars Orbiter would raise India's profile and prioritize long-term innovation, voters believe that there are urgencies here at home that must be first addressed."

The support for more such missions was surprisingly low in Karnataka, home to the Mars Orbiter Mission development and headquarters of the Indian Space Research Organisation. Nearly 63% of Kannada respondents thought that it was better to spend money on reducing poverty and on development.

English respondents on the poll were also ambivalent, with 48% supporting more such space missions. In terms of which cities the respondents were based in, Bangalore and Chennai were least supportive of future missions, instaVaani said.

Marathi and Hindi respondents across Mumbai and Delhi were most in favour of more missions, with 55% and 52% of the respondents, respectively, expressing support.

Source: instaVaani.

SUBRATA JANA/MINT

Nayi Duniya ND 02/10/2014 P-11

एमआईटी पहुंचे सुपर-30 के आनंद कुमार

■ तकनीक के जरिए समावेशी विकास होना चाहिए : आनंद

बॉस्टन (प्रे)। सुपर-30 क्लासेस के संस्थापक और गणितज्ञ आनंद कुमार प्रतिष्ठित मैसेच्यूसेट्स इंस्टीट्यूट ऑफ टेक्नोलॉजी (एमआईटी) में संबोधित करने पहुंचे।

निर्धन वर्ग के बच्चों का आईआईटी का सपना पूरा करने के लिए सुपर-30 से लोकप्रिय हुए आनंद कुमार ने संबोधन में लोगों से कहा कि तकनीक के जरिए समावेशी विकास होना चाहिए। उन्होंने कहा कि विशेषज्ञों को अब लैब आदि से बाहर निकलकर अपने ज्ञान से निर्धन का कल्याण करने का निर्णय लेना चाहिए। सुपर-30 के कई छात्रों का उदाहरण देते हुए उन्होंने कहा कि तकनीक केवल आर्थिक फायदें नहीं बल्कि निर्धन को साक्षर बनाने के लिए उपयोग में लाना चाहिए। आनंद कुमार गुरुवार को हार्वर्ड यूनिवर्सिटी में अपना संबोधन देंगे।

गौरतलब है कि 2002 में शुरू हुई सुपर-30 क्लासेस से अब तक 308 छात्रों ने आईआईटी में प्रवेश किया है। यहां पर बच्चों को मुफ्त खाना और रहने की सुविधा दी जाती है।

Time has come to make optimal use of technology, says mathematician Anand Kumar in MIT

http://timesofindia.indiatimes.com/india/Time-has-come-to-make-optimal-use-of-technology-says-mathematician-Anand-Kumar-in-MIT/articleshow/44002042.cms

PATNA: Super 30 founder and mathematician Anand Kumar, who has transformed hundreds of lives of underprivileged students through education said that time has come for making optimal use of technology to fight world's biggest twin challenges— poverty and illiteracy, both of which are inter-connected. He was delivering a lecture at Media Lab of Massachusetts Institute of Technology (MIT) USA Boston. On October 1, he has also been invited by Harvard University to deliver another lecture.

Technology should not just remain a tool to make big money. It should also be made a big weapon in the fight against illiteracy so that even the poorest could get quality education, which a huge population of the world remains deprived of. This costs the world a lot of talent," he added.

Giving the examples of several Super 30 students who were first generation learners and from underprivileged sections of the society, Kumar exhorted the technological experts from world's top university to not let technology become a tool in the hands of the elite and the privileged; rather let it reach out to the needy of the society.

"Time has come for the tech experts to move out of the labs to get a feel of world's pressing problems and find solutions. Problems across the globe is more or less the same—of poverty and deprivation. Spare a thought for those who don't even get electricity and clean water even in this advanced age. Technology should not create islands, but help develop inclusive society," he said, adding human dimension to science and technology would make world a much better place.

Kumar said, war machines could win us wars, but it could not give us peace and enlightenment—so important for happiness. "Today, world wants technology to save humanity and give it dignity. And it requires cooperation from all sections. A beautiful world is what we all need—a world free from poverty and illiteracy, a world with true understanding and compassion," he added.

Talking to TOI over phone from Boston Anand Kumar said :"The response was tremendous. The session was followed by a long discussion in which people asked a number of questions. MIT Media Lab had organized lunch for all the invitees after the lecture of Anand Kumar.

Experiencing acute poverty in his student days, which prevented him from going to Cambridge University for higher education, he made it a mission to help wards of people from underprivileged sections realise their dreams.

