NEWS CLIPS

March 2-8, 2019

IIT Delhi Placements Surpass 10-Year Record with Students Grabbing 900 Offers

February 7, 2019 https://timesofindia.indiatimes.com/home/education/news/iit-delhi-placements-surpass-10-year-record-with-students-grabbing-900-offers/articleshow/68305764.cms

The Indian Institute of Technology (IIT) Delhi this year broke its last 10 years' record for number of placements, with its students grabbing over 900 offers from various national and international employers so far. The number crosses 1,000 if one includes the pre-placement offers, meaning those under which a student works as an intern before getting recruited.

These core subjects are the biggest winners in IIT-Delhi's record campus placement season

February 7, 2019 https://www.businessinsider.in/iit-delhi-campus-placements-exceeded-1000-in-electrical-chemical-civil-mechanical-and-it-engineering/articleshow/68297555.cms

IIT Delhi breaks its 10 years' placement record, fetching over 1,000 placements during the current placement season.

Domains including electrical, chemical, civil and mechanical engineering bagged most offers in the technology sector.

The institute saw a 15% increase in the number of companies visiting the campus.

With more Indian corporates looking to hire from top tier colleges, Indian Institute of Technology (IIT) Delhi has seen the highest number of placements in a decade.

And the top-most core subjects — bagging over 32% of offers — included electrical, chemical, civil and mechanical engineering followed by information technology. IT graduates secured 20% of the total offers rolled out by the employers.

While analytics, management, finance, consulting and research fields secure the highest and most placements from India's B-schools, the category bagged rest of the offers during the current placement season at IIT.

However, the IIT did not disclose the salary packages offered by employers, saying that may be "devaluing national placements over international placements as well as core jobs over finance and consulting jobs."

Eyeing the global demand for skills in technology sectors and analytics, IT majors including Capgemini and Wipro have been stepping up hiring a large chunk of talent from Indian engineering campuses. Capgemini has reportedly been planning to hire over 10,000 fresh graduates via campus placements, extending quarterly promotions to freshers.

While the homegrown IT multinational Wipro is prioritising digital expertise at campus hirings with a plan to double fresh hirings.

Given high demand for AI skills, IITs are also rolling out certificate courses and degrees in AI along with machine learning, starting next academic session.

The rise in automation and related skills has led to increased demand in the Artificial Intelligence. Hence, to bridge the gap, IIT has also introduced B.Tech in Artificial Intelligence along with other certification courses in machine learning, starting next academic session.

Overall, as the IIT Delhi institute witnessed an upsurge of 15% in the number of companies visiting for campus placements, it scored over 1,000 offers from Indian as well as overseas employers. This included pre-placement offers allowing students to intern before going onboard with a company.

The Delhi campus of Indian Institute of Technology has also been ranked among the top 100 institutions in the Global University Employability Ranking for the year 2018.

Ashwagandha can treat cancer: DAILAB@IIT Delhi researchers

February 7, 2019 https://economictimes.indiatimes.com/news/science/ashwagandha-can-treat-cancer-dailabiit-delhi-researchers/articleshow/68301627.cms

A collaborative study from Japan has been published in the Journal of Experimental and Clinical Cancer Research (JECCR), IIT Delhi shared in a statement.

Researchers from DAILAB@IIT Delhi and National Institute of Advanced Industrial Science and Technology (AIST) have discovered that Indian herb-Ashwagandha or Withania somnifera can treat cancer as it has the ability to provide a wild type p53 (a tumour cell) tumour suppressor activity in cancers with a certain type of mutation.

A collaborative study from Japan has been published in the Journal of Experimental and Clinical Cancer Research (JECCR), IIT Delhi shared in a statement.

Tumour suppressor p53 protein, also known as guardian of the genome, is frequently mutated in a large majority of cancers. These mutations induce local or global changes in protein structure thereby affecting its binding to DNA. The structural differences between the wild type and mutant p53 provide an opportunity to selectively target mutated p53 harbouring cancer cells for cancer therapy, according to the research findings.

