Newspaper Clips
July 8-14, 2017

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IISc Bangalore, IIT Delhi & Bombay in World's best
http://www.minglebox.com/article/news/iisc-bangalore-iit-delhi-and-bombay-in-worlds-best

The Indian Institute of Technology (IIT)-Bombay, IIT-Delhi and Indian Institute of Science (IISc), Bengaluru, have found a place in the top 200 universities in the latest edition of the Quacquarelli Symonds (QS) World University Rankings.

From the top 200 universities in the world for the first time India boasts three of them. IIT-Bombay grabbed the 179th rank this time from 219th last year, IIT-Delhi rose to 172nd from the 185th rank and IISc Bangalore slipped by 38 places to 190.

"India is progressing in our global rankings. There are five Indian universities that feature among the global 100 for research indicator. However, there is still plenty of room for improvement, especially in the 'employer's reputation' indicator, suggesting that a closer collaboration between the corporate world and the leading universities is essential," Sir Ben Sowter, research director at QS, has quoted.

"India is also less competitive than other countries in the international students and faculty indicators, which makes perfect sense given the huge internal demand for higher education," he added.

IIT-Delhi replaced IISc Bangalore as the best ranked Indian institution in the world for the first time. However, IISc was ranked the sixth best institution in the world in terms of QS's 'citations per faculty' metric.

"This metric measures the research intensiveness and research impact of a university by dividing the number of citations that a university's research acquires by the number of faculty members at that university. QS notes that IISc Bangalore research papers were cited nearly 82,000 times over the five-year period QS used for this metric," the report cited a statement from QS as saying.

There are 20 Indian institutions six more than compared to last year in the ranking table this year that has a list of the world's 959 top universities. Jadavpur University (ranked in the 601-650band), University of Hyderabad (601-650), Anna University (651-700), Manipal University (701-750), Aligarh Muslim University (800-1000) and Birla Institute of Technology and Science (800-1000) are some of the new names.

"For the first time, Delhi university entered the top 500 group, moving up from the 501-550category to the 481-490 category. IIT-Kharagpur improved its rank from 313 to 308, and IIT-Kanpur rose from 302 to 293rank. IIT-Madras had lost a few places and moved from 249 to 264rank.

IIT-Guwahati moved from 481-490band to 501-550band. Banaras Hindu University, Panjab University, University of Mumbai and University of Pune are all ranked in the 801-1000 band," the report said.

The Massachusetts Institute of Technology (MIT) was placed as the world's best university for the sixth consecutive year in the overall rankings. Stanford University is the world's second best and Harvard University the third best institutions.

IIT admission 2017: Just one seat left vacant after JoSAA round three

http://www.hindustantimes.com/education/iit-admission-2017-just-one-seat-left-vacant-after-josaa-round-three/story-ohGrfwrenJIHUx1bMZcK5I.html

Out of the total 36,208 seats available across 97 institutes, including all IITs, NITs, IIITs as well as GFTIs, only 399 remain vacant and will be up for allotment in the remaining rounds

All but one seat out of 10,988 in 23 Indian Institutes of Technology (IITs) have been allotted to students by the end of round three of admissions this year, a considerable improvement over 76 left vacant last year. The Joint Seat Allocation Authority (JoSAA), which managed seat allocation to 97 institutes, including 23 IITs, 31 National Institutes of Technology (NITs), 23 Indian Institutes of Information Technology (IIITs) and 20 other-government funded technical Institutes (GFTIs) in 2017, also released a revised seat allotment schedule on its website, www.josaa.nic.in.

"Only one seat remains vacant in IIT Bhubaneshwar now, that too in the Scheduled Tribe (ST) category. This too should get taken in the next round," a JoSAA official said.

About 3,200 seats were lying vacant across IITs, NITs, IIITs and other GFTIs after the second round of allotment out of which 68 were available in 23 IITs, including the Indian School of Mines-Dhanbad (ISM-Dhanbad).

Out of the total 36,208 seats available across 97 institutes, including all IITs, NITs, IIITs as well as GFTIs, only 399 remain vacant and will be up for allotment in the remaining rounds. Allotment list for the fourth round was revealed on Thursday evening.

This is the first time that JoSAA will be conducting seven rounds of seat allotment in order to ensure zero vacancy in any of the 97 institutes. Last year, six seat allotment rounds were conducted and the year before that only two rounds were conducted. "We hopefully won't have to wait till the seventh round to fill up all seats this year," added the official.

IITs urge Centre to extend research grants to foreign scholars

http://www.firstpost.com/india/iits-urge-centre-to-extend-research-grants-to-foreign-scholars-3810223.html

New Delhi: The heads of a few IITs have urged the government to extend grants for research to foreign scholars taking up teaching or research jobs at the Indian Institutes of Technology.

Foreign nationals are not eligible for funding for research projects which comes mostly from the Department of Science and Technology (DST), an IIT director said.

"The government wants to extend grant facilities only to Indian-origin candidates (NRIs), and we believe that it is unfair to the others," the director told *PTI* on the condition of anonymity.

He said some IIT heads had recently approached the HRD ministry, asking it to take the issue up with the DST.

"Keeping foreign nationals out of the purview of the major chunk of funding available to faculty members at IIT also discourages them from taking up jobs here," the director added.

At present, IITs can hire foreign nationals on a five-year contract, which can be renewed. The norms, however, do not permit them to take up permanent positions or to be eligible for any government funding for research projects.

"We know relaxing the five-year criteria is not a feasible idea at present. However, granting them research funding can attract a lot of foreign scholars and our students can benefit from their expertise," the director said.

Once the ministry takes the issue up with the DST, it would be discussed at IIT directors' meeting and ultimately go to the council for approval, the director said.

IITs, IIMs go on Global Talent Hunt to Beat Teachers' Crunch
http://www.news18.com/news/india/iits-iims-go-on-global-talent-hunt-to-beat-teachers-crunch-1460631.html

The government in 2016 had in a statement to the Parliament said that over 50% of teaching positions are lying vacant at Indian Institutes of Technology (IIT). Cut to 2017, the situation seems to be no better and the centers of higher education in India are now scuttling here and there to bridge the gap between demand and supply.

New Delhi: In 2016, the government in a statement to the Parliament said that over 50% of teaching positions are lying vacant at Indian Institutes of Technology (IIT). Cut to 2017, the situation seems to be no better and the centers of higher education in India are now scuttling here and there to bridge the gap between demand and supply.

No Strong Army of Gurus

The firsts of the IITs sprung up in Bombay, Madras, Kanpur, Kharagpur and Delhi, followed by Guwahati in 1994. In 2001 an IIT in Roorkee was created and the next batch was established in 2008 and 2009, which included Bhubaneswar, Gandhinagar, Hyderabad, Jodhpur, Patna, Ropar, Indore and Mandi. Benaras Hindu University (BHU) IIT was formed in 2012. The latest batch of IITs was announced over the last two years: Palakkad, Tirupati, Bhilai, Goa, Jammu, Dharwad and the Indian School of Mines, Dhanbad.

A look at numbers in IITs across the country does not paint a rosy picture. One of the first to be established, IIT Bombay is short of 389 teachers against the 1017 sanctioned by the ministry of human resource development.

In the national capital, IIT Delhi is short of at least 40% of the staff that it requires for its student strength.

Speaking to News 18, IIT Delhi director Prof V Ramgopal Rao, acknowledged there was a big divide between the number of teachers wanted and the actual strength.

"We're short of 40% of what is needed. In next 5-7 years, for the 23 IITs the requirement of faculty will be of 5000. But in the next 20 years it will be more," he said.

Worldwide Hunt For Teachers

While IIM Lucknow is all set to start a faculty development center, IIT Delhi conducted roadshows in July to attract a pool of talent to the IITs from across the world.

IIT Bombay has approached potential faculty candidates across the world, including those in other institutes and universities in the country.

The institute is also leveraging the help of alumni through its faculty alumni network to identify potential candidates. Rolling advertisements are being put up on websites and in newspapers.

"We also take the help of distinguished professors from top universities and industry professionals as adjunct and visiting faculty to fill the gap temporarily," said source from IIT Bombay.

IIT Delhi, that is facing a shortage of 40% staff, sent a team to Harvard, MIT, Princeton, University of Houston, and Stanford University for attracting potential faculty candidate.

They ran an "Unlimited IIT Delhi" campaign in some of the best universities around the world to attract talent to the institute.

"We projected our achievement and also the facilities that come with being an IIT teacher," Rao said.

The recruitment rules are generous —one can take up consultancy policies and yet be in IIT. Rao has rooted for international collaborations to solve this problem of shortage.

"There should be more fellowships for students to go abroad and study. There should be a talent pool from around the world," he added. Though there is no permanent post for the overseas candidates, the faculty is working on contract for the same.