Launched in 2002, 308 students from Super 30 have made it to IIT out of 360 who appeared from the institution so far. In Super 30, food and accommodation are provided free of cost. Apart from round the clock mentoring.

IISc undergraduate scores full marks in GRE

K.C. Deepika

BANGALORE: A student of the Indian Institute of Science (IISc) has managed to score full marks in the GRE (Graduate Record Examinations). Aditya Hebbar, who is in his fourth year of the first batch of the four-year Bachelor of Science (B.S.) programme of the premier institute, scored 340 on 340 in the September exam.

Having passed out of Sri Kumaran Children's Home, Kanakapura Road, Mr. Hebbar opted to pursue pure sciences over other professional courses despite having qualified in the State-administered Common Entrance Test (CET) and the Joint Entrance Examination. He is majoring in Physics.

This was his first attempt at cracking the GRE. "I prepared for a month and did not

Aditya Hebbar

take any additional coaching," he said. Mr. Hebbar's father is a businessman while his mother is a homemaker.

Students in the four-year course of the IISc study physics, chemistry, mathematics, biology and a few engineering subjects such as material science, electronics and computer science in the first three semesters after which

they can choose to major in any subject.

GRE General Test scores are currently accepted by thousands of graduate-level schools worldwide. Mr. Hebbar is planning to take up the GRE Subject Test on October 25 in Physics. Each Subject Test is intended for students who have an undergraduate major or extensive background in one of the seven disciplines: Biochemistry, Cell and Molecular Biology; Biology; Chemistry; Literature in English; Mathematics; Physics and Psychology.

"I am thinking of applying for a Ph.D. in Physics in the U.S. The universities I am looking at are Cornell University, University of California, Santa Barbara; or Harvard University. My long-term goal is to do research in particle physics," Mr. Hebbar said.

NCTE rejects plea to expand teacher-educator pool's skill

Snubs Call For Inclusion Of Science PhDs

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New Delhi: For two years now, one of the best educational institutes in the country has been knocking on the doors of the National Council for Teacher Training and HRD ministry to include science education as a qualification for teacher education. But so far success has eluded the Homi Bhabha Centre for Science Education (HBCSE), which operates under the Tata Institute of Fundamental Research (TIFR).

The Tata Institute of Fundamental Research has been demanding inclusion of science education as a qualification for teacher education

On Wednesday, TIFR director Mustansir Barma wrote to HRD ministry asking it to consider the matter seriously in the interest of school education in India. Barma's letter assumes importance as the NCTE council yet again refused to entertain HBCSE's plea in its recent meeting.

However, Barma maintained that HBCSE is an exemplar of the interest taken by the science community at the frontiers of scientific research in school education. "It brings a high level of competence in science together with commitment towards and insight into school education," Barma wrote.

Barma said the Ph.D programme at HBCSE is a rigorous and systematic research programme. The course, he said, seeks to develop among its graduates deep knowledge of the school subject and its pedagogy in an integrated manner.

Making its plea for inclusion of Ph.D in science education as a qualification for teacher educator, Barma said "students enter the Ph.D in science education with master's degree in science or mathematics, but not necessarily with M.Ed." Barma said given the "high level of this program which is unique in the country, it is important that Ph.Ds in science education should be allowed entry into the teacher educator pool."

HBCSE has also been citing Justice Verma Commission (JVC) report on teacher education that stressed on the need to broad-base essential qualification framework for teacher educators. JVC had said postgraduate degree in social sciences, sciences, language, mathematics along with a professional first degree in education or a doctorate degree in mathematics or science education should be considered appropriate qualifications for teacher educators.

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ANTIBIOTIC RESISTANCE

Why India should be worried about the Aligarh superbug

BY VIDYA KRISHNAN
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ALIGARH

In January, a farmer living close to Aligarh Muslim University (AMU) was admitted at the university's medical college with a seemingly simple kidney infection. Doctors at the J.N. Medical College, a tertiary care facility, were certain he would recover.

A week later, the patient's infection had not responded to even the most powerful antibiotics. He died, leaving the doctors wondering about the extent of antibiotic resistance prevalent in the community.

The farmer's death prompted Asadullah Khan, a scientist at AMU's biotechnology department, to check the water samples in the drains of the medical college. He ended up discovering a new variant of New Delhi Metallo-betalactamse, called NDM-4—a superbug.