Restoration of wild type activity in p53 mutants using small molecules that can revert the structural changes have been considered promising strategy for drug development, the institute stated in the release shared.

D. Sundar, coordinator of DAILAB@IIT Delhi said that they (IIT Delhi) could not accomplish these findings without the collaborations with researchers from AIST (Tsukuba, Japan) and Institute of Molecular Biology and Biotechnology- Foundation for Research and Technology, Greece.

#IITDelhi: Cycling towards a greener campus

February 6, 2019 https://www.newslaundry.com/2019/03/06/iitdelhi-cycling-towards-a-greener-campus

IIT Delhi students can use an app-based cycle service to get around the campus. The rental is just two bucks plus GST for 15 minutes.

The alarm goes off. The snooze button is pressed more than a couple of times. When our future engineer finally awakens, it's 10 minutes to the start of class.

This is the predicament Hitesh Aggarwal, a student of industrial and production engineering at IIT-Delhi, says he faced on a daily basis before the bicycle sharing app was launched on campus. The "LetUsCycle" app has made getting around the campus faster and easier. It has also cut down on the number of personal bicycles as it works on a share model.

It is just one of the green initiatives which the campus is working on—a place which is like a beacon of hope for the rest of Delhi. It's green, cars are driven by the rules, cyclists ride unafraid and the university has an aura of peace which is missing outside its gates.

Conceptualised in July 2017, the app became operational in February 2018, and was in full swing by July last year, says general secretary of student affairs Jashant Suri. The app and 200 bikes were provided by the start-up Greenolution. IIT-Delhi is the first campus they started off in, and are presently working to introduce the system in JNU.

The bike stands, 16 in total, are paid for by the institute which spent approximately ₹10 lakh on them. The company has provided the bikes and the app at no cost. Their revenue comes directly from bike usage. It also provides the campus with e-rickshaws which go around servicing the bikes and also redistributing them, which makes life much easier for the students.

But it hasn't all been seamless. When the bulk of registration had been done around July, they also started facing some setbacks. "Throughout July to December we were fire-fighting", Suri says.

The initial problems were with pricing, pegged at ₹10 for half an hour. But with most students requiring a bicycle from their hostel to the institute, the time bracket did not work to their favour.

And then another issue crept up: students trying to fool the system. He gave us an example wherein some students would never end the ride. This meant they could come back to use the bicycle whenever they wanted. They have understood this point and plugged the loophole. A ride can now last for a maximum of 15 minutes and is charged at ₹2 (plus 18 per cent GST).

The other issue which they are still facing is that the system requires Bluetooth but there are some black zones in the campus, which means the app is unable to function seamlessly. Out of 16 cycle stands on campus, a few fall in black zones. Thus, their next intention: creating four virtual stands which would allow users to drop off their share bikes at a cluster, instead of the designated stands.

He adds candidly that no matter what the facility, students will always come with a grievance. "We are an entitled people, including myself. Students would never be happy so they constantly come up to us with complaints and their own suggestions on how to navigate that problem."

In their defence, however, he did admit that the app they have is not "top class". The institution could have had a link-up with cab hailing app Ola, which provides the same service to IIT-Bombay. Suri admits, "We could have had Ola which has a better backend and a robust system" but Greenolution's three-year contract with IIT-Delhi will last at least till 2020.

Meanwhile, the venture is enjoying moderate success. With a total of 2,500 downloads till date and on average close to 1,200 rides a day, it is helping students like Hitesh Aggarwal make it to classes on time.

Greening the campus

Other than the bicycle sharing initiative, the IIT-Delhi campus is working to make the campus a zero waste one. Simar Kaur Mattewal, general secretary of IIT's NSS (National Service Scheme) says that while it may take some time to fructify, they are working hard to operationalise the concept.