IIM Lucknow is also doing its best to fill the vacant posts. Professor Pushpendra Priyadarshi, associate professor (Human Resource Management), and also chairperson, corporate communication and media relations, said, "We are fully aware of the shortage, and are trying our level best. Quality of faculty is an issue. We are also in the process of setting up a Faculty Development Center at Noida to mitigate this problem. It will be launched on 5th September (Teachers Day)."

Beyond The Worrying Numbers

It has been observed by some in IITs that, in the past, 80% students would go to study in universities out of India and that number has declined in past 10 years due to opportunities in India.

"Older IITs like Kharagpur, Delhi, Bombay, Madras and Kanpur should have more students graduate armed with PhDs and serve as a faculty training institute," Rao added.

There are many IITs that are in a 'safe place'. While they have completed a round to recruit teachers for elective courses, IIT Palakkad is now looking at hunting faculty for specialized courses.

With the latest recruitment, their faculty strength will go to 40.

"Considering that we are only in the third year of establishment, we're doing pretty fine," said the director, prof. P.B. Sunil Kumar, adding that they may still need a few more teachers. "But for that we'll turn to our mentor institution, IIT Madras," he said.

Kumar was also quick to add that the institute did have problems in finding suitable faculty for particular courses. "There are some areas for which demand in the industry is high. We need highly motivated academicians for that. Not just IITs,

many other places are on the lookout for such people," he said.

Operating Systems, VLSI and Electrical Machines are some of the specialized areas where very few applications for teachers came up. The center had applicants from abroad, and many have been accepted.

The problem of shortage has not been faced by IIT Mandi and they attribute it to their academic culture, which is different from the rest.

Speaking to News18, director Timothy Gonsalves said, "We have an inter-disciplinary academic culture. The undergraduate programs are project oriented, which lay more emphasis on practical work than on lectures. We're of the staunch belief that lectures, in the coming times, will become less relevant. Because of our emphasis on practicality, we need very few lecturers."

Successful overseas recruitment & research collaboration tour by IIT Ropar

https://indiaeducationdiary.in/successful-overseas-recruitment-research-collaboration-tour-iit-ropar/

New Delhi: The Indian Institute of Technology, Ropar successfully completed its 2nd overseas tour for international recruitment and research collaborations. The team from the institute, headed by Prof. Sarit Kumar Das, Director, IIT Ropar, travelled to Australia and Singapore with an objective of building strong international research collaborations with universities and research institutes; build relationships with the Indian diaspora and aim to bring back some of the best talent overseas as faculty at the institute. The team accompanying Prof. S.K. Das, Director, IIT Ropar included Dr. Harpreet Singh, Associate-Dean (International Affairs), Prof. Manohar Lal Munjal (Senior Senator of IIT Ropar) Prof. Deepak Kashyap, (Head, Civil Engineering), Dr. Rohit Y. Sharma, Coordinator (International University Affairs).

The delegation visited Macquarie University, Sydney; Australian National University, Canberra; Commonwealth Scientific and Industrial Research Organisation (CSIRO), Canberra; University of Canberra; Swinburne University, Melbourne; University of New South Wales, Sydney; National University of Singapore and Nangyang Technological University, Singapore. The team discussed the prospects of building a strong research collaboration in areas such as Biomedical Engineering, Affordable healthcare, Telecommunication, Artificial Intelligence, Robotics, Nanoelectronics, Medical Image Processing, Big data and data analytics, Water and Environmental Science, Sports Technologies, Civil Engineering and Material Sciences. During the tour, the delegation also signed a Memorandum of Understanding (MoU) with the University of New South Wales.

As a part of the tour, the team also conducted offshore faculty recruitments to get overseas faculty & researchers to come and work with the institute. 14 candidates were screened in total during the trip for positions in Computer Science Engineering (CSE), Mechanical Engineering (ME), Electrical Engineering (EE), Biomedical Engineering (BME). 2 candidates were selected for faculty positions in the departments of Computer Science Engineering (CSE) & Electrical Engineering (EE). Out of the remaining candidates, 5 were recommended to the respective departments for evaluation, post which their recruitment will be finalized.

The team also met with the Indian diaspora in Australia & Singapore, where Prof. Das introduced IIT Ropar and presented his vision and mission about IIT Ropar and its possible contribution to the state in solving some of challenging problems of the State. It was decided during the meeting that the membership of Council of Global Associates (CGA) of IIT Ropar to be expanded with members from Australia.

Speaking about the successful trip, Prof. Sarit K Das, Director, IIT Ropar said, "The 3 main objectives of the overseas tour were to forge research collaborations and partnerships with universities and research institutes, attract meritorious faculty and to reach out to the Indian diaspora & IIT alumni abroad. On all these accounts, we had an extremely successful trip. We visited some of the top universities in Australia & Singapore and discussed collaborations with them on some of the key research areas like biomedical engineering, affordable healthcare, robotics and artificial intelligence. The response we got in return was very encouraging and we are happy to have signed an MoU with the University of New South Wales as part of the collaborations."

"We also got some brilliant candidates for faculty positions and have already recruited 2 faculty members and hope to get some more. We also met with the Indian diaspora in both the countries who promised to serve IIT Ropar in all possible ways and gave many valuable suggestions from them, which we will be implementing soon. The success of the visit will not only help in enhancing the quality of academics at IIT Ropar, but also will make the institution familiar internationally.", he added.

July 13

IIT Delhi to share solved papers on channel for aspiring students
http://www.dnaindia.com/india/report-iit-delhi-to-share-solved-papers-on-channel-for-aspiring-students-2500340

IIT Delhi is going to solve last year's question papers with experts and first year students and upload it on the channel for aspiring students.

Students preparing for admission to Indian Institutes of Technology (IITs) will be able to obtain virtual guidance on solving papers with the help of IIT Pal, HRD Ministry's channel meant for coaching aspirants. IIT Delhi is going to solve last year's question papers with experts and first year students and upload it on the channel for aspiring students.

IIT Pal, available on DTH channels, is meant for coaching students who do not have access to coaching classes or other study material to prepare for the entrance exams. The channel primarily has classroom lectures on various subjects, where they teach subject concepts. But, IIT Delhi is preparing a pool of question-solving videos as well as learning tricks to solve questions, considered crucial to cracking the exam.

IIT Pal was formally launched by President Pranab Mukherjee on Sunday in the presence of the heads of all IITs, IIMs, deemed and private universities at an event in Vigyan Bhawan. At the event, all institutions were asked to take more initiative to upgrade their digital teaching mechanism.

They have been given a 17-point agenda that they need to work upon by the end of 2017.

"We already have recordings of classroom lectures on IIT Pal, but in order to improvise our teaching, we are conducting an exercise of uploading question answer sessions on the system, too. We have two approaches for this, one is to solve them using IIT students, the other is with the help of teachers, who set the question papers," said Professor V Ramagopal Rao, Director, IIT Delhi.

"When students solve questions, they employ various tricks to solve them. Teachers who set the question papers have a different approach to solving them. This way, we will be able to provide both approaches to the student," he said.

The question-answer session will be available on IIT Pal of IIT Delhi in the next few weeks.

IIT BOMBAY WILL BE CONDUCTING JAM 2018
HTTPS://NEWS.AGLASEM.COM/IIT-BOMBAY-JAM-2018/

IIT Bombay will conduct JAM 2018 exam. There will not be any significant changes in the exam pattern.

The most popular question, **who will conduct JAM 2018**? has been answered. This year, the Joint Admission Test for M.Sc. will be conducted by the Indian Institute of Technology **(IIT) Bombay**. The IIT will announce the details and dates of the examination in the month of August and by September, the online registration will begin.

The announcement of the conducting body was done two years back in the year 2015 when the GATE and JAM examination Tender was finalized. It clearly stated the names of the bodies which will be conducting these two examinations from 2016 to 2018. The image of the official tender is as below.

TENDER DOCUMENT

FOR

THE CONDUCT OF COMPUTER BASED ONLINE
GATE/JAM EXAMINATIONS FOR THREE YEARS
(2016-2018)

YEAR	ORGANIZING INSTITUTES	
2016	INDIAN INSTITUTE OF SCIENCE BENGALURU – 560012 and INDIAN INSTITUTE OF TECHNOLOGY MADRAS CHENNAI – 600036	
2017	INDIAN INSTITUTE OF TECHNOLOGY ROORKEE ROORKEE – 247667 and INDIAN INSTITUTE OF TECHNOLOGY DELHI DELHI – 110016	
2018	INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI GUWAHATI – 781039 and INDIAN INSTITUTE OF TECHNOLOGY BOMBAY MUMBAI – 400076	

This is not the first time when IIT-B will conducting the examination. Even in the year 2012, the exam was held by the IIT Bombay only. The Joint Admission Test for M.Sc. (JAM) is conducted for admission of candidates in Masters of Science courses. Usually, the exam is held in the month of February. It is conducted by IITs, which take turns to carry out the process. The courses offered under it include. M.Sc., Ph.D., M.Sc-Ph.D Dual Degree, M.Sc.-M.Tech Dual Degree, etc course.