Superbugs

This was the first recorded presence of the deadly, drug-resistant strain in India that has so far been detected only in Cameroon, Denmark, France and the Czech Republic. NDM-4 is a

RAMESH PATHANIA/MINT

Wake-up call: *AMU's Asadullah Khan checked water samples in the drains of the medical college and ended up discovering a new variant of New Delhi Metallo-betalactamse, called NDM-4.*

mint SERIES-I

more virulent form of the NDM-1 bacteria that was isolated in 2009 from a Swedish patient who contracted a bacterial infection in Delhi.

The identification and nomenclature became controversial, with India not taking kindly to a superbug being named after its capital city.

In fact New Delhi Metallo is simply an enzyme, and bacteria that carry it become resistant to most antibiotics. Worse, they

can pass on this resilience to other bugs they come in touch with.

Antibiotic resistance is developed when microorganisms evolve and adapt to new drugs. When this happens, drugs that normally kill these organisms cannot treat the infection. A superbug is a bacteria that develops resistance to multiple antibiotics. The discovery of NDM-4 is ominous; the superbug is resistant to almost all known antibiotics, even the most powerful,

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Why India should be worried about the Aligarh superbug

last-resort antibiotics called carbapenems.

When it comes to antibiotic resistance, the scientific community has only two types of information—bad and worse.

First the bad news: as of now, carbapenems are the only treatment option for bacterial infections caused by bugs such as Escherichia coli (E. coli), responsible for such things as urinary tract infections, peritonitis, septicemia, and pulmonary complications. There are currently no new antibiotics in development to combat bacteria resistant to carbapenems, which makes discovery of these superbugs a potential nightmare scenario.

And it gets worse.

The Aligarh discovery cannot be dismissed as an isolated incident of a superbug discovered in a tier-II city of India. If superbugs can be found in sewage in smaller cities such as Aligarh, say scientists, it is almost certain that the problem is widespread across India.

"I can say with a fair degree of certainty that NDM-4 has spread in India," said Khan, whose study appeared in the September issue of the *Journal of Medical Microbiology*. The scientist is now trying to get funding for an India-wide study to assess the extent of the superbug's presence.

India and a post-antibiotic era

Discovery of these superbugs in India is a cause for global concern. India has the largest number of patients treated for infectious diseases (including tuberculosis, malaria, filariasis, visceral leishmaniasis, leprosy, HIV and childhood cluster of vaccine-preventable diseases) which also means it has the most number of antibiotic users.

Then there is the sanitation

angle—one reason why the importance of Prime Minister Narendra Modi's 'Clean India' mission can't be overemphasized.

Superbugs can be prevented from entering the human system through good hygiene. The bigger concern for India is the growing resistance of even bacteria that cause diseases such as tuberculosis to antibiotics. The World Health Organization (WHO) expects this resistant form of tuberculosis to affect 2 million people annually worldwide by 2015.

In India, particularly, where self-medication is common and drugs can be purchased over the counter without proper prescriptions, patients are more at risk to antibiotic resistance. Every time a patient pops an antibiotic for viral fever and does not finish the entire dosage, he/she allows the weaker virus/bacteria to survive the current line of treatment, thereby making it stronger.

"Easily treatable, mild illnesses are going to be the mass killers of the 21st century," said Narendra Saini, secretary general, Indian Medical Association (IMA).
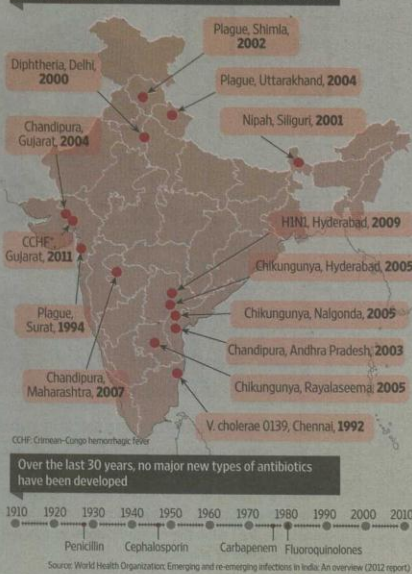
In April, WHO released the first ever global report on antimicrobial resistance. Keiji Fukuda, assistant director-general for health security at WHO, said at the time: "Without urgent, coordinated action by many stakeholders, the world is headed for a post-antibiotic era, in which common infections and minor injuries which have been treatable for decades can once again kill."

Since national data is not available, researchers conducted small surveys and found a staggering resistance in India for different classes of antibiotics. According to WHO, 61% Indians are resistant to third-generation cephalosporins; samples from

RISK FACTOR

India has the largest number of patients treated for infectious diseases, which also means it has the most number of antibiotic users.