For now, they have collaborated with the NGO Chintan Environmental Research and Action Group to manage its waste. Waste is divided into biodegradable and plastic, with the former being composted on site and plastic sent to Chintan for recycling.

"We have a biogas plant so we take vegetable waste from hostel waste", Mattewal says. With this, they have fuelled a car which is currently on testing mode. They are also trying to target e-waste, with special e-waste drives planned for the end of the semester. Plastic bags are banned on campus.

Raised Line Foundation, an IIT-Delhi initiative, is working to bring the power of choice to visually impaired students

February 5, 2019 https://newzhook.com/story/21559

Imagine learning about a vast and diverse country like India without the aid of a map? Or understanding basic science experiments without access to diagrams?

These are real, daily barriers in learning that students with vision impairments face across the world. Barriers that come in the way of pursuing many subjects and hamper career choices.

Walls that Raised Lines Foundation (RLF) is helping to address through a technology that uses 3D printing to produce tactile diagrams that are affordable. Their aim is to open doors to new subjects and learning opportunities to students who are blind and low vision.

RLF was incubated after four years of research at the Centre of Excellence in Tactile Graphics at Indian Institute of Technology, Delhi (IIT-D), and sponsored by the Ministry of Electronics and Information Technology, Government of India.

It started during the development journey of SmartCane, a device that helps visually impaired person to navigate independently. We thought of representing its functionality with the help of tactile diagrams. While doing that we found out that there is no scalable and affordable means available for production of tactile diagrams in developing nations, hence diagrams were not available in the textbooks. Because of this students have to leave subjects like Mathematics, Science, Geography, etc. especially in the higher secondary stage. Schools and institutions rely on manual-based interventions like thread, wires, and cotton for creating the diagrams manually that is tedious and non-scalable. - Kunal Kwatra, Director, raised Line Foundation

POWER OF TOUCH

Substantial research by the RLF team went into developing a technology that was affordable and scalable for bulk production of tactile diagrams.

"Assume a diagram to be shared in a classroom of 50 odd students, which meant 50 copies of the diagrams need to be created using manual interventions, this was the problem statement that came into picture", explains Kwatra. The swell-based method used in the United Kingdom and United States was found to be unaffordable so the team researched various available technologies.

The team developed diagrams based on guidelines so they were intuitive for visually impaired students to understand. They used existing international standards and guidelines from the Braille Authority, U.S. and Royal National Institute for the Blind in the UK.

So far, the RLF team has produced nearly 70,000 tactile diagrams and designs for students from classes six to 12. They have designed and produced textbooks in partnership with the .

Pushpa Madhwal, teacher at the Saksham School for the Blind in Noida shared this feedback from a class 10 student.

"The tactile books have helped a lot. These books were a medium to provide a clear visualization of various complicated illustrations and were a helping hand throughout the year. However, at times, it was difficult to distinguish between different colour combinations which were indicated by various textures in the books".

Going ahead the foundation has ambitious plans of reaching out to each and every visually impaired student so they get access to diagrams which will help to pursue different subjects, not just locally but worldwide.

The team is not limiting itself to school curriculum. A recent manual designed by the foundation on menstrual hygiene has come in for much praise. It also gets orders for designing from art galleries, museums and training centres for visually impaired people.

Clearly, Raised Lines Foundation is looking to open a whole new world to a community that has been in the shadows when it comes to opportunities in education and employment.

8 March

Smartphone App Developed by IIT Kharagpur Students Can Detect Fake Currency

https://www.news18.com/news/tech/smartphone-app-developed-by-iit-kharagpur-students-can-detect-fake-currency-2060087.html

The group students from the Department of Computer Science and Engineering developed the code for a smartphone application that can detect counterfeit currency.

Researchers at IIT Kharagpur have developed a smartphone-based application to detect counterfeit currency and also provided solutions for industrial operations ranging from thermal power plants to

nuclear radiation tracking, an official said on Thursday.

