Eight Indian institutions among top 500 world universities, IISC leads the pack

Eight higher educational institutions from India have been listed in the top 500 universities in the world by the QS rankings in 2015.

This was disclosed by Union Minister for Human Resource development Smriti Irani in the Lok Sabha on Monday.

Two of these institutions' the Indian Institute of Science (IISc), Bangalore and the Indian Institute of Technology Delhi are ranked 147 and 179 respectively in the QS World University Rankings for 2015-16. The other six were IITs in Bombay (ranked 202); T Kanpur (271); Kharagpur (286); Madras (254); Roorkee (391) and Guwahati (460).

Irani said Indian higher education institutions would need to work on improving their perception index if they have to better their global rankings.

ISc scientists develop drug delivery system to target hepatitis C virus

Lab experiments carried out on mice recorded 77% reduction in hepatitis C virus levels in mice

Srom the Indian Institute of Science (IISc) have found a way to effectively treat the chronic hepatitis C virus (HCV) infection, caused by a blood-borne virus that infects the liver to cause diseases like cancer and liver cirrhosis.

They have achieved a major breakthrough in nano-drug delivery systems by engineering a nanovector which can specifically home in on liver cells and destroy the viral RNA in HCV infections. It also promises to significantly decrease the drug dosage to cure the patient of the disease.

Nanovectors are like ultra-microscopic vehicles that are able to carry drugs to specific locations and target the precise cells which are the villains of the infection. This, they do with minimal or no harm to surrounding healthy tissue. HCV infects more than 13 crore people worldwide; and although existing antivirals cure 90 per cent of infected patients, there is currently no vaccine. Around five lakh people die every year due to chronic HCV infection.

A major problem in the treatment of this disease is the growing drug resistance of the virus and the side effects of the antiviral therapy that limit the dosage that can be safely used.

The study recently published in the journal Nanoscale demonstrates the functionality of a special class of drug delivery molecules called poly (propyl ether imine) or PETIM dendrimers - hyper-branched polymer molecules that can be used
to carry other molecules like drugs or nucleic acids.

"The major hurdle that we face (in drug therapy) is the targeted delivery of any drug" says Saumitra Das, professor at IISc's department of microbiology and cell biology, who is the corresponding author of the study. "Having a specific delivery system allows us to reduce the dosage of the drug and make it more effective."

In this proof-of-concept study, the scientists have modified PETIM to specifically deliver anti-HCV siRNA (molecules that degrade a specific RNA of HCV) to liver cells. The researchers were able to demonstrate that PETIM produces a 77 per cent reduction in HCV RNA levels and specifically travels to the liver of mice injected with the dendrimer.

One of the unique and most important features of PETIM when compared to other dendrimer molecules is that it is non-toxic to the nearby cells.

While anti-viral siRNA therapy is plagued with problems of siRNA stability, PETIM conjugated siRNA were shown to be completely stable and were properly taken up by the affected cells.

The researchers said that in principle PETIM can be modified to target other cells of the body too.

"PETIM, till today is the most non-toxic dendrimer that has been developed" explains Abirami Lakshminarayanan, PhD student at the departments of organic chemistry and microbiology and cell biology, who is the study's first author.

The study also highlights the inter-disciplinary nature of research involved in the development and characterisation of PETIM, with scientists across departments in collaboration.

"This is a unique effort where biologists, organic chemists, physicists and computational biologists have come together to solve problems in healthcare" explains Saumitra Das.

New education policy to come up next year: Smriti Irani

Economic Times

NEW DELHI: The government would come up with a new education policy next year, the Lok Sabha was informed today.

HRD Minister Smriti Irani said the proposed new education policy would "fructify next year", amid a series of questions on the involvement of stakeholders from the grassroot level to frame the new policy.

"The government has undertaken an unprecedented collaborated, multi-stakeholder and multi-pronged consultation process for formulating the new education policy. (The consultation process) included online, grassroots and national level thematic deliberations," she said during Question Hour.

Irani stressed that the consultative process included over 2 lakh gram panchayats, over 6000 blocks and several urban bodies.

Responding to a supplementary, she said results of better co-ordination between CBSE and state education boards will be seen from next year onwards. Her attention was pointed towards the different syllabi being followed by various state boards and the CBSE.

Irani said the 'e-pathshala' project has ensured that all CBSE books from class I to XII are available for free online and through a mobile phone application.
Placement Depression Hits IITians

Wide disparity between the highest and lowest salaries offered to students and high family expectations are creating stress among IIT students.

Prachi Verma

New Delhi: Sometime in early November, a 21-year-old student at the Indian Institute of Technology (IIT), Kharagpur, developed heartburn and palpitations besides being unable to sleep at night — classic symptoms of depression. He wasn’t alone. Among placements, which start on Tuesday at the leading IITs, many students are afflicted as the stress of landing a top-paying job takes a toll.

By the middle of November, the campus grapevine and the media make much of salaries in excess of Rs 1 crore being offered to batch mates in pre-placement offers (which precede the final ones).

“Since my parents heard this, they have been calling me and checking on the trend of final placements in terms of salaries,” said the final-year student of mechanical engineering mentioned above.

The wide disparity between the highest and lowest salaries offered to students — as much as Rs 1 crore including stock options to Rs 1 lakh — is key to what’s emerging as a mental health issue for students and the schools that are meant to nurture them. Family expectations add to the stress.