Infectious disease outbreaks in India between 1992 and 2011

Plague, Shimla, **2002**
Diphtheria, Delhi, **2000**
Plague, Uttarakhand, **2004**
Chandipura, Gujarat, **2004**
Nipah, Siliguri, **2001**
CCHF*, Gujarat, **2011**
H1N1, Hyderabad, **2009**
Chikungunya, Hyderabad, **2005**
Plague, Surat, **1994**
Chikungunya, Nalgonda, **2005**
Chandipura, Andhra Pradesh, **2003**
Chandipura, Maharashtra, **2007**
Chikungunya, Rayalaseema, **2005**
V. cholerae 0139, Chennai, **1992**

CCHF: Crimean-Congo hemorrhagic fever

Over the last 30 years, no major new types of antibiotics have been developed

1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 2010
Penicillin   Cephalosporin   Carbapenem   Fluoroquinolones

Source: World Health Organization; Emerging and re-emerging infections in India: An overview (2012 report)

SARVESH SHARMA/MINT

the community and hospitals were 80% resistant to meticillin; and resistance to fluoroquinolones ranged between 82% to 11% in nearly six surveys conducted between 2003 and 2012.

The data in India is sketchy but the problem extends to the entire South Asia region, adds the report. "The report's results show high levels of E. coli resistance to third generation cephalosporins and fluoroquinolo-

nes—two important and commonly used types of antibacterial medicine-in the region. Resistance to third generation cephalosporins in K. pneumoniae is also high and widespread. In some parts of the Region, more than one quarter of Staphylococcus aureus infections are reported to be methicillin-resistant, meaning that treatment with standard antibiotics does not work," the WHO report added.

Prescription problems

The big challenge in India is poor regulation of prescription of medicines. "There is also a lack of knowledge among medical practitioners as well as the public on rational use of antibiotics. The health sector in India needs improved management of the health care delivery systems, both public and private, which will minimize conditions favourable for the development of drug resistance," the WHO report said. The emergence of resistance to artemisinin, used to treat malaria and multi-drug resistance in tuberculosis, is an especially "daunting" public health challenge not only for India but for South Asia, adds the report.

India's health ministry has been particularly slow in its response to the growing threat of antibiotic resistance. While Khan is still struggling to get a multi-centered trial to investigate the penetration of NDM-4, the health ministry is mulling the need for a comprehensive study mapping the extent of the crisis.

"Antibiotic resistance is a growing concern," said V.M. Katoch, director general of the Indian Council of Medical Research. "We have created a task force to analyse the situation," he added.

The other steps the health ministry is considering include placing restrictions on the prescription of newer drugs as they become available in the markets. Regulating the older drugs will be a challenge, Katoch admitted.

"We cannot do this overnight. We are aware of the concerns in the public health community-and this is a priority issue for the ministry as well. We are looking at ways to address the situation. We have started work on this front and are funding some studies to get original data at first," he added.

The Aligarh ailment

Meanwhile, Aligarh's biggest hospital continues to receive patients who suffer from increasingly stubborn infections.

"There is just too much drug resistance in the community and obviously the cases in our hospital are becoming more and more challenging to treat," said Syed Hasan Harris, dean, faculty of medicine. "Since we are a tertiary care hospital, most of our patients have already been treated at some other facility before being referred to us. Neither do doctors know how to correctly prescribe antibiotics nor do patients know how to comply with the prescriptions. I can only say that our patients are antibiotic-resistant but exactly which microorganism they are resistant to will require further investigations," he added.

Harris says he doesn't know how many patients have been affected by NDM-4 but adds that he has seen many patients with extended-spectrum beta-lactamases, enzymes that confer resistance to most antibiotics, including penicillins, cephalosporins, and the monobactam aztreonam, adversely affecting treatment outcomes at the hospital.

IMA is holding Antibiotic Awareness week from 28 September to 4 October.

In 1945, Alexander Fleming, the man who discovered penicillin, stated in his Nobel Prize acceptance speech that "there is the danger that the ignorant man may easily underdose himself and by exposing his microbes to non-lethal quantities of the drug make them resistant".

The post-antibiotic era is not just an apocalyptic fantasy. No new classes of antibiotics have been discovered since 1987.

This is the first in a series on antibiotic resistance.

Smriti focuses on digital India campaign

Central Universities, IITs, IIMs to have scholarship programmes

http://www.thehindu.com/news/cities/Delhi/smriti-focuses-on-digital-india-campaign/article6464404.ece

The lead in every newspaper when board exam results are announced is how girls outshine boys yet again.