A group of six students from the Department of Computer Science and Engineering developed the code for a smartphone application to detecting counterfeit currency.

The image processing application which can detect counterfeit currency, can be installed on smartphones and thus used by people at various points to reduce the chances of fraud, a statement said.

"A user can upload a currency note image and the mobile app would verify its authenticity using 25 features extracted from the front and rear side of the currency note. In case of detection of a fake note, the user will also be notified...," T.Y.S.S. Santosh, the research leader, said.

To address the issue of occupational hazard for people working in the domain of a nuclear-powered device, students were asked to develop a solution for visualising and localising a 3D radiation source along with its size, shape and orientation, given the data on spatial dosage.

The 6-member student team proposed a solution based on Boltzmann Transport Equations dealing with the flow of heat in fluids from hotter regions to colder ones. The students solved the reverse Boltzmann Transport Equations using the dataset for a given area to estimate the source location.

"This solution is well-suited to occupational workers carrying wearable sensors detecting radiation dose data. The sensors can pinpoint the location of radiation leaks in nuclear plants and refineries. The solution can also find application in medical radiation therapy or radiotherapy as part of cancer treatment to control or kill malignant cancer cells," said Lakshay Bansal, the team leader.

Another team from the institute has developed a virtual reality-based application for training and skill development of the workers at a thermal power plant through interactive drill based training.

The solution is an interactive virtual reality environment of a thermal power plant with simulations and guides to help operations, maintenance and performance of complex procedures in an efficient and error-free manner.

The students, who proposed these solutions, won some of the top prizes in the recently- concluded nationwide competition SIH (Smart India Hackathon) 2019.

Professors, scholars canvass for Narendra Modi govt 2.0

https://www.dnaindia.com/india/report-professors-scholars-canvass-for-narendra-modi-govt-20-2727455

As the 2019 general election approaches, a group of like-minded professors and research scholars from across the nation – having "nationalistic" thinking – have launched an innovative national outreach campaign called 'Academics4NaMo' to canvass for bringing back the Narendra Modi government to power.

Academics4NaMo will carry out the outreach programme through digital platforms, series of meetings, seminars, conferences, public discourses and workshops – though out the electoral process – will explain to the people about the policy initiatives of the Modi government in the last five years and why it is "necessary" to bring back the ruling dispensation again.

"In this election Prime Minister Modi is the agenda. This is not to dispute that under Modi's decisive leadership, India has made giant strides in all spheres, ranging from economy to foreign policy. Academics4NaMo firmly believes that to continue the momentum of growth and development of the nation, a Modi government 2.0 is a necessity," said Swadesh Singh, Assistant Professor of Delhi University, who is one of the conveners of the project.

"The thought leaders from the world of academics and research – who have areas of influence – will filter down the message," he said.

Academics4NaMo will hold a national workshop on March 14 in Delhi in which 300 select delegates from across the country will participate, sources said adding that the workshop will assign task to the members. The members will hit the ground from March 20, sources said.

According to sources, several professors of Delhi's Jawaharlal Nehru University (JNU), including varsity's registrar Prof Pramod Kumar, Prof Sudheer Pratap Singh of Centre for Indian Languages and Dr Vandana Mishra of Centre for Comparative Politics & Political Theory; Delhi University professors like Prof Shri Prakash, Prof Tarun Kumar Garg, Prof Manan Dwivedi of Indian Institute of Public Administration (IIPA), Delhi and Dr Shantesh Singh of Kuala Lumpur based United Nations University are part of the campaign.

Within days since the campaign was launched on March 5 in Delhi, the membership of Academics4NaMo has reached 2000 and counting. Several associate professors and assistant professors from as many as 20 affiliated colleges of Delhi University have joined the campaign, sources said.

