

THE PULSE OF HBTU

Fortnightly Newsletter

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**Microwaving
Sewage Waste
May Make It
Safe To Use As
Fertilizer**



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ADHYAAY

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Fraternity Achievers



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Singh

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CREATIVE
CLUSTER



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INTERNATIONAL CONFERENCE ON ENVIRONMENT AND SOCIETY

International Conference on Environment and Society was organized by Global Environment and Social Association, New Delhi, Harcourt Butler Technical University, Kanpur, DG PG College, Kanpur, Indian Thinkers Society, Kanpur, Asian Biological Research Foundation, Prayagraj and Department of Biotechnology, Government of India. The point of issue covered under this conference was Socio-Economic Challenges of Agriculture, Biodiversity and Environment.

Professor C.L. Gehlot from Department of Chemistry, School of Basic and Applied Sciences, HBTU Kanpur gave a review on mechanical and thermal properties of EPOXY/FLY ASH from Thermal Power Plant. Professor Pradeep Kumar, Head of Department, Civil engineering Department, HBTU Kanpur gave his views on effective utilization of waste Plastic in Bituminous Road Construction, Performance evaluation of Thermal Power Plants in India using MCDM Techniques, analysis of Gaseous Pollutants at Industrial Area in Kanpur City, Air Quality monitoring using Internet of Things, zero energy building: A Future Prospect, treatment of waste water of organic nature by Fenton Process etc. Also Professor S.J. Nagar from Department of Biochemical Engineering, School of Chemical Technology, HBTU Kanpur focussed on production of Polylactic acid from composite floral waste, production and characterization of Fibrinolytic Enzyme from Bacillus Species and development of antigungal tolerance and growth promotion in Chickpea.

Professor Neelema said that scholars should come up with the ideas to tackle Climate Change. Professor Neelema, Honourable Vice Chancellor, asked future scholars to research on the impending dangers on the Biodiversity as well as methods to save the Biodiversity from the Climate Change. She was present in International Conference held in HBTU in

association with Global Environment Social Association, Asian Biological Research Foundation and Dayanand Girls P.G. College. Furthermore, Dr. Sadhna, Principal, D.G.P.G. College highlighted the relation between Pollution, Environment, Farming Techniques and Biodiversity. Prof. Dileep Kumar, Chitwan University, Nepal presented his Research Paper on "Fighting Malnutrition with encouraging Aquaculture at Schools." Dr. A.K.Verma, Head, GESA told that Pollution free environment is integral to maintain Biodiversity. The conference witnessed presence of Prof. Vinay Kumar Chakrabarty, Prof. V.K. Jha, Balram Narula, P.N. Kaul, Dr. Sumita Arya. The program ended by honoring Dr. Krishnakant, Dr Neelesh, Dr. Prathibha Gupta, Dr. Shiv Kumar, Dr.S.P. Dwivedi, Dr. Ratna Katiyar and prassenjit Hazzra by Minister of State for Jail, J.K.Singh.

Prof. Dr. Vineeta Shukla of zoology department from Maharishi Dayanand University received the ABRF Excellence Award for zoological research. She presented her research on the hazardous effects of mobile radiations on human health. She was honored in the Harcourt Butler Technical University, Kanpur by the The Minister of Prison and Public Service Management Department, Uttar Pradesh, Mr. Jay Kumar. She presented her research papers on the topic of socio-economic challenges of agriculture, biodiversity and environment in the conference conducted by Harcourt Butler Technical University, Kanpur and Asian Biological Research, Prayagraj. During this she mentioned that mobile radiations can cause cancer and holding mobile in a wrong manner or keeping it under the pillow while sleeping can have severely negative impact on a person's health. Along with the precautions that need to be taken care of, she also emphasized on the other problems.

Eco-friendly bags made by Kolkata jail inmates for Gangasagar pilgrims

In an effort to make the Gangasagar Mela in West Bengal's South 24 Parganas district plastic-free, around 150 inmates of two correctional homes in the city have made eco-friendly bags for distribution among the pilgrims, an official said.

More than 50,000 bags made of cotton and jute had been stitched by the inmates of Dum Dum Central Correctional Home and Presidency Correctional Home, the official said.

"The environment-friendly bags are made of jute and cotton and being distributed among pilgrims in the Gangasagar Mela. The inmate-turned-artisans of the two correctional homes are excited for supporting the social cause," said an official of the Presidency Correctional Home.



Every year on Makar Sankranti, lakhs of pilgrims flock to the Sagar Island in the state to take the holy dip and offer prayers at the Kapil Muni temple. The inmates had been trained by an NGO, Rakshak Foundation, in association with the authorities of two correctional homes and the National Jute Board to make the bio-degradable bags, he said.