However, in reality, a majority of these girls do not manage to achieve bigger things simply because of financial constraints or social challenges — a situation Human Resource Development Minister Smriti Irani wants to set right with use of information technology.

All this and more was announced to more than 35,000 students, who were jointly addressed by the Minister as well as Microsoft CEO Satya Nadella on Tuesday, at the "Microsoft Talent India 2014," the company's initiative to use its resources to help Indian youth succeed in the new digital economy.

While Mr. Nadella, who is on his first trip to the country after becoming the CEO, spoke about the importance of doing what you love and looking at every opportunity as a learning experience, Ms. Irani spoke about the importance of IT as a key factor in providing a better tomorrow for India's youth as promised by her government.

"Soon, every Central University, Indian Institute of Technology, and the Indian Institute of Management will have scholarship programmes. And we are focusing on the Northeast too. We will facilitate 2,000 students and 500 faculty members to travel to these institutes and see the technology used there, as well as other things that they could use in their own institutes. This will go hand-in-hand with scholarships for 10,000 students," she said, adding that another feature she would introduce is a council for academic and industry interface, which will have a placement cell at all Central Universities as well as IITs and IIMs.

"We have managed to get details of 50,000 meritorious students who cannot study further because of financial constraints," said Ms. Irani, while talking at length about the "digital India campaign," which she wants to promote as a national agenda along with the other agendas of her government.

"The mygov.in is an initiative where citizens have not just commented on politicians, but also given concrete ideas about policy which the government can use," she said.

Students asked questions that ran from how soon technology would be made available to those in small towns to how a person could move with the times in spite of working for decades in the same industry.

The importance of continuous "learning" and not just continuous "employment", as well as the ability to listen, change with the times and experiment, and learn to move on from failure were listed as the key factors for professional success.

Union HRD Minister Smriti Irani Releases a Handbook -Swachh Bharat Swachh Vidyalaya

http://indiaeducationdiary.in/Shownews.asp?newsid=31433

Report by India Education bureau, New Delhi: Giving a call to the Nation on 15th August 2014, the Prime Minister of India announced that "all schools in the country should have toilets with separate toilets for girls and that this target should be completed within one year".

To fulfil this very initiative/vision, the Union Minister for Human Resource Development, Smt. Smriti Irani released a "Handbook on Swachh Bharat - Swachh Vidyalaya" in New Delhi today which will encourage maintenance of hygiene and cleanliness in all schools across the country. The Handbook elaborates that a Swachh Vidyalaya should have neatness and orderliness, clean drinking water spaces, clean toilets and tidy classrooms and compounds. Several good practices from many States have been captured in the Handbook as exemplar to be emulated by children and schools. The Handbook speaks to students, teachers, parents and school management members in order to make them realise Gandhiji's dream of Swachh Bharat in their very own Vidyalayas and to make an ideal Swachh Vidyalaya inspired by Gandhiji's pronouncement – "Be the change you wish to see in the world"

Inspired by Gandhiji's pronouncement – "Be the change you wish to see in the world", the Handbook aims at promoting behavioural change in school children so that they become agents of change in the society.

IISc signs pact with UK research centre

Bangalore, October 1:

http://www.thehindubusinessline.com/news/states/iisc-signs-pact-withuk-research-centre/article6465660.ece

The UK's Centre for Ecology & Hydrology (CEH) and the Indian Institute of Science (IISc), Bangalore, have signed a memorandum of understanding to collaborate on key challenges such as water security, impact of air pollution, soil health and sustainability.

The MoU was signed by IISc Registrar Mohan Das and CEH Director Mark Bailey at IISc on Wednesday. British Deputy High Commissioner Ian Felton was present.

The two organisations are expected to identify opportunities for development of collaborative research, exchange of research scientists, and joint staff and studentships, a press release said.

An initial project is for CEH scientists to work with an IISc team to monitor soil moisture at the IISc catchment near Mysore. The CEH will supply cosmic ray soil moisture measuring device Cosmos and train IISc staff and students on its use.

"This type of partnership is crucial in carrying out research on serious environmental challenges such as water security and soil sustainability issues. We will be working with IISc on a number of projects in the immediate future," said Alan Jenkins, Deputy Director, CEH.

Pradeep Mujumdar, professor of civil engineering, IISc, said, "This link with the leading environmental science institute in the UK offers huge opportunities for making significant advances in understanding our soil and water systems and how they can be best managed to provide essential ecosystem services."