In all, 14 IITs participate in JAM and these are IIT Delhi, Bombay, Indore, Bhubaneswar, Kanpur, Kharagpur, Gandhinagar, Ropar, Hyderabad, Patna, Jodhpur, Roorkee, Guwahati, and Madras. Apart from the IITs, IISc Bangalore, IISER Pune, IISER Bhopal, and NITs under CCMN also use the score of JAM for admission.

The examination is held in online or computer based mode. In all, 60 multiple choice questions are given in the exam and candidates get 2 hours and 30 minutes to attempt it. The total marks in the examination are 100 and the exam is held for Physics, Chemistry, Mathematics, Mathematical Statistics, Geology, Biotechnology, and Biological Sciences subjects.

Last year, the cutoff of the examination for BL, BT, CY, GG, MA, MS, and PH subjects were 33.99, 26.67, 23.35, 33.29, 19.51, 19.04, and 14.79. However, for the reserved category, it went as low as 17, 13.34, 11.68, 16.64, 9.76, 9.52, and 7.39.

The admission through JAM is granted in the counselling , which is also organized by the conducting body. It is held in multiple rounds and the candidates need to register first for it. The registration window begins in the month of April and the allotments are announced in May. Before the seat allocation, the candidates are required to submit the choices for the course and colleges. Then on the basis of JAM Score and submitted preferences, the candidates are allocated seat.

Last year, more than 1600 seats were offered by IIT and IISc Banglore, to JAM qualifiers. Apart from this, CCMN counselling is held separately for admission in National Institute Technology (NITs). 16 NITs, an SLIET and IIEST participate in CCMN counselling to grant admission to JAM qualifiers. CCMN counselling also begins with registration, in the month of May.

IIT Bombay Cites Govt Rules to Justify Fee Hike; Refuses to Roll Back
http://newsclick.in/iit-bombay-cites-govt-rules-justify-fee-hike-refuses-roll-back

The components of the non-tuition fees are being considered as "user charges" sparking furore among students.

After two months of student protests at the Indian Institute of Technology-Bombay (IIT-B) against massive fee hike, students are still awaiting a "reduction" in the hike as promised by the director, even as a rollback was ruled out by the institute citing government "mandate". Meanwhile, the deadline for fee payment passed on July 11.

The hike—ranging from 30% to 300% per semester in different components of the non-tuition fees for all undergraduate, postgraduate and research students—was announced in May.

On July 10, student representatives met IIT-B Director Devang Khakhar and other officials as part of a committee formed to "finalise a proposal for reduction of fee hike" .

During the three-hour meeting, a white paper released by the institute on the hike in non-tuition fees was discussed. The institute had also emailed the white paper to students on July 7

In the paper, the administration refers to the General Financial Rules 2017 laid down by the Government of India as a mandate to increase the non-tuition fees (for expenses on hostel, gymkhana, mess, medical facilities, etc.).

The components of the non-tuition fees are being considered as "user charges"— as the director had earlier called them , sparking furore among students.

The GFR has clauses — also quoted by the institute — which say that all "autonomous" organisations receiving government funding "should be encouraged to maximise generation of internal resources and eventually attain self-sufficiency", and that "user charges [must] recover the current cost of providing services with reasonable return on capital investment."

The white paper also says that the "MHRD draft MoU with IITs states that apart from MHRD allocation, the Institutes will raise funds from (i) User Charges in the form of Fees, (ii) User charges other than fees."

During the July 10 meeting, it was decided that student representatives would submit a concrete proposal about the expected reduction in the hike. After this, another meeting of the committee would take place to finalise the matter and the decision will then be referred to the Board of Governors, which meets in August.

The reduced fees would be implemented retrospectively, and would be refunded or adjusted in the next semester fees, as the deadline for this semester has already passed.

Students are also working on a proposal about how, in the future, students can be involved in reviewing plans for changes in the fee structure.

The IIT-B director had agreed to negotiations—to decide which components of the fees could be reduced—after weeks of organising, protesting and submitting representations to the administration by the student collective Students Against Fee Hike, IIT-B .

On June 22, after a 10-hour protest march and sit-in around the main administrative building on campus, the director had addressed students, promising to release a white paper explaining the hike and to hold a meeting with student representatives, both elected and from the collective.

But as the administration delayed in responding and the fee payment deadline loomed large, students went on a relay hunger strike on July 3.

However, the hunger strike was suspended on July 4, after an email from the director, wherein he announced the dates for the white paper as well as the meeting.

The Indian Institutes of Technology—the premier institutions of higher technical education and research in the country—are autonomous public-sector institutes, funded by the government.

But over the past few years, there has been an increasing push by the government to turn them into "self-financing" institutions. This new hike at IIT-B, announced in May, comes a year after the undergraduate tuition fees was more than doubled—from Rs 90,000 per annum to Rs 2 lakh per annum—across the 23 IITs in the country.

IIT-Kanpur adopts 5 villages to promote tech, solar energy use, solve water crisis

http://www.hindustantimes.com/education/iit-kanpur-adopts-5-villages-to-promote-tech-solar-energy-use-solve-water-crisis/story-eytCkVqgahdEVQ438FK3KO.html

Unnat Bharat Abhiyan has been introduced by the ministry of human resource development (MHRD) to uplift rural India

Senior professors and IIT-K students will assist villagers in solving the potable water crisis and teach them the recycling process for treating waste water and using solar energy

The Indian Institute of Technology, Kanpur (IIT-K) has adopted five villages under Unnat Bharat Abhiyan.

The scheme has been introduced by the ministry of human resource development (MHRD) to uplift rural India.

"As part of the initiative, we will ensure the overall development of Hridayapur, Baikanthpur, Ishwariganj, Pratappur Hari and Saxupurva villages, situated on the outskirts," said IIT-K professor Sandeep Sangal.

Senior professors and IIT-K students will assist villagers in solving the potable water crisis and teach them the recycling process for treating waste water.

Besides, the farmers would be educated about the use of solar energy, cleanliness and use of latest technologies for farming.

Chief development officer (CDO) Arun Kumar said the IIT-K has agreed to provide all assistance for the development of these villages.

Dr Reeta Singh of IIT-K said most of the problems of these villages would be solved by introducing new technologies.

The IIT-K professors led by the district magistrate Surendra Singh would hold Chaupal in Baikanthpur and Saxupurva villages on Thursday to understand the problems of villagers and to frame the strategy for their development.

"Other educational institutes would also be associated with the Unnat Bharat Abhiyan to ensure the development of the villages they decide to adopt," said the DM.

July 12

IIT scientists develop catalyst to make biofuel using Rajasthani sand

http://www.hindustantimes.com/jaipur/iit-scientists-develop-catalyst-to-make-biofuel-using-rajasthani-sand/story-rrmp1gfkoq7OuxI00DJ4RK.html

World over scientists are working on converting algae oil into biofuels using different catalysts.

The scientists have shown that oil extracted from algae can be converted into diesel by using sand from Rajasthan.

Scientists from the Indian Institute of Technology, Jodhpur, have gone a step further in the quest for low-cost bio-fuel. The scientists have shown that oil extracted from algae can be converted into diesel by using sand from Rajasthan.

World over scientists are working on converting algae oil into biofuels (a fuel derived immediately from living matter) using different catalysts.

"We have developed a catalyst using sand, nickel and cobalt to convert algae oil into diesel," said Dr Rakesh Kumar Sharma, head of chemistry department at the IIT, who pioneered the study. Dr Vineet K Soni, a post-doctoral fellow, assisted Dr Sharma on the project.

Algae, which grows abundantly in waste water and waste land at a much faster rate than plants, has a huge potential as a renewable energy resource as it absorbs carbon dioxide. This will help reduce greenhouse gases if the oil can replace petrol and diesel. Biofuel is being considered as the future fuel worldwide.

Sharma said some European countries are using rhodium and other rare and expensive metals to convert algae oil into biofuel. The cost of catalyst adds to the production cost of bio-fuel.

"What we have developed is low cost because sand is abundant and nickel and cobalt are cheap metals. We have shown at the laboratory level that the cost of bio-diesel produced using this technology will be half the current price of the fuel," the scientist said.

The two scientists, who worked on the innovation, received rave reviews at the 'Bioenergy Urja Utsav' in Pune organized by the Union Ministry of Petroleum last week. Dr Sharma said he has published the innovation in American Chemical Society's Sustainable Chemistry and Engineering, a top international journal of chemistry, in May this year

Will this innovation work only with sand from Rajasthan? Dr Sharma said sand has two types of structure at the nano level — pillar and layered. "Rajasthani sand can be tuned for both types of structures. For the current study, pillared clay has been used. We filled nano particles of nickel and cobalt between those pillars to make the catalyst. So this will work with any sand which has pillar structure," he explained.