"The inmates have been informed about how use of plastics is harming the environment and are happy for contributing to the cause," the official said. This year, the Gangasagar Bakkhali Development Authority (GBDA) and the South 24 Parganas district administration have decided to make the Gangasagar Mela an "eco-friendly, green and clean fair" by imposing ban on single-use plastic and thermocol items.

"Every year, about two crore plastic bags are generated during the mela. Apart from campaigning against the plastic pollution, we are distributing alternative bags among pilgrims during the seven-day fair which started from January 11," South 24 Parganas district magistrate P Ulaganathan said.

Around 50 lakh pilgrims from different parts of the country and neighbouring Bangladesh and Nepal took a holy dip on the confluence of the Ganga and the Bay of Bengal on the occasion of Makar Sankranti on Wednesday.

Source- india tv

Microwaving sewage waste may make it safe to use as fertilizer on crops

Gang Chen, FAMU-FSU College of Engineering

January 14, 2020 8.48am EST

My team has discovered another use for microwave ovens that will surprise you. Biosolids – primarily dead bacteria – from sewage plants are usually dumped into landfills. However, they are rich in nutrients and can potentially be used as fertilizers. But farmers can't just replace the normal fertilizers they use on agricultural soil with these biosolids. The reason is that they are often

contaminated with toxic heavy metals like arsenic, lead, mercury and cadmium from industry. But dumping them in the landfills is wasting precious resources. So, what is the solution?

I'm an environmental engineer and an expert in wastewater treatment. My colleagues and I have figured out how to treat these biosolids and remove heavy metals so that they can be safely used as a fertilizer.

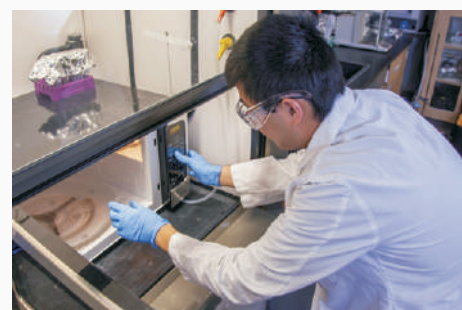
Microwaving waste releases heavy metals

Conventionally, these metals are removed from biosolids using chemical methods involving acids, but this is costly and generates more dangerous waste. This has been practiced on a small scale in some agricultural fields.

After a careful calculation of the energy requirement to release the heavy metals from the attached bacteria, I searched around for all the possible energy sources that can provide just enough to break the bonds but not too much to destroy the nutrients in the biosolids. That's when I serendipitously noticed the microwave oven in my home kitchen and began to wonder whether microwaving was the solution.

My team and I tested whether microwaving the biosolids would break the bonds between heavy metals and the bacterial cells. We discovered it was efficient and environmentally friendly. The work has been published in the Journal of Cleaner Production. This concept can be adapted to an industrial scale by using electromagnetic waves to produce the microwaves.

This is a solution that should be beneficial for many people. For instance, managers of wastewater treatment plants could potentially earn revenue by selling the biosolids instead of paying disposal fees for the material to be dumped to the landfills.



It is a better strategy for the environment because when biosolids are deposited in landfills, the heavy metals seep into landfill leachate, which is then treated in wastewater treatment plants. The heavy metals thus move between wastewater treatment plants and landfills in an endless loop. This research breaks this cycle by separating the heavy metals from biosolids and recovering them. Farmers would also benefit from cheap organic fertilizers that could replace the chemical synthetic ones, conserving valuable resources and protecting the ecosystem.

Is this the end? Not yet. So far we can only remove 50% of heavy metals but we hope to shift this to 80% with improved experimental designs. My team is currently conducting small laboratory and field experiments to explore whether our new strategy will work on a large scale. One lesson I would like to share with everyone: Be observant. For any problem, the solution may be just around you, in your home, your office, even in the appliances you are using.

Source- conversation

Ahead of National Girl Child Day, 'Pink Turban Campaign' launched in Chandigarh

Kamini Mehta-TNN Jan 15, 2020, 16:35 IST

Over 1500 school students participated in the initiative, in which girls came wearing Pink Turbans and boys pink stoles to show solidarity with the cause. CHANDIGARH: Preparing for upcoming National Girl Child Day, Yuvsatta along with Peace Clubs of St Stephen's School organized girls' rights celebrations with a unique 'Pink Turban Campaign' promoting the cause of rights and dignity of girls and women at all levels in our society.



Over 1500 school students participated in the initiative, in which girls came wearing pink turbans and boys pink stoles to show solidarity with the cause, shared Louis Lopez, Principal of the School. Harjinder Kaur, Chairperson of CCPCR-Chandigarh Commission of Protection of Child Rights was the chief guest on the occasion and Pramod Sharma, chief functionary of Yuvsatta (youth for peace)-NGO presided over the same.