A number of professors and research scholars of Indian Institutes of Technology (IIT) Delhi, Lucknow University, Banaras Hindu University, Patna University, Central University of South Bihar,

Indraprastha University, Indian Institute of Public Administration (IIPA) have already joined the campaign, sources said. Delhi-based think tanks like Centre for Policy Research and Governance and Institute for Policy Research are also part of the campaign.

To begin with the campaign is getting a "good response" in 20 cities across the country, including Delhi, Mumbai, Pune, Lucknow, Varanasi, Bhubaneswar, Ranchi, Guwahati, Jaipur and Jammu, sources in know of the development informed.

7 March

NGT forms panel of CPCB, IIT Delhi & IIT Kanpur to assess eco damage at Tata Power's Trombay power plant

https://steelguru.com/power/ngt-forms-panel-of-cpcb-iit-delhi-iit-kanpur-to-assess-eco-damage-at-tata-power-s-trombay-power-plant/535972

ET reported that the National Green Tribunal has constituted a three-member committee to investigate the environmental impact of the conversion of Tata Power's 500MW Unit 6 at its Trombay power plant from an oil based one to a coal-fired one. The committee will consist of representatives from the Central Pollution Control Board, IIT-Delhi, and IIT-Kanpur.

In the order passed by the NGT on February 27, it had asked the committee to submit its report by June 30.

Green activists, including Ashok Khatri and Debi Goenka, had challenged the environmental clearance granted to the conversion in 2014. Their main contention was that the environment impact assessment was carried out by Tata Consultancy Services, which is not an independent organization. They also protested against the fact that no public hearing was held, and said that although the National Environmental Engineering Research Institute had carried out a further review, this is not a substitute for a separate EIA. In such a situation, a separate carrying-capacity study on the plant's land, water and air was needed, they said. They also said coal, even imported, is a polluting fuel compared to oil, and leaves the problem of dealing with fly ash.

QS World Rankings 2019: Five new Indian institutes debut in the list

https://timesofindia.indiatimes.com/home/education/news/qs-world-rankings-2019-five-new-indian-institutes-debut-in-the-list/articleshow/68271811.cms

According to the recently released world rankings by Quacquarelli Symonds (QS) 2019, three Indian institutions feature in the world's top 200 university list. Indian Institute of Technology Bombay (IIT-B), Indian Institute of Science, Bengaluru (IISc) and IIT Delhi have bagged 162, 170 and 172 spots, respectively. In comparison to 2018 rankings, IIT Bombay has gone up 17 places from 179 to 162 and IISc has moved up from 190 to 170.

Among other IITs, IIT Kanpur has gone up from 293 to 283, IIT Kharagpur has moved up to 295 from 308, IIT Roorkee has gone up to 381 from 431-440 bracket, and IIT Guwahati has moved up to 472 from 501-550 bracket.

IIT Mandi Researchers Produce Jute, Kenaf Fibre Reinforced Plastics through Microwave Energy

https://www.ndtv.com/education/iit-mandi-researchers-produce-jute-kenaf-fibre-reinforced-plastics-through-microwave-energy-2003152

IIT Mandi researchers have developed thermoplastic fibre reinforced composites using jute and kenaf fibres through a simple process of 'Microwave Curing'.

Research Student Manoj Kumar Singh, and Dr. Sunny Zafar, IIT Mandi, with the Microwave Furnace

Indian Institute of Technology (IIT) Mandi researchers have developed thermoplastic fibre reinforced composites using jute and kenaf fibres through a simple process of 'Microwave Curing'. An IIT Mandi team lead by Dr. Sunny Zafar, Assistant Professor, School of Engineering, IIT Mandi, and his research student Manoj Kumar Singh has developed this and their research paper titled 'Development and mechanical characterization of microwave-cured thermoplastic based natural fibre reinforced composites' has recently been published in the Journal of Thermoplastic Composite Materials.