Of course, this is nano-technology and such structures are not visible to the naked eye.

The project was funded by the department of biotechnology at IIT.

"We have shown the way forward to low-cost biofuel. Some European companies have shown interest in the technology," Dr Sharma said.

Third round of document verification held at Uttar Pradesh IITs
http://timesofindia.indiatimes.com/city/kanpur/third-round-of-document-verification-held-at-uttar-pradesh-iits/articleshow/59555857.cms

KANPUR: The third round of document verification work for admission to IITs and other institutes related to JEE Advanced, commenced at all IITs on Tuesday, including IIT-Kanpur. A total of three students went to the institute to freeze the seats alloted to them.

Earlier, these students had 'floated' the allotted IIT and the particular B.Tech branch. But not satisfied with the choice and on not getting better B.Tech branch as expected by them in the third round, they decided to opt for the given choice.

Talking to TOI, Prof Shalabh, vice-chairman of IIT-JEE Kanpur zone, informed the three candidates got their documents verified and chose to freeze the seats which had been allotted to them earlier. The third round would continue till 1 pm on July 13, he added.

Out of a total 827 seats, only five seats of B.Tech course are left to be filled in IIT-K. It is expected that by the end of the third round no seat will remain vacant here.

Joint Seat Allocation Authority (JOSAA) had to revise the counselling and document verification schedule because the Supreme Court had first stayed the counselling in the IITs and later vacated the stay on Monday. Between Friday (when the stay was ordered) and Sunday, the schedule, as decided by JOSAA, could not be followed, and therefore, the new schedule was released by JOSAA on Tuesday evening.

According to the new schedule, the candidates would be able to see the number of seats filled and its availability on July 13 after 5 pm, and this will mark the start of the fourth round of counselling.

The result of seat allocation in the fourth round will be available to the candidates after 8 pm on July 13. On July 14 and 15, candidates will have the option to either accept or withdraw the seats.

The detailed revised schedule of document verification, acceptance/withdrawal of seats has been provided by JOSAA on its website which can students can check.

Cell to innovate, incubate young entrepreneurs

http://timesofindia.indiatimes.com/city/lucknow/cell-to-incubate-young-entrepreneurs/articleshow/59552973.cms

LUCKNOW: A provision of Rs 5-crore for setting up incubators in Lucknow is a first in UP budget, say experts. It's probably for the first time that that the government has focussed on entrepreneurial development in the state. UP never had an incubation centre or cell beyond institutions like IIT, Kanpur or IIM, Lucknow.

"It will turn students into employers and not employment-seekers," says Prof Manish Gaur, founder director, Institute of Advanced Studies, APJ Abdul Kalam Technical University, and a member of the innovation and incubation cell. In UP, since students do not have the money for start-ups, they mostly hunt for jobs. That's where the role of incubation cell becomes important.

These cells are meant to support under-graduate and post-graduate students willing to set up industrial units or a start-ups. They provide a conducive environment to students as far as designing the product, finding the market and addressing legal issues is concerned.

Once the start-up or the industrial unit becomes matured and strong enough to be a stand-alone set up, the entrepreneur can migrate. The incubation cells can be set up in universities or private institutes which are matured enough to provide the support an incubation cell.

Industrial Investment and Employment Promotion Policy 2017 emphasises on promoting start-ups by reducing regulatory burden on them; creating venture capital fund; setting up incubation centres to connect start-ups with resources for running their businesses and connect them to network of experts and opening up incubation centres in government and private engineering colleges, management institutes and other technical organizations.

"But government should guard against start-ups migrating to other states once matured," the professor adds.

July 11

IIT-B asks students to propose fee structure

http://indianexpress.com/article/cities/mumbai/iit-b-asks-students-to-propose-fee-structure-4745015/

The development comes after negotiations between protesting students and the institute management on Monday. The institute has now put the ball in students' court after students said the institute had hiked fees without consulting them.

FOLLOWING PROTESTS over fee hike at the Indian Institute of Technology, Bombay, (IIT-B), the institute management on Monday asked students to propose a revised fee structure. The development comes after negotiations between protesting

students and the institute management on Monday. The institute has now put the ball in students' court after students said the institute had hiked fees without consulting them.

"A meeting for negotiations was held on Monday. We have asked the students to make a proposal to us (the management). We will take a decision after looking at what the students have proposed," said director Devang Khakhar. A student, who did not wish to be named, said the student community welcomed the institute's decision to involve students in the decision making.

"We will work out a detailed fee structure taking all socio-economic parameters into consideration and submit it within a couple of days," the student said. In May, the IIT-B administration introduced a fee hike for the new academic session. The hostel seat rent and establishment charges were Rs 500 and Rs 2,000 respectively. The amounts have been raised to Rs 2,000 and Rs 3,000 respectively.

The gymkhana fee that was Rs 750 has been raised to Rs 2,000. Examination, registration and medical fees were Rs 500, Rs 500 and Rs 1,000 respectively. Students claimed that after the hike, all those using hostel facilities will have to pay anywhere between Rs 8,670 and Rs 11,170 higher than the usual at the end of the autumn semester, including the mess overdue for hostelites. Following the hike, a students' collective, 'Students against Fee Hike', launched a protest rally and dialogues on June 22, which remained inconclusive.

On July 3, the students launched an indefinite relay hunger strike after which the management formed a committee to address their grievances. While the director hinted at a fee restructuring, he said a final decision would be taken by the board of governors, who will meet in August.

Home Ministry serves FCRA notices to 5,922 organizations including IIT, IIM, IGNOU and Oxfam

https://scroll.in/latest/843357/home-ministry-serves-fcra-notices-to-5922-organisations-including-iit-iim-ignou-and-oxfam

The MHA said these bodies have not filed their annual returns for five consecutive years.

Top educational institutes such as the Indian Institute of Technology, Indian Institute of Management, and Indira Gandhi National Open University are among 5,922 associations that received show cause notices from the Ministry of Home Affairs for failing to file their annual returns for five consecutive years, PTI reported.

These associations or non-government organisations are at the risk of losing their licence to receive foreign donations under the Foreign Contribution Regulation Act.

In May this year, more than 18,000 NGOs were given a one-time opportunity by the MHA to provide details of their annual returns by June 14, without having to pay any penalty. The MHA said that despite sending regular reminders to these organisations on emails and SMS alerts, several have failed to file their details.

"However, in spite of sufficient and adequate notice, it has been observed that 5,922 associations have not uploaded their annual returns for three or more than three years within the stipulated time given in the notice," the MHA circular read.

The associations were asked to submit their annual returns for five years – between 2010 to 2011 fiscal year and 2014 to 2015 fiscal year. The notice was served to them on July 8 and they have been given time till July 23 to file their replies.

The list of organisations also include religious organisations such as Sri Ramakrishna Sevashram, Ramakrishna Mission Ashram, Young Mens Christian Association and Sri Sathya Sai Medical Trust, among others. Delhi Technological University, Punjabi University in Patiala, Indira Gandhi National Centre for the Arts are among those who have been issued the show cause notice. International rights group Oxfam also appears on the list.

In December 2016, 20,000 NGOs were barred from receiving foreign funding for allegedly violating provisions of the Act. Opposition leaders had written to Prime Minister Narendra Modi to reconsider the decision. They had urged the Centre to refrain from indulging in vindictive politics by "selectively" cancelling the foreign funding licences of NGOs that are critical of government policies. A number of civil society organisations and activists, too, had accused the government of using the Act to suppress dissenting voices.

July 10

SC gives go-ahead to IIT-JEE counselling, admissions allowed for IIT, NIT and other engineering colleges

http://www.hindustantimes.com/india-news/sc-gives-go-ahead-to-iit-jee-counselling-admissions-allowed-for-iit-nit-and-other-engineering-colleges/story-c5dDcdjnnNOJsgX8ILp4BM.html

The Supreme Court on Friday had put admissions to IITs and NITs on hold over awarding of bonus marks in the JEE.

The Supreme Court on Monday lifted the stay on admissions to Indian Institute of Technology (IITs), NITs and other colleges, bringing relief to thousands of students who wrote the joint entrance examination.

The court on Friday had put on hold admissions to IITs, National Institutes of Technology and other colleges over awarding of bonus marks in JEE, an all-India examination taken by aspiring engineers.

Dismissing petitions challenging the award of grace marks, the court said the printing errors should not be repeated.

Bonus marks were awarded to all the students who wrote to the exam for admission to engineering colleges after printing errors were found in the question paper.

In a petition, two students had sought direction to IIT-Madras to revise the list of successful students without giving them bonus marks.

IIT-Madras conducted the entrance exam this year.

The petitioners, who cleared the exam, had said their ranking in the merit list was hit by bonus marks given to all and they would not get colleges of their choice.