“Parents who are not well informed do create tremendous pressure on students,” said Rup Vishwanath, professor and in charge of the training and placement cell at IIT Delhi.

Getting selected by a top recruiter becomes critical for many.

“Students link performance to their personality and identity. This turns out disastrous for them. At least 10% of IIT Delhi students suffer an identity crisis,” said IIT Delhi student counsellor Rup Vishwanath.

The stress starts during entrance coaching and the exam itself, then continues with the academic grind and job search.

According to an IIT Madras student, 75% of all students who seek help suffer from clinical depression.

“The issue of depression is real across the IITs.”

According to an IIT Madras student, 75% of all students who seek help suffer from clinical depression. “Overwhelming competition at premier institutes often creates discontent among students who were once the best of the best,” he said.

“The schools are emasculated of the merit and are trying to do something about it,” added Vishwanath. “But the problem is students typically don’t want to reveal too much of their anxieties, said a teacher at IIT Kharagpur.

The IITs try an unconventional approach, switching off the power supply to the hostels for an hour to force students to attend a group therapy session.

“Psychological and motivational talks are housed at ITs — students are only coming out in the open,” said Vishwanath.

A more pragmatic term is essential to help them.

In the two rigorous years that a student spends preparing for IIT-JEE, he/she tends to lose touch with his/her emotional side,” said an IIT Bombay counsellor. “Having tenderness around the campus could help change that.

Placement Blues

- Stress starts with entrance coaching, admission test, and academic grind and worthless placement
- Placement pressure stems largely from parents and peer group
- Widening gap between highest and lowest pay packages also leads to stress
- November is dubbed “pressure cooker” month
- Not many students willing to seek counselling to deal with stress and depression at IITs

CAUTION BISWAJIT IIT GUWAHATI DIRECTOR

Placements at IIT Madras, this year literally rest in the hands of the rain gods. Incessant rains in Chennai, which led to floods and waterlogging in several parts of the city over the past fortnight, have made recruiters unsure of the placement at IIT Madras.

The institute was receiving frantic calls from companies coming for placements to the campus on Monday, when schools and colleges in the city were told to remain closed due to rains. IIT-Madras, however, said it is not affected much as of now and that the placements would take place starting Tuesday.

IITs Watch Out for Cos Floating Norms as Placement Begins Today

Prachi Verma

New Delhi: IITs are keeping a sharp eye on companies floating placement guidelines even as the war for talent at IITs begins on Tuesday amid rising concerns over too many open positions or not being given online with their tests.

We are keeping a close watch as we want the placement process to go smoothly,” said the professor. “A vacuum is being created with Day 1 companies moving to pre-placement offers, after a couple of companies in recent weeks have moved up to CFA, which is our last day of the process.”

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Rain Threat to IIT Madras Placements

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Smriti Irani supports students’ demand for night canteen at IIT-Gandhinagar, suggests ‘anda paratha’

At the end of her address where IIT Kharagpur had a virtual presence, she said, “Let me tell IIT-Kharagpur that the next time you visit IIT-Gandhinagar please go and have anda paratha at the students’ canteen.”


AT THE inauguration of the Union HRD ministry’s much-acclaimed project GIAN (Global Initiative on Academic Network) at the Indian Institute of Technology, Gandhinagar, its minister Smriti Irani politely but smartly declined Gujarat Education Minister’s Bhupendrasinh Chudasama’s demands for the state. Instead, she backed IIT-Gn students’ demand for an overnight canteen at the newly-constructed campus and said she would recommend other IIT students to have its “anda paratha”.

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Responding to the minister’s requests, who had repeatedly addressed her as “sister”, of giving something during her visit to the state and IIT-Gn campus, Irani said, “It is a strange thing when Bhupendrabhai said that I have to give something. Every brother present here knows that a sister only takes and never give anything. This would be a strange trend in Gujarat being a brother and that too an elder brother.”

Chudasama, while addressing the student, said: “When she entered the compound she was very happy with the aura and atmosphere. I feel that through this event she is going to give us something else too… We had a request of IIIT in Surat. Just Before she reached here she called me up and said we have given IIIT to Surat. When the education minister is from Gujarat and the Prime Minister also from Gujarat then we do not lack anything. I request Sudhir ji to inform me about any other request he had.”

Taking IIT-GN director Sudhir Jain too in her response, Irani said he was “very excited and applauding” on Bhupendrasinh’s requests. She said, “Sudhirji, I tell you that if you want anything, I publicly announce that I support students demand for an overnight canteen on the campus.”

What is GIAN?

Under project GIAN or Global Initiative on Academic Network, institutes of higher education will host guest lectures by internationally and nationally renowned experts and evolve a comprehensive Faculty Development Programme.

The project was launched with two 10-day-long courses — 3D Digitization for Cultural Heritage at IIT-Gandhinagar, and Orthopaedic Biomechanics: Implants and Biomaterials at IIT-Kharagpur. These are two of the 201 courses approved under GIAN from 488 courses proposed by different higher education institutes, which include 31 state universities, 94 central universities, 5 management institutes and 7 AICTE engineering colleges.

MHRD has allocated Rs 35 crore for GIAN in the current financial year.
Under the scheme, 500 international faculty will be engaged this academic year and 1,000 in subsequent years. Nearly 200 Indian institutes will host GIAN courses this year. This number will grow to 500 institutes in the following years.

The long term goals of GIAN, include sharing of academic credits, availability of content through a National Digital Library, and forging academic and research collaborations.