Speaking about his Research, Dr. Sunny Zafar said, "The fibre reinforcement holds the polymer matrix together, thereby enhancing the properties of the composite."

"Microwave energy is known for its fast heating rates, as we know from our kitchen ovens. Microwave has been shown to result in improved properties of the processed products in laboratories, as well", he adds.

The fibre-reinforced composite materials are ubiquitous today and are used in applications ranging from aerospace systems to automotive, industrial, and consumer products.

Speaking on the relevance of their work in the Indian context, Mr Singh said, "Thermoplastic-based natural fibre-reinforced composites undoubtedly offer advantages like biodegradability and reduction in greenhouse emissions but the greater incentive for developing such FRPs in India is the availability of variety of fibres, possibility of job creation in rural areas, low energy utilization and consumption and low cost."

Dr. Zafar used microwave energy to produce thermoplastic polymers such as polyethylene and polypropylene that were reinforced with jute and kenaf fibres.

They first pre-treated the fibres to improve their wettability by the polymer, mixed them with the polymers and subjected the mix to microwave radiation. The composites formed were similar to those obtained by conventional processes.

The researchers also elucidated the mechanism of microwave-induced curing and analysed the properties of the composites by methods such as Scanning Electron Microscopy (SEM), X-Ray Diffraction (XRD) and mechanical properties assessment using the Universal Testing Machine (UTM), according to a statement from IIT Mandi.

4 March

IITs see surge in number of doctoral degrees

https://economictimes.indiatimes.com/industry/services/education/iits-see-surge-in-number-of-doctoral-degrees/articleshow/68261406.cms

The rise in the number of researchers is also a result of the expanded focus on research at top IITs.

Top Indian Institutes of Technology (IITs) have seen an unprecedented increase in the number of research scholars graduating with a doctoral degree.

Proactive government funding, multiple sources of on-campus financial assistance and IITs' efforts to buff-shine their image from undergraduate engineering colleges to research focused institutes have led to a 50-100% jump in successful PhD graduates over the last five years.

The numbers have almost doubled at Delhi and Kharagpur IITs. At Madras and Kanpur, it has jumped by about 50%.

In the 2018-19 academic session, IIT Bombay had the largest number of PhDs graduating at 380. Among others, IIT Delhi had 378 (up 112% since 2014), Kharagpur 295 (80%), Madras 257 (49%) and IIT Kanpur 186 (41%).

"Over the years, the ministry of human resource development has been increasing funding support with respect to the number of PhD students sanctioned as well as the amount of monthly fellowship/assistantship for a PhD student. The rate of increase in PhD strength is primarily related to this," said Ashok Mishra, dean academic research at IIT Madras.

The ministry directly funds a certain percentage of the research scholarships. In addition, there are students funded by other arms of the government, such as the University Grants Commission and the Council of Scientific & Industrial Research. These apart, there are research programmes through government bodies like the Defence Research and Development Organisation.

The rise in the number of researchers is also a result of the expanded focus on research at top IITs. According to IIT professors, this is an attempt to change the image of the premier institutes from a B.Tech college to a research-driven establishment.

"We have increased the focus on research. IITs were earlier seen as undergraduate engineering institutes. That has completely changed," said Santanu Roy, associate dean–academics at IIT-Delhi. "We want to see ourselves as a research-driven institute and PhD is a vehicle on which research is done."

The ratio of postgraduate to undergraduate students at IIT Delhi is 60:40, of which a large number is research scholars.

The cumulative number of research scholars at top IITs since 2014 has seen a 40-80% increase. At IIT Delhi, it has gone up 80% to 2,700 in the academic year 2018-19 and at IIT Kharagpur, it jumped 70% to 2,921. Both Madras and Kanpur had about 35% increase in the number of research scholars in the last five years. The total number of PhD students enrolled at IIT Bombay touched a peak of 3,171 in 2018-19.

About 40% of the total pool of research scholars is Masters' degree holders from various IITs while 50% is from other—mostly government-run—institutions.