(This article was published on October 1, 2014)

The Maths Teacher From Patna

Modi launches 'Clean India' initiative: as it happened

http://www.thehindu.com/news/national/modi-to-launch-clean-india-initiative/article6467953.ece

It is nice to see the two of them together. They are both young, barely 40 years of age and neither of them went to IIT. One is a Professor of Mathematics at Princeton and the other has been teaching Mathematics to bright but poor students in the backwaters of Bihar. Manjul Bhargava, the Canadian-American and the winner of the Fields Medal, the equivalent of the Nobel in Mathematics, and Anand Kumar, better known as one who has been helping students from poor families crack the IIT Joint Entrance Examination, have only one thing in common, their passion for Mathematics. The Canadian-American of course has had a more privileged upbringing and possibly only the accident of birth has kept Anand, who for some time had to work in the Posts & Telegraph Department in a Class III job and deliver wafers (papad) on his bicycle to make ends meet, from distinguishing himself internationally.

But this week Anand is in the USA, delivering lectures, one at [MIT](#) and the other at Harvard today. He has come a long way from the time when the US Consulate at Calcutta rejected his application for even a tourist visa. This was around 2002 and he had just launched his 'Super 30' scheme under which a part of his earning from teaching Mathematics was set aside to provide board, lodging and coaching to 30 bright students from poor families who could not afford to go to Kota.

But by then his financial troubles were over. He was teaching an incredible number of students— as many as 600 in one batch, using a microphone clipped to his shirt. He was earning enough to have hired a Chartered Accountant as consultant and was paying a hefty amount as income tax. So much so that a smart police inspector demanded that he better pay the policeman a cut or the professor sahib would get framed in a false case, forcing Anand to hire a bodyguard.

But the Visa Officer at the US consulate was not impressed. Anand's stock attire of jeans and a T-shirt with the buttons open would not have helped and he sounded dejected when he called to inform that the mission had ended in failure. Therefore the next time he received an invitation from the United States to engage a few classes, he called me before applying for Visa. I was posted in Calcutta then but had no clue how to help him out. I did the only thing I could and called the regional director of the American Centre. The only guarantee I could give, I told him, was that Anand would not stay back in the US. I then proceeded to narrate the young man's incredible journey, which impressed him enough to promise that he would try to put in a word. It worked and Anand flew out on his first trip abroad.

I remember the time when he was teaching Mathematics in Patna without charging a paisa. I also remember the time when he invited me to see him coaching several hundred students crowded in a small hall. He was charging them the princely sum of Rs 25 every month to cover the cost of hiring the hall and making arrangements for drinking water. But the then IG of Police Abhayanand, who later became the DGP in

Bihar, advised him to stop teaching for free. People, he told Anand, would not value anything they received without making an effort for it or without paying for it.

I was, therefore, astonished to hear Anand tell me on one of his visits to Lucknow around 1999 that I should stop worrying about sending him abroad. Around 1996 he had received admission in Cambridge University but he was advised to arrange for four or five lakh Rupees to cover his expenses during the first year. I had tried persuading the then Bihar chief minister to sponsor Anand. I took the idea to local Rotary and Lions Clubs and interceded with businessmen. But nothing had worked and soon I had to move out to Lucknow on transfer.

" For a three-month coaching class in Mathematics," I recall Anand telling me, " the going rate in Patna is Rs 6,000 but for the first time in my life I conducted the course for the Joint Entrance Examination and charged only Rs 1000." How many students had he taught? I asked and was surprised to be told that the number was 400.

Having watched him teach for even a short while was a lesson in itself. Because he seemed to have the ability to simplify the most complex of Mathematical problems to even novices like me. And the number of students willing to spend three hours listening to him in rather cramped conditions bore testimony to how well he communicated.

From Lucknow I had moved to Calcutta where one day I received a call from him. No bank, he complained, was willing to give him a credit card in Patna, which then was known for dons who would get loans sanctioned at gun point. So Anand flew down to Calcutta and offered to deposit X amount of money in a bank if they allowed him a credit card to enable him to buy books online. The bank was happy to oblige, I remember.

What is striking about him is the fine balance he has been able to maintain. Even when he was teaching five days a week, he would refuse to teach in the afternoon. That was the time he devoted to his family and to his own reading and writing. He could have doubled his earning by conducting an evening course but wouldn't. Similarly, he had the chance to go abroad and teach. He didn't.