It's stressful: As admissions to IITs and NITs are stayed, students face new hardships

http://blogs.timesofindia.indiatimes.com/toi-editorials/its-stressful-as-admissions-to-iits-and-nits-are-stayed-students-face-new-hardships/

The admission process of IITs, NITs, IIITs and government-funded engineering colleges has been stalled midway – even as IITs say more than 33,000 candidates have already taken admission. A pattern has emerged of goalposts for exams and admissions being shifted repeatedly and especially at the last minute.

This is very unjust in how it inflicts unwarranted pressure and hardship on students – while the authorities concerned just cannot seem to get their act right.

Two petitioners have won a stay from the Supreme Court over the awarding of 18 bonus marks to all candidates who appeared in the JEE Advanced, after two wrong questions were discovered in one out of 10 question sets in Hindi. They argued the bonus marks were unfair to those who attempted the questions correctly in other question sets. The petitioners alleged that the bonus marks altered the merit list and brought their ranks several notches down. This is certainly possible. A higher rank can ensure admission to top-grade institutes and preferred engineering streams. But Attorney General KK Venugopal argued that it was difficult to find the candidates who took the test in Hindi, which led to awarding bonus marks to all candidates. Ultimately there should be a uniform, predictable policy for dealing with wrong questions, so that the matter doesn't keep returning to the courts.

It should be remembered that medical candidates had little clarity about the NEET entrance test for four years and CBSE is facing heat over poor evaluation practices in Class 12 examinations. Often the bunglings emerge closer to exam or admission time. This unconscionably worsens stress for students, who spend years preparing for exams amid stiff competition and limited seats.

IIT-B meeting today to discuss possible rollback of fee hike

http://www.hindustantimes.com/education/iit-b-meeting-today-to-discuss-possible-rollback-of-fee-hike/story-4TD52nWbPRduSDLcePJCVP.html

After introducing a 300% hike in hostel rent, 167% hike in gymkhana fee and 100% hike in examination, registration and medical fees, IIT-B is meeting today to review the decision

Mumbai: The Indian Institute of Technology Bombay (IIT-B) administration has scheduled a meeting today to discuss a possible rollback in the recently introduced fee hike. The decision follows student protests for over a month, ending in a relay hunger strike which was called off after the director Devang Khakhar gave the assurance of a review meeting.

"Since we finally got a response from the administration, we decided to suspend our hunger strike till today. After the meeting if we do not get a positive response, we will start the hunger strike again," said a student, on condition of anonymity.

According to a letter released to the protesting students on July 4, Khakhr promised that a white paper of the said hike would be shared with students on July 7 to explain why it was necessary and on July 10 (today) a review meeting will be held. This meeting will be attended by deputy director (finance and external affairs), dean (student affairs), registrar, three representatives of the group Students against Fee Hike, general secretary (postgraduate students) and a representative from Research Scholars Forum. This meeting began at the institute at 10am today.

In May this year, the management of IIT-B introduced a hike for the new academic session, including a 300% hike in hostel rent, 167% hike in gymkhana fee, 100% hike in examination, registration and medical fees and around 50% hike in other charges. The hostel rent of students in IIT-B has gone up by 300%, from Rs 500 per semester to Rs 2,000 from this year. Even the mess advance has gone up from Rs 15,000 to Rs 20,000. Even as IIT-B authorities attributed this hike to inflation, the students were upset because they were not consulted before implementation of the hike.

"This meeting is what most of us have pinned our hopes on as we are pressed for time now. Tomorrow is the last day to pay the hiked fees and avoid any late fees fine," a student said. Khakhar in his previous mail also made it clear that in case

the hike was rolled back, the decision would only be implemented after the proposal went to the IIT-B board in August. "So all of us will have to pay the hiked fee and hope for a refund soon," said the student.

IISc researchers propose a more effective treatment for tuberculosis

http://www.biospectrumindia.com/news/58/9222/iisc-researchers-propose-a-more-effective-treatment-for-tuberculosis.html

The team used integrated experimental technology and computer tools to understand the mechanism by which resistance against Augmentin can set in.

A team of researchers at the Indian Institute of Science (IISc) has found whether and how drug resistance can develop against a candidate drug called Augmentin even before the drug is approved for treating patients with drug-resistant tuberculosis (TB).

The researchers have found ways of overcoming this potential resistance mechanism, thereby making Augmentin a potentially powerful drug to treat both multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB).

The team used integrated experimental technology and computer tools to understand the mechanism by which resistance against Augmentin can set in.

There are certain antibiotics such as clofazimine that work by increasing the levels of reactive oxygen species (ROS) inside bacteria. The researchers are currently testing if using such antibiotics along with Augmentin can efficiently kill drug-resistant TB bacteria.

Augmentin and clofazimine antibiotics can together elevate the production of ROS. The excessive ROS inside the bacteria can then kill all forms of drug-resistant TB bacteria.

Augmentin is currently undergoing clinical trials in patients with drug-resistant TB. It is already being used for common bacterial infections.

IISC researchers make electronic nose to 'sniff out' toxic pollutants from air

https://factordaily.com/iisc-researchers-toxic-gas-sensor-air-pollution/

Story Highlights
- *Researchers from the Indian Institute of Science, Bengaluru, have designed a novel gas sensor for monitoring air pollution by quantifying various gaseous pollutants*
- *The sensor array contains four micro-heaters and four sensor elements, each of them customised to sense a specific gas: carbon monoxide, carbon dioxide, nitrogen dioxide & sulphur dioxide*
- *The micro-sensor array will find a range of applications in various fields that include sensing and diagnosis. Future possibilities include food quality monitoring and breath analysis for disease diagnosis*

As kids, most of us were introduced to various air pollutants and their harmful effects in our schoolbooks. Over the past few decades, the number of these pollutants and the industries that spew them have increased manifold, to the extent that people walking around in anti-pollution masks has become a common sight in most Indian cities these days. Some of these toxic pollutants are known to cause asthma, lung cancer and even death.

Now, researchers from the Indian Institute of Science (IISc), Bengaluru, have designed a novel gas sensor for monitoring air pollution by quantifying various gaseous pollutants. The gas sensor, the researchers say, can accurately measure carbon monoxide (CO), carbon dioxide (CO2), nitrogen dioxide (NO2) and sulphur dioxide (SO2). It is also cost-effective.

They recently published their results in the *Journal of Microelectromechanical Systems* from IEEE Xplore. The *Times of India* reported recently on the CO detection capabilities of the sensor.

The researchers have assembled an array of gas sensors — a microelectromechanical system — on a single chip. Microelectromechanical systems (MEMS) are miniaturised mechanical and electromechanical devices ranging from well below one micron (a billion times smaller than 1 metre) to several millimeters (1,000 times smaller than 1 metre) in dimension. "Since they consume just a few milliwatts of power for operation, they fulfil the current demands for integration in battery-operated (portable) devices. This kind of small footprint is not possible to achieve using macro components," says professor Navankanta Bhat from the Centre of Nano Science and Engineering (CeNSE), IISc, who led this research effort at the institute.

This sensor array contains four micro-heaters and four sensor elements, each of them customised to sense a specific gas: zinc oxide (ZnO) for CO, barium titanate-cupric oxide (BaTiO3-CuO) doped with 1% silver (Ag) for CO2, tungsten trioxide (WO3) for NO2 and vanadium pentoxide (V2O5) for SO2.

This sensor array contains four micro-heaters and four sensor elements, each of them customised to sense a specific gas: zinc oxide (ZnO) for CO, barium titanate-cupric oxide (BaTiO3-CuO) doped with 1% silver (Ag) for CO2, tungsten trioxide (WO3) for NO2 and vanadium pentoxide (V2O5) for SO2

Gas sensors usually suffer from insufficient sensitivity to gases, lack of reproducibility, temporal drift, and instability. However, the newly developed sensor array acts as an "electronic nose" due to its enhanced selectivity and sensitivity. This is because of its different sensing pattern for each gas in a mixture. The data collected from the different array elements can be utilised to distinguish constituent gases of the mixture, thus making it capable of onsite monitoring of air pollution.

The researchers have designed the new sensor such that it consumes very low power (~10 mW for the micro-heaters to achieve 300°C), is very compact, and allows for the temperature of each sensing unit to be controlled separately, thus being highly selective. Such a feature was made possible by using a stress-engineered silicon dioxide (SiO2) diaphragm, made using plasma-enhanced chemical vapour deposition.

A diaphragm is a platform that hosts all the array elements. It is a chemically inert material that makes it possible to join together with a wide variety of media, thus helping reduce both the size and the cost of the sensors.

One of the investigations that was carried out for optimising the system was the synthesis process of the diaphragm (SiO2). Taking into account the efficiency of various synthesis routes, the plasma-enhanced chemical vapour deposition demonstrated higher fabrication yield compared to thermally grown SiO2. The investigators carried out simulations of both the diaphragms under thermal, bending and tensile stresses, and the yield was found to be higher in the former route.