Achla Raina, dean of academic affairs at IIT-Kanpur, attributes the rise in research interest to enhanced government support. This, in a way, has become a logical option to pursue after Masters, she said.

PhD Boost
Factors that led to rise in doctoral degrees at IITs

Increase in government funding

Multiple sources of on-campus financial assistance | Proactive effort by IITs to be seen as research-focused institute

Many faculties are part of industry-sponsored projects, leading to more research funding too

Greater awareness about the higher employability and job assurance for a PHD

The numbers are expected to increase further with the implementation of reservation for the economically weaker sections in the upcoming admissions in May 2019," she predicted.

The institutes, on their part, have made the PhD process more attractive. For instance, IIT Kanpur has introduced measures such as 'walk-in' interviews and other measures to attract doctoral aspirants in various fields. IIT Kharagpur has introduced a large number of 'disciplines' (diversity of subjects) where researchers can pursue interdisciplinary research in various schools and centres.

Experts also attribute the increase in the number of researchers on campus to multiple sources of funding, other than government dole. A large number of faculties are working on industry-sponsored projects. Research programmes sponsored by both Indian and multinational companies have increased, said professors. "Individual faculty members work on projects with industry. There are a few students who assist the faculty — an arrangement which also ensures funding," said Roy of IIT Delhi.

3 March

JEE Main 2019: NTA has an important message for Economically Weaker Sections (EWS) category candidates

https://www.indiatoday.in/education-today/notification/story/jee-main-2019-nta-economically-weaker-sections-ews-category-divd-1469289-2019-03-03

However, the statement said the certificate will be required at the time of filling up of the application for JEE (Advanced).
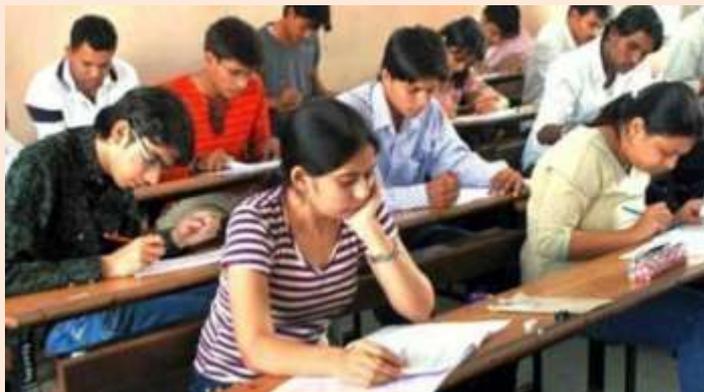
JEE Main 2019: The National Testing Agency (NTA) has an important message for the candidates of JEE Main January, 2019 as well as April 2019 examination, who come under Economically Weaker Sections (EWS) category as per the Certificate issued by the Competent Authority.

In an official statement, NTA said that, the candidates may mention such category in the online application form available at www.jeemain.nic.in between March 11-15, 2019.''

The EWS category certificate is not to be uploaded in the JEE Main portal, according to a statement from National Testing Agency (NTA).

Official statement by NTA

"As per the OM No. 20013/01/2018-BC-II dated January 17, 2019 issued by the Ministry of Social Justice and Empowerment and the OM No. 12-4/2019-U1 dated 17.01.2019 as well as the Letters No 35-2/2019-T.S.I dated 21.01.2019, 01.02.2019, 04.02.2019 and 15.02.2019 of MHRD Department of Higher Education regarding implementation of reservation for Economically Weaker Sections (EWSs) for admission in Central Educational Institutions, it is necessary to identify the candidates belonging to EWS category from amongst the candidates of JEE(Main) January and JEE(Main) April 2019," the statement added.

JEE Main 2019 exam registration

The candidates who are willing to give the JEE Main April 2019 exam, shall visit the official website for registrations as the link is currently activate.