I once suggested that Patna was too risky for him and he should think of shifting to New Delhi and he disarmingly said, "What will then happen to my students ?" .

His critics accuse him of hogging publicity in the media and he is undoubtedly media savvy unlike most academics. How indeed does he manage to lecture at MIT and also feel at ease in the company of politicians and business tycoons ? I wish I knew.

The restless young man occasionally calls. He appears dissatisfied at the kind of education we are imparting and the state of our schools and colleges. Should he confine himself to teaching or write text books, engage in research or get into administration ? Would it be better for him to establish a school ? Too easy for us to reply for him but I do know that he agonises over the choices life has presented him with.

Swachh Bharat Mission is Prime Minister Narendra Modi's pet project that seeks to create a 'Clean India'. Mr. Modi had urged citizens, government institutions to dedicate 100 hours every year towards cleanliness.

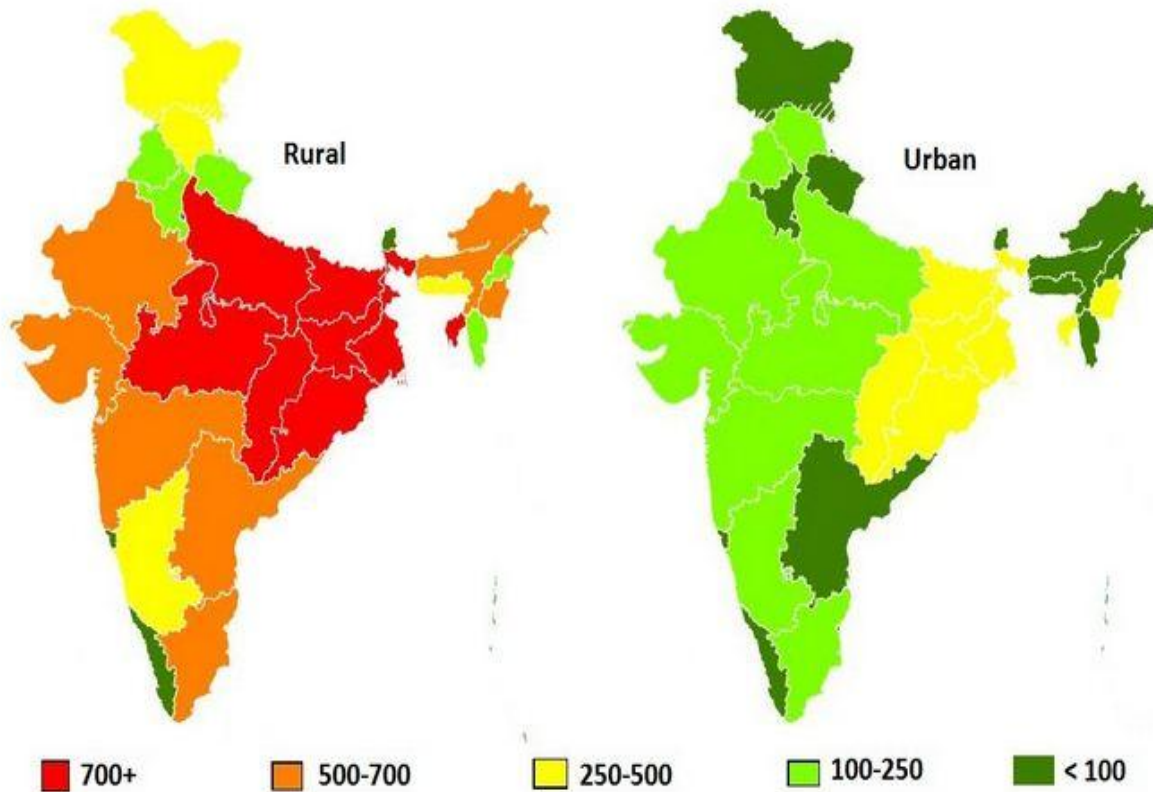**10.10:** PM flags off walkathon after administering pledge.

10.02: PM Modi concludes his speech.

10.00: PM is reading the oath. Actor Aaamir Khan is on the stage with the PM.