Pramod Sharma of Yuvsatta-NGO, which around 4 years back started this campaign from Chandigarh, gave examples of three countries of China, Germany and Malaysia, where Independence came around the same time as we Indians got our independence but today they're far ahead than us not only in terms of overall development but in fields of women empowerment too.

"And the main reason Pramod mentioned is that there in these countries all men and women are looked upon as two important and equal pillars of progress. So, if today India is lacking behind, it's because Indian girls and women are not getting right environment and opportunities at homes and outside to realize their true potential. As if half of Indian workforce is not properly utilized. If India has to progress, first women of India need to come in forefront. And through this unique campaign they're motivating and inspiring young girls to take a stand and lead the country towards a better future," he said.

Harjinder Kaur shared that Turban-Pagri is a symbol of honour and respect in all the regions where it is a practice to wear one, especially in north India with worst kind of sex ratio and cases of female foeticide. And pink colour represents compassion, nurturing and love. It relates to unconditional love and understanding, and the giving and receiving of nurturing. So she appreciated the whole idea of this campaign giving a strong message of "RISING GIRLS and EMPOWERED NATION". She also added that "She makes the world bright, but still struggles to see light". And she further endorsed that until & unless girls and women feel empowered from inside and take a stand to claim their due rights, one can't expect any drastic change in their position in society.

Source- times of india

NATIONAL Michael Debabrata Patra appointed new RBI deputy governor



Michael Debabrata Patra is likely to retain the monetary policy department, which was previously handled by Viral V Acharya, as the deputy governor.

Michael Debabrata Patra has been appointed as the deputy governor of the Reserve Bank of India (RBI), according to a Personnel Ministry order.

He has been appointed to the post for a period of three years, it said. Mr. Patra, who is looking after the monetary policy department as the executive director, will be the fourth deputy governor of the RBI. The post was lying vacant after Viral V Acharya had resigned from the post in June last year.

Mr. Patra is likely to retain the monetary policy department, which was handled by Mr. Acharya, as the deputy governor. The RBI, headed by Governor Shaktikanta Das, can have a maximum of four deputy governors. N S Vishwanathan, B P Kanungo and M K Jain are the other deputy governors working at the central bank.

Source - pti news

Report: Russian prime minister submits resignation to Putin

Putin thanked Medvedev for his service but noted that the prime minister Dmitry Medvedev's Cabinet failed to fulfill all the objectives set for it.

Russian President Vladimir Putin (left) listens to Russian PM Dmitry Medvedev during their meeting in Kremlin in Moscow, Russia on Wednesday | Sputnik, Kremlin Pool Photo via AP

The Tass news agency reports that Russian Prime Minister Dmitry Medvedev submitted his resignation to President Vladimir Putin on Wednesday.

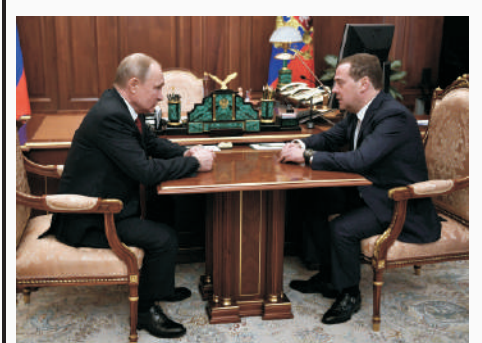
Russian news agencies said Putin thanked Medvedev for his service but noted that the prime minister Dmitry Medvedev's Cabinet failed to fulfill all the objectives set for it.

Russian media said Putin plans to name Medvedev as deputy of the presidential Security Council.

Medvedev, a longtime close associate of Putin's, has served as Russia's prime minister since 2012. He spent four years before that as president in 2008-2012.

Putin asked the member's of Medvedev's Cabinet to keep working until a new Cabinet is formed.

Medvedev's resignation followed Putin's annual state of the nation address earlier Wednesday. During his speech, the Russian leader proposed amending the constitution to increase the powers of prime ministers and Cabinet members.



The proposed move is seen as part of Putin's efforts to carve out a new position of power for himself to stay at the helm after his current term as president ends in 2024. Source - india today Associated press, Moscow

CAT - Qualifiers**Mayank Mishra**
(Final B.Tech Electrical Engineering)

We Harcourtians are well-equipped to perform decently in CAT as there is only aptitude test. However, regular practice is must. It helps to maintain speed and get in touch with shortcuts and the thinking process. According to me, the difference between a 95+ %iler and 99+ %iler is mental calmness. The game is 10% skill and 90% nerves. Getting yourself under pressure can pile up and crumble the confidence. Better to take things question by question and not thinking about the results while giving the test. Remove the fear of failure from your mind, and who better than us who have already failed on a great stage once or twice (JEE) and yet found the strength to stand again. Building up the confidence helps to harness the energy of the brain on the question rather than the consequences, and that's where you shall stand out.