The researchers also ensured that the new array was not "cross-sensing" interfering gases, a drawback of most metal oxide-based sensors. By recording the response of interfering gases, they chose the optimal sensing material, thus eliminating cross-sensing. "We are already evaluating the interference from ambient temperature and humidity and appropriate algorithms can be developed to achieve robust gas-sensing performance against all interfering agents," says Dr Chandra Shekhar Prajapati, a postdoctoral fellow who worked on the project, talking about future plans to improve the sensor.

"This sensor array technology was developed as a prototype device for air quality monitoring, and is currently being used for selective detection of NO2 at Satish Dhawan Space Centre SHAR, Isro.

The future possibilities include food quality monitoring and breath analysis for disease diagnosis"
— Professor Navankanta Bhat, CeNSE, IISc

The newly developed micro-sensor array will find a range of applications in various fields that include sensing and diagnosis. "This sensor array technology was developed as a prototype device for air quality monitoring, and is currently being used for selective detection of NO2 at Satish Dhawan Space Centre SHAR, Isro. The future possibilities include food quality monitoring and breath analysis for disease diagnosis. The miniature size of the micro-sensors can also enable the integration of such devices in cellphones in the near future," says Bhat.

There is a global need for reliable and low-cost sensors. With air pollutants rising over time, sensors help address issues related to public health by augmenting data regarding their quantity, source and distribution, as well as develop methods to subside them. In the long run, they could possibly aid in environmental public policy.

Swayam Prabha DTH channels launched: Here is all you want to know

http://www.financialexpress.com/jobs/swayam-prabha-dth-channels-launched-here-is-all-you-want-to-know/756779/

Swayam Prabha DTH channels will telecast educational programmes 24x7 for the benefit of students across the country.

Swayam Prabha channels launch: Minister of Human Resource Development Prakash Javadekar presents a memento to President Pranab Mukherjee during the National Convention on Digital Initiatives for Higher Education and the launch of SWAYAM, SWAYAM Prabha, and National Academic Depository in New Delhi on Sunday.

President Pranab Mukherjee on Sunday launched 32 Swayam Prabha DTH channels which will telecast educational programmes 24×7 for the benefit of students across the country, even in the remotest parts of India where digital penetration is still not effective. While launching the service, President Mukherjee said, "The use of satellite technology to reach the unreached is time-tested. I am happy to note that the scale and reach of this technology has been raised manifold through the 32 SWAYAM Prabha DTH channels."

He added, "These channels will help students in the rural areas and in the remote areas where IT infrastructure have not penetrated so well. It is essential that all of you first start using these channels in your own institutions extensively, and later urge others to use it in their own homes."

According to the official website, the Swayam Prabha is conceived as a group of 32 DTH channels to telecast high-quality educational programmes 24X7 using the GSAT-15 satellite. Every day, the channels would telecast new content for at least four hours which would be repeated 5 more times in a day. Thus allowing students to choose the time of their convenience.

The channels would be uplinked from BISAG, Gandhinagar. The web portal of the channels is managed by The INFLIBNET Centre.

Content providers: The content for Swayam Prabha Channels are provided by NPTEL, IITs, UGC, CEC, IGNOU, NCERT and NIOS.

Courses covered by Swayam Prabha channels:

1. Higher Education: The channels will provide curriculum-based course contents at post-graduate and under-graduate level covering disciplines such as Arts, Science, Commerce, Performing Arts, Social Sciences and Humanities, Engineering, Technology, Law, Medicine, Agriculture.

All the courses would also be certification-ready in their detailed offering through SWAYAM, the platform being developed for offering Massive Open Online Courses (MOOC).

2. School education (Class 9-12): The channels would telecast modules for teacher's training as well as teaching and learning aids for children to help them understand the subjects better and also help them in preparing for competitive examinations for admissions to professional degree programmes.

3. Curriculum-based courses to address the needs of life-long learners among Indian citizens living in India and abroad.

4. Competitive exams: The channels would also assist students of Class 11 and 12 prepare for competitive exams.

Full List of Swayam Prabha DTH channels and the courses they will telecast

Channels 01-10 are managed by CEC/UGC, New Delhi.

Channel 01 – Humanities- 1, Language and Literature by EMRC, EFLU, Hyderabad (The English and Foreign Languages University)

Channel 02 – Humanities- 2, Arts, History, Philosophy and related Subjects

Channel 03 – Social Science -1, Sociology, Political Science and related subjects

Channel 04-Social Science – 2, Education, Psychology, Home Science and related subjects

Channel 05-Social Science – 3, Management, Library Science, Information Science and related subjects by EMRC/MCRC, Jamia Millia Islamia, New Delhi

Channel 06- Social Science – 4, Law, Legal Studies, Human Rights and related subjects by EMRC, Punjabi University, Patiala

Channel 07-Economics, Commerce and Finance by EMRC, Gujarat University, Ahmedabad

Channel 08- Physical Sciences, Mathematics, Physics, Chemistry and related Subjects by EMRC, University of Calicut

Channel 09- Life Sciences, Botany, Zoology, Bio-Science and related subjects by EMRC, Kashmir University, Srinagar

Channel 10- Applied Sciences, Allied Physical and Chemical sciences and related subjects by EMRC, Anna University, Chennai

Channels 11 to 18 are managed by NPTEL.

Channel 11- Chemical Engineering, Chemistry and related Subjects

Channel 12 -Civil Engineering and related subjects

Channel 13 -Computer Science and Engineering

Channel 14 -Electrical engineering, Electronics and Communication Engineering and related subjects

Channel 15 – Engineering Sciences and general subjects for engineering

Channel 16- Humanities, Social Sciences and Management

Channel 17 -Mechanical Engineering and related subjects

Channel 18 – Mathematics, Physics, Metallurgy and related subjects

Channels 19 -22 are managed for high School students by IIT Delhi and is called IIT PAL.

Channel 19: Biology

Channel 20: Chemistry

Channel 21: Mathematics

Channel 22: Physics

Channels 23 to 26 are managed by IGNOU New Delhi.

Channel 23- Liberal Arts and Humanities

Channel 24-Agriculture, Vocational and Allied Sciences

Channel 25- Culture

Channel 26-State Open Universities' programs

Channels 27 and 28 are managed by the NIOS, New Delhi.

Channel 27 – Secondary School Education

Channel 28-Higher Secondary School Education

Channels 29 and 30 are managed QEEE, IIT Madras.

Channel 29- QEEE 1 (Live classes in Engineering and Technology)

Channel 30: Mathematics

Channel 31 is managed by NCERT

Channel 31- School and Teacher Education

Channel 32 is managed by IGNOU and NIOS jointly

Channel 32- Teacher Education

College teachers, staff salaries to shoot up by 22-28 per cent

http://indianexpress.com/article/education/iit-ugc-college-teachers-staff-salaries-7th-pay-commission-to-shoot-up-by-22-28-per-cent-4743803/

The entry pay of assistant professors will rise by Rs 10,396 with a grade pay of Rs 6,000 and that of associate professors will rise by Rs 23,662. About 8 lakh teachers and staff working at central or state colleges, universities and other educational institutions like IITs and NITs will witness the hike

Teachers may also be evaluated on the basis of a grading system instead of the current point system.

The University Grants Commission (UGC)'s recommendations will come into focus this month with the Cabinet considering a pay hike of 22 per cent to 28 per cent for about 8 lakh teachers and staff working at central or state colleges, universities and other educational institutions like IITs and NITs.

The entry pay of assistant professors will rise by Rs 10,396 with a grade pay of Rs 6,000 and that of associate professors will rise by Rs 23,662, according to a report by Hindustan Times. The Union Human Resource Development Ministry officials said that the decision will "most likely sail through".

The pay structure for centrally-funded institutions will be separate and another pay panel has suggested an increase in salary structure. Teachers may also be evaluated on the basis of a grading system instead of the current point system.

Changes in salary as follows:

1. Assistant professor (1)

Central Pay Commission (CPC)- Rs 47,304

Seventh CPC entry pay- Rs 57,700

Increase- 22 per cent

Grade pay- Rs 6,000

1. Assistant professor (2)

CPC- Rs 56,480
Seventh CPC entry pay- Rs 68,900
Increase- 22 per cent
Grade pay- Rs 7,000

3. Associate professor

CPC- Rs 1,07,748
Seventh CPC entry pay- Rs 1,31,400
Increase- 22 per cent
Grade pay- Rs 9,000

4. Professor

CPC- Rs 1,16,070
Seventh CPC entry pay- Rs 1,44,200
Increase- 24 per cent
Grade pay- Rs 10,000

5. Vice Chancellor

CPC- Rs 1,75,200
Seventh CPC entry pay- Rs 2,25,000
Increase- 28 per cent

The last pay hike for teachers was implemented 11 years ago and this year, numerous teachers associations have threatened to go on strike due to the delay in the implementation of the seventh pay commission.