Last date to apply for JEE Main 2019

Eligible candidates will be able to apply for JEE Main April 2019 till March 7, 2019.

2 March

Delhi's pollution crisis comes in 2 waves: Study
https://www.hindustantimes.com/delhi-news/delhi-s-pollution-crisis-comes-in-2-waves-study/story-bmI5JCH3yTkxpA2DrNJvyN.html

In 2018, Delhi witnessed one peak on November 9, a day after Diwali, when pollution hit the emergency level. Another peak was witnessed between December 23 and 25. Pollution levels hit the emergency levels at least two times after that, largely because of unfavourable wind conditions.

Delhi, considered among the most polluted cities in the world, sees two spikes in pollution during winter months, a new study has shown.

Delhi, considered among the most polluted cities in the world, sees two spikes in pollution during winter months, a new study has shown. In both spikes, lasting a week each, pollution levels shoot up at least five times above the permissible limits, forcing authorities to implement emergency measures.

Researchers from Indian Institute of Technology (IIT)-Delhi, the University of California, University of Illinois, and other research organisations found that while the first peak hits the National Capital Region (NCR) sometime around late October and early November, the second one, comparatively milder, occurs around December-end and early January.

The researchers analysed 16 years of satellite data (from 2001 to 2016) to obtain weekly concentration of PM2.5 levels in Delhi-NCR between October and May of the following year.

The research was published in Atmospheric Environment, a peer-reviewed scientific journal, in February 2019.

PM 2.5 — particulate matter that are 2.5 microns or less in width — are pollutants that can penetrate deep inside the lungs.

"The study indicates two peak pollution episodes in Delhi-NCR. The first peak occurs in the week of October 29-November 4. The second peak is slightly lower than the first peak and hits between December 30 and January 5," said Sagnik Dey, associate professor at the Centre for Atmospheric Studies in IIT-Delhi.

Pollution levels starts peaking from October 15- 21 and peak between October 29 and November 4. This peak continues till around November 11 after which pollution levels start declining. The concentration of PM 2.5 again starts building up from around December 17-23 and hits a peak around December 30-January 5.

In 2018, Delhi witnessed one peak on November 9, a day after Diwali, when pollution hit the emergency level. Another peak was witnessed between December 23 and 25. Pollution levels hit the emergency levels at least two times after that, largely because of unfavourable wind conditions. Delhi encountered its worst fog in 17 years in the last week of October and the first week of November in 2016.

During the first episode, stubble burning plays a major role with northwesterly winds bringing in toxic fumes from the stubble burning regions of Punjab and Haryana (where farmers burn stubble from the previous crop to get ready for the new season). The second episode is triggered by multiple factors, including local emissions, unfavourable meteorological conditions, and pollutants coming in from outside Delhi.

"Satellite data shows that pollution from stubble burning shot up by at least 9% between 2009 and 2016. The Punjab government implemented the Sub-soil Water Preservation Act which reduced the time period between wheat and paddy crops [meaning farmers have less time to clear the previous crop]. This could have led to a rise in stubble burning," said Dey.

The research also shows that places located downwind of Delhi become more polluted because the wind transports the pollutants locally emitted by vehicles and industries within Delhi. This, researchers term as 'Megacity Outflow'.

An earlier study done by The Energy Resources Institute (TERI) and Automotive Research Association of India said that while Noida receives 40% of its pollution from Delhi, Gurugram and Faridabad receive around 15% and 17% of their pollution from Delhi.

While east and north-east Delhi remain more polluted during the October-November episode, the pollution rises across the national capital, except South Delhi, during the December- January episode.

"Pollution levels in Delhi are governed primarily by two factors — meteorology and ground-level activities. If we can manage the ground level activities, pollution can be brought down. If we can plan our actions keeping in mind these two periods, we will able to further bring down pollution levels," said D Saha, former head of the Central Pollution Control Board's air quality laboratory.