9.56: I appeal to people to make a pledge. Join your hands above your heads to Mahatma Gandhi: PM Modi

9.54: More than 60% of rural India still has to defecate in open: PM Modi

Map showing the no. of households per 1000 without bathroom facilities:

9.53: Don't trust me or my govt. - trust Mahatma Gandhi's dream for a clean India: PM Modi

9.51: Clean India will give us as much joy as Quit India: PM Modi

9.51: Quit India was a mass movement. Clean India should be too: PM Modi

9.49: WHO (World Health Organisation) says poor sanitation costs India Rs. 6500 per year per Indian: PM Modi

9.47: I have invited Goa Governor, Baba Ramdev, Sashi Tharoor, Kamal Haasan, Salman Khan, Priyanka Chopra, Tendulkar, Anil Ambani and Tarak Mehta: PM Modi

9.46: I have invited nine people to join me, they should pick another nine and this should go on: PM Modi

9.45: I am not alone, 125 crore people are with me: PM Modi

9.43: Mahatma Gandhi did not clean every village, but his work gave everyone inspiration: PM Modi

9.42: We need to recognise people who have been doing this work. This is not a political move - the only motivation is patriotism: PM Modi

9.40: If you see dirt anywhere, take a picture and upload in social media. Then take a video of you cleaning it and then upload the photo of the clean spot: PM Modi

9.40: We reached Mars. No PM or Minister went. It was the people who did it, our scientists who did it. So can't we create (a Clean India): PM Modi

9.38: It takes a long time to change old habits.It is difficult. But we still have time till 2019: PM Modi

9.36: Is cleaning India the job of sanitation workers only?: PM Modi

9.35: Every person, every leader in the country has made some efforts for this. I congratulate them: PM Modi

9.34: When I saw this logo, it made me think that Mahatma Gandhi was looking at us through his spectacles, checking if we had made India clean: PM Modi

9.32: Bapu gave us the slogan "Quit India. Clean India". But "Clean India" is still unfulfilled: PM Modi

9.31: PM begins his speech, pays rich tributes to Mahatma Gandhi and Lal Bahadur Shastri.

9.29: Winners of the logo and slogo contest are receiving awards from the Prime Minister. Bhagyashree Seth, winner of the slogan contest.

9.27: The campaign has received over 1000 entries for logos and 5000 for slogans on the mygov.in portal

9.26: Urban Development Minister Venkaiah Naidu concludes his speech.

9.23: Keep your house, neighbourhood and place of worship clean. That is my message to our countrymen: Naidu

9.19: Sanitation is more important than political freedom: Urban Development Minister Venkaiah Naidu

9.17: Will devote up to 2 hours a week to clean up India: PM Modi

9.10: PM Modi is on his way to Rajpath where he will administer a cleanliness pledge and lead a walkathon.

9.02: PM Modi launches Swachh Bharat Mission in Valmiki Basti, a sanitation workers' colony, in Delhi.

(Image courtesy: All India Radio)

9.01: Arjuna awardee and boxer Vijender Singh is also present at the event.

8.52: What is Swachh Bharat Mission?

Swachh Bharat Mission is PM Narendra Modi's pet project to that seeks to create a 'Clean India'. Mr. Modi had urged citizens, government institutions to dedicate 100 hours every year towards cleanliness. The Government has decided to invoke Mahatma Gandhi and rope in religious leaders from all faiths to drive the Mission. As per

estimates prepared by the Ministries of Urban Development and Rural Development, Rs. 2 lakh crore will be spent on the Mission over the next five years.**Read here**

8.49: With the Prime Minister setting an August 15, 2015, deadline by when all schools in the country should have separate toilets for girls, the Union Human Resource Development Ministry brought out a handbook on Wednesday for the "Clean School" campaign on the upkeep of sanitation facilities already in place and under construction. **Read here**

8.40: Urban Development Minister Venkaiah Naidu calls it a non-political movement, for which he seeks cooperation from all citizens.

8.39: Movie star Aamir Khan has joined the dignitaries.

8: 30: Bureaucrats are in attendance as well as ministers including rail min Sadanand Gowda, and Delhi Lt Gov

8.20: Schoolchildren, dressed in white with tricoloured balloons, are lined up down the whole of Rajpath

8. 00: Prime Minister Narendra Modi will launch a five-year "Clean India" campaign, or Swachh Bharat Mission, on Thursday morning, most likely by wielding the broom himself. The campaign will culminate on the 150th birth anniversary of Mahatma Gandhi in 2019.

In the hours after the launch with a series of events, including a visit by Mr. Modi to Valmiki Basti and a walkathon, Union government employees will gather in their offices to take the oath, which will be administered by the respective Ministers or administrative heads. They are expected to clean up their work spaces and put in 100 hours a year to keep their home and office surroundings clean.

In his message to the nation on the eve of Gandhi Jayanthi, President Pranab Mukherjee urged everyone to make the mission a success.