July 9

60 IIT Kanpur students admission terminated over sub-standard performance
http://www.financialexpress.com/education-2/60-iit-kanpur-students-admission-terminated-over-sub-standard-performance/755593/

IIT Kanpur has launched a drive on excellence and maintaining standards at as high levels as possible. What this has led to is the sacking of students who were considered laggards.

IIT Kanpur has launched a drive on excellence and maintaining standards at as high levels as possible. What this has led to is the sacking of students who were considered laggards. It has been revealed that The premier engineering institution in India, the Indian Institute of Technology, Kanpur has terminated as many as 60 of its students who had performed poorly in their academic pursuits, the Hindustan Times reveals. The university has an excellent record and any under-performance is being frowned upon. However, this has not happened on the spur of the moment. It has been revealed that the institution was forced to take the action after having issued a warning earlier to the concerned students to pull up their socks and improve their academic standards. Their continued non-performance caused the institution to launch the crackdown. Exactly what it entails and what will happen to the students now is unclear. Considering that these students received the benefits of studying in one of India's premier institutes and they managed to get admission on the basis of having excelled in their studies and competitive exams, as well as the institute itself, having spent a lot on their studies, the uncertainty about their fate or permanent removal would be a big loss.

The students whose admissions were terminated were seniors – as many as 8 were post graduates and some 6 were research scholars at the institution. HT reveals that mercy petitions were provided to some students but the weakest of them all were not given this opportunity. To ensure no untoward steps are taken by the students and to ensure transparency at all levels, the institute has even informed the parents of the students concerned.

IIT Kharagpur gets four mega research projects from HRD ministry

https://www.newsbytesapp.com/timeline/Science/8696/49418/iit-kharagpur-s-projects-aimed-towards-a-better-india

IIT Kharagpur has now undertaken four mega research projects along with six integrated projects from Ministry of Human Resource Development.

The areas of focus are sustainable food security, future of cities, signals and systems for life sciences and science and heritage interface.

IIT KGP deputy director Sriman Kumar Bhattacharyya said that these projects are critical for the future of India.

Here's all about it.

In context: IIT Kharagpur's projects aimed towards a better India

09 Jul 2017IIT Kharagpur gets four mega research projects from HRD ministry

Project Deploying technology effectively

As per sources, the 'Sustainable Food Security' project is aligned with the need of technological interventions under the National Food Security Act.

It is aimed at bringing technological expertise in food production, processing, and distribution logistics.

The 'Signals and Systems for Life Sciences' project is aimed at further improvement of biometric signal processing in areas of analysis, prognostics, diagnostics and economical healthcare.

IIT KGP Urban India development

The institute's authority believes that its upcoming super-speciality hospital will be an ideal platform to kick start the endeavor, which is aimed at bringing more focus to its efforts in the health domain.

The 'Future of Cities' project, which IIT KGP has also undertaken, would create a platform to identify and address the issues pertaining to the development of urban India.

Varanasi There is also a Varanasi project

'Science and Heritage Interface' will be a science-culture initiative aimed at harnessing the power of technology for the preservation, archival, development and scientific exploration of Indian heritage. Under this project, a holistic project on Varanasi will also be carried out.

Infrastructure, digital convergence, transport technologies, affordable health care, advanced manufacturing and geoscience for future of earth are the six integrated projects that it'll undertake.

July 8

IIT-Bombay to help BSF find tech solutions, MoU on July 8
http://indianexpress.com/article/india/iit-bombay-to-help-bsf-find-tech-solutions-mou-on-july-8-4739563/

The idea has received a go-ahead from the Ministry of Home Affairs and will be formalised on July 8 through a MoU between the BSF and the National Conference On Emerging Information Technology and Its Solutions under IIT Bombay.

With increasing cases of infiltration on the western border and government looking for technological solutions to shore up defences, particularly on the Punjab and J&K border, the BSF is roping in IIT Bombay for research and development support on border defences and to screen new technologies for their effectiveness on borders.

The idea has received a go-ahead from the Ministry of Home Affairs and will be formalised on July 8 through a MoU between the BSF and the National Conference On Emerging Information Technology and Its Solutions under IIT Bombay.

The MoU will be signed by BSF DG K K Sharma and Dr Devang V Khakhar, Director, IIT Bombay. Joint secretaries of the border management and police modernisation divisions of the MHA are also likely to be present.

According to sources, there is a massive push by the government to plug riverine gaps on the western border often used by terrorists such as those who attacked the Pathankot airbase. From laser walls to earth sensors to underwater detectors, the government is testing all forms of technology to beef up the border defence, they said.

"We are looking at modern hi-tech gadgets to plug gaps in our border defence and also to strengthen the existing infrastructure. It is part of the BSF's integrated border management programme where multiple layers of security, both human and technical, will complement each other," a senior BSF officer said.

He, however, added that the force did not have the expertise to optimally test new technologies and their effectiveness in countering peculiar problems on both eastern and western borders, which are of a different nature.

"This is where experts from the IIT would be helpful. At the moment, we have many vendors selling us different technologies. But many of these technologies will have to be customised according to our needs and potential threats. For that, we need a high-quality research and development set-up. IIT will provide that," the officer said.

The IIT's support is also going to be utilised for improving the capacity, efficiency and health of the force personnel, a source said.

Supreme Court halts admission to engineering colleges through IIT-JEE, NIT

http://www.timesnow.tv/india/article/admission-engineering-colleges-iit-jee-nit-halted-by-supreme-court/65316

New Delhi: In relation to awarding of bonus marks in the joint entrance examination (JEE), the Supreme Court on Friday put a hold on admissions to the majority of the country's engineering colleges including the Indian Institute of Technology (IITs).

The apex court's order comes as a result of a petition filed by two students who sought the court's direction to IIT-Madras to revise the list of successful students without awarding them bonus marks.

The matter is listed to be heard on July 10 by the bench of the Supreme Court.

IIT- Madras was responsible for conducting the entrance exam this year for admissions to IITs, National Institute of Technology and other colleges.

The petitioners who cleared the exam complained that their ranking in merit list was affected by bonus marks given to all, and as a result, they would not get admission in colleges of their choice.

In the petition, it was also argued that bonus marks be given to only those who attempted the questions as against everybody else.

Other High Courts were restrained by the bench to not entertain any writ petition related to counselling and admissions to the IITs from Friday.

Following the Supreme Court order, IIT Kanpur stopped the third round of counselling that was scheduled for Saturday.

IIT-Guwahati launches programme to boost cybersecurity

https://factordaily.com/news/iit-guwahati-bug-bounty-programme-cybersecurity/

The Indian Institute of Technology (IIT), Guwahati, is offering a bounty for ethical hackers to enhance its cybersecurity through a programme called 'Bug Bounty'.

In the programme, white hat hackers will use their skills to test and expose cyber vulnerabilities of protected systems and networks of the institute before black hat hackers (malicious hackers) can exploit them.

"This will help improve security within IIT Guwahati's network and its websites," K Mohan Sai Krishna, a fourth year B Tech computer science and engineering student and the brain behind the initiative, told IANS.

IIT-Guwahati's Facebook page says this is a first-of-its-kind initiative in the country (in terms of educational institutes).

Launched on June 30, the programme is an experimental program focusing on improving the security within IIT Guwahati's network.

The initial bounty is an appreciation of the bug-hunter in the 'Hall of Fame' page.

The introductory phase is meant for the institute's students and faculty, but it will be rolled out for ethical hackers across the world to participate.

Among the rules and restrictions of the project, one forbids hackers from "publicly disclosing any vulnerabilities before they have been completely resolved".

"Soon after the programme was released, we got seven reports in two days, three of which are high priority ones and four of them are low priority ones," said Krishna, whose core interest lies in information security and has earlier helped companies like Microsoft to secure their websites.

"I noticed some flaws in the IIT-Guwahati website and informed the concerned people. One more thing which fuelled this idea was that most of the times when some Indian government websites were hacked by some Pakistani hackers or someone else you could hear many Indian hackers saying 'I reported about this vulnerability long ago, nobody patched it'," he said.

"The idea is that with the success of this programme in IIT-Guwahati, other IITs and government bodies might also start something similar, and in the end, it should contribute in making Indian cyberspace more secure," he said, acknowledging the institute's Computer Centre for seeing the merits of the programme and taking it up.

Massachusetts Institute of Technology (MIT) in the US has its own bug-hunting project.

Benefits of scientific research should reach public: Union minister Harsh Vardhan

http://www.financialexpress.com/lifestyle/science/benefits-of-scientific-research-should-reach-public-union-minister-harsh-vardhan/754384/

Environment minister Harsh Vardhan today asked researchers to solve basic problems, like of water shortage and sanitation, confronting the common man as the benefits of scientific research should reach the public.

Emphasising the need of having "environmental soldiers", he said that a data bank of environment friendly practises is being prepared by his Ministry.

Environment minister Harsh Vardhan today asked researchers to solve basic problems, like of water shortage and sanitation, confronting the common man as the benefits of scientific research should reach the public. The Minister said that scientists should work at the grassroots level and emphasised on synergy and coordination between various scientific and technical institutions working for the common goal to combat the climate change. After launching the National Carbonaceous Aerosols Programme Project (NCAP) on Carbonaceous aerosol emissions, source apportionment and

climate impacts (NCAP-COALESCE project) at Indian Institute of Technology (IIT), Bombay, he said that climate change and global warming were the talk of the world and this project will be a milestone in our history. Carbonaceous aerosols of great concern on the issue of climate change, he said. He also urged the students to set ambitious goals and work relentlessly to achieve them.

The Minister expressed hope that the project will encourage scientists to address important questions, generate new and impactful knowledge and produce research outputs which are second to none in the world. Noting that organisations like ISRO are working in the field of carbon emissions, the Minister suggested that there should be a synergy between various organisations working in a particular field. Emphasising the need of having "environmental soldiers", he said that a data bank of environment friendly practises is being prepared by his Ministry.

"For this, joint secretaries from the Centre are being sent to various regions across the country," he said, adding environmental protection is in the DNA of Indians. The NCAP-COALESCE project was launched as part of India's National Climate Action Programme. Under IIT Bombay's Interdisciplinary Programme in Climate Studies, this multi-institutional, coordinated project, would enable teamwork in cutting-edge fundamental research to understand the sources, fate and impacts of carbonaceous aerosols, on climate change in the Indian region.

"The project would be a key step to build a strong knowledge base for India related to short lived climate pollutants, including carbonaceous aerosols, as part of India's broad commitment to climate action," an official statement said. The project would also contribute towards building scientific capacity, through training of M.Sc., M.Tech. and Ph.D. students as well as the creation of infrastructure and systems at the participating institutions. The project would strengthen scientific networks and provide key new knowledge to underpin government decision making in regard to climate change, the statement added.

Government to approve Rs 3,000 crore foundry to IISc for production of wonder nano material

http://www.financialexpress.com/industry/government-to-approve-rs-3000-crore-foundry-to-iisc-for-production-of-wonder-nano-material/754727/

The government has granted initial approval to The Indian Institute of Science (IISc) to set up a foundry worth Rs 3,000 crore for the production of a "wonder" nano material, gallium nitride, which is emerging as one of the most promising semiconductors for next-generation strategic technologies, which includes communication systems and radar.

The government has granted initial approval to The Indian Institute of Science (IISc) to set up a foundry worth Rs 3,000 crore for the production of a "wonder" nano material, gallium nitride, which is emerging as one of the most promising semiconductors for next-generation strategic technologies, which includes communication systems and radar. According to Indian Express reports, the proposed foundry is supposed to be developed around an existing facility for producing gallium nitride transistors on silicon wafers and the development is supposed to take place under the supervision of associate professor Srinivasan Raghavan.
Indian Express quoted Prof. S A Shivashankar of the CeNSE saying, "The proposal is currently at the highest level of the government. It needs about Rs 3,000 crore and is seen as a strategic-sector investment."

A superior alternative to silica-based semiconductors, nano material Gallium Nitride, or GaN is expected to generate revenues within the range of $700 million by 2020. The current revenue generated is within the range of $300. "The proposal to set up a foundry at the IISc for producing GaN is a good development. Gallium nitride technology will substantially help in the development of next-generation radars, seekers and communication systems, and will be useful

in systems like Light Combat Aircraft," said R K Sharma, the director of the DRDO's (Defence Research and Development Organisation) Solid State Physics Lab.

In 2015, Prime Minister Narendra Modi had inaugurated the CeNSE facility at the IISc which at this juncture is trying to create an ecosystem of GaN electronics, which includes devices, system and materials. CeNSE is already selling GaN-based transistors to researchers across the country. The development of the foundry will only help the industry demands for emerging technology. Director Sharma thinks that gallium nitride conductors are an answer to the to the much needed efficient energy consumption and since countries like China have been investing in such strategies, India too needs to do so.

GaN semi-conductors can be used in phased array radars for electronic warfare. The GaN technologies foundation was laid down by 2014 Nobel Physics Prize-winning scientists work. The wide-gap semiconductor GaN has unique electronic properties which makes it possible to operate at high temperatures and at high switching speeds where the power flow is much more than that of silica. Prof Srinivasan Raghavan says in a section on GaN at the CeNSE website that every electronic device has an electronic circuit that handles very high voltages and power and it is these circuits that constitute the field of power electronics.

Coming up: mobile phones with pollution sensors

http://www.thehindu.com/news/cities/bangalore/coming-up-mobile-phones-with-pollution-sensors/article19235598.ece

IISc. team develops highly sensitive low-cost CO sensor

How cool would it be to have a mobile phone equipped with a pollution sensor? This could one day become a reality with researchers at the Indian Institute of Science (IISc.) developing a highly sensitive low-cost sensor to detect carbon monoxide levels, small enough to fit into a mobile phone.

While conventional sensors are made through lithography (similar to printing circuits but at nano scale), the team used a low-cost fabrication technique of pouring semiconductor material over nano beads to build a honeycomb-like nano-structure made up of zinc oxide.

The research was carried out by Chandra Shekhar Prajapati, post-doctoral fellow, and Navakanta Bhat, Chair & Professor, Centre for Nano Science and Engineering (CeNSE), IISc., along with researchers at the KTH Royal Institute of Technology, Sweden. The study was published in peer-reviewed *Sensors and Actuators B: Chemical* in June 2017.

So how does this technique improve sensitivity of the device? A simple way to explain this, says Dr. Prajapati, is to imagine a group of really small hexagonal polystyrene beads arranged in a pattern over the sensing material and more of the same material deposited in the gaps to form a honeycomb pattern.

The sensor can quickly detect minute changes in carbon monoxide levels, and can be used in environmental pollution monitoring. "Imagine the difference between a flat surface and a dimpled one. The second would be more sensitive, as there would be greater surface area to interact with gases," explains Dr. Bhat.

The same technique can be extended to develop other gas sensors as well. "It can be used for other oxides and even metals can be structured in this technique. Palladium and platinum are good for hydrogen sensors," says Dr. Prajapati.

Conventional optical sensors are much bulkier, measuring at least a few centimetres across, while the sensor devised is less than 1 mm. And while nano sensors are not new, the uniqueness of the research lies in the low cost technique and

high sensitivity of the sensors. The scientists developed sensors with varying widths of the honeycomb pattern and the one with the smallest width (~100 nm) was able to detect a change of even 500 parts per billion in CO concentration.

This sensitivity could be vital in mines where early detection of carbon monoxide could save lives. "It can also be used to detect CO levels at traffic junctions," said Prof Bhat, adding, "The holy grail that scientists are aiming for is fitting these sensors in mobile phones."

No degree if one doesn't do yoga or sports in engineering, technical institutes

http://www.hindustantimes.com/india-news/no-yoga-no-degree-in-india-s-engineering-and-technical-institutes/story-w3LtNQeIMIU8BB9glXgPSK.html

Students will have to ensure 25% attendance in one of these activities although there won't be any marks for their performance.

Students of engineering colleges and technical institutes will have to take part in yoga, sports or other socially relevant activities in addition to their regular academics to be awarded a degree.

Earlier, the institutions had these activities, including National Social Service (NSS), National Cadet Corps (NCC) and the Unnat Bharat Abhiyan, but these were not compulsory for earning a degree.

Now, the All India Council for Technical Education (AICTE), which governs more than 10,000 institutions having over 18 lakh students, has made these mandatory.

Students will have to ensure 25% attendance in one of these activities although there won't be any marks for their performance.

Officials said the move will help in the holistic development of students.

"Apart from studies, students need to do other activities too which is good for their well-being and for the society too," a senior AICTE official said.

Welcoming the move, Pooja Sharma, a BTech student, said unless it is made mandatory, students will not take it up.

For example, under the government's flagship Unnat Bharat Abhiyan, which aims to uplift rural India, students will have to visit villages and engage with the rural folk to learn from their lifestyle.

"By doing yoga or sports they can take care of their health," the official said.

The all India boards of studies was considering incorporation of yoga and value addition to the curriculum of engineering courses, the HRD ministry had said recently.

Last month, the University Grants Commission (UGC) had asked all universities and colleges to prioritise the celebration of the International Yoga Day (IYD), and submit proof of activities undertaken by students and faculty for review.

Under the Unnat Bharat Abhiyan (UBA), the government aims to uplift rural India by enabling higher educational institutions to work with villages in identifying development challenges and finding solutions for enabling sustainable growth.

The NSS is a large-scale community service programme meant for the youth to engage with social problems and is run by universities across the country. Delhi University, for instance, took up the programme in 1969.