VARC 97.45
DILR 98.13
Quant 97.94
Overall 99.02

Mayur Mishra
(Final B.Tech Civil Engineering)

Regular practice is the key to success. I had joined the coaching in January 2019 and gave proper time to the tasks at hand. Keeping the mind open to various possibilities of reaching the right answer can only come by practice. I even used to solve questions from my friend's study materials which were from a different institute. All it required is a few hours per week. Although it was regular. I did not divert my mind to visit home on every possible holiday like the general tendency in our university students. Smart work shall bring laurels for sure.

Varc: 96.71
Lrdi: 99.26
Quant: 98.51
Total: 99.33

Nitij Mishra
(Final Year B-Tech, Paint Technology)

Firstly, strengthen your fundamentals like calculations and english reading habits. Then go through the syllabus thoroughly and follow study material provided by Career launcher. Give tests on regular basis even if you are not scoring well. Analyse your mistakes and weak portions and work on them the most. The result will be evident. In the last month give as many Mocks as you can including past year papers. This will give you a very good idea of exam pattern and you will be good to go.

VARC- 94.13
DILR-99.53
QA- 99.81
Overall- 99.73

Rishab Agarwal,
(Final B-Tech, Electrical Engineering)

CAT is basically an exam about consistency and choices. One thing that aspirants must remember while preparing that syllabus and preparation wise CAT does not require too much hard-work but smart-work. It is the small pushes everyday consistently and then a big burst in the last three months which can propel anyone towards 99+ percentile. Also one must remember the importance of mock tests and give as many of them as possible throughout the preparation time and analysis and retrospection is a must as well. If you persist with the right mindset, then it is very much possible for anyone to score a 99+ %ile in CAT exam.

Varc: 97.8
Lrdi: 99.29
Quant: 98.35
Total: 99.47

Vishal Gupta
(Final B-Tech, Mechanical Engineering)

"CAT is all about the accuracy with speed"

For Quant:

Although many of my friends were far better than me in maths instead of this I had an edge because I always tried not to apply the orthodox methods and solve the question by eliminating the choices which reduced the solving time from 90 seconds to 40-50 seconds.

Also familiarity with the types of questions/concepts is the most important part while attempting a CAT paper.

For Lrdi:

Give 60-90 sec. to every set and Mark it as easy/med./difficult and you will always find 2-4 sets in easy category and 2-4 sets in medium category and these should be your target in the paper.

For Varc: Not the best person to advice.

Quant: 99.21
Lrdi: 98.27
Varc: 60.04
Overall: 95.89

'Swachhta' of Oneself and One's surrounding.

Students are the best in achieving any goal or mission. India needs the power of the youth to achieve all its cleanliness and developmental goals. Without their involvement all campaigns will end up hopelessly. Let's talk about students' role in keeping the surroundings clean and green. "Clean your mind and our country will automatically get dry cleaned." India, our beloved motherland is in the direst need of cleanliness. The general state of our cities, towns, colonies, rivers, oceans, lakes, hill-stations, parks, gardens, public transportation systems, railway stations, public toilets, etc, all indicate we as a nation are not proin cleanliness! The nationwide 'Swachh Bharat Abhiyan' is another proof of our vice of apathy to the squalor lying uncleaned around us!

We must start the cleanliness drive from our own home and surroundings. Our zeal and enthusiasm for the cleanliness drive is useless, if our own home and surroundings are unclean, and we are spending hours cleaning the streets in other areas.

Students, who are so energetic and dedicated to anything feel drawn towards it and can do phenomenal work in making cleanliness a successful campaign. The best way to begin this cleanliness drive is your own room, your own cupboard, your own toilet, your own kitchen, your own garbage. Do you keep your own room and surroundings clean? Are you able to maintain the cleanliness around you? If you really do, you feel the satisfaction and contentment of being clean! Now you can lend a helping hand and your expertise in keeping the neighborhood clean! This is how we must go about this cleanliness drive. Remember, only a lit candle can light other unlit candles. Similarly, people who keep themselves clean and their surroundings clean, can help other people to achieve cleanliness objectives. Let the cleanliness begin at your own home and let it reach out to your University. If each one starts maintaining cleanliness at his/her own home, the entire nation will automatically become clean.

In order to maintain cleanliness at University, students should make cleanliness monitoring committees consisting of some representatives in every batch. They should not let any student throw litter either in the class or anywhere else in the university campus.

After launching the cleanliness drive in the above mentioned manner, green campaign can also be launched in the similar manner. Students can form groups to plant trees first in the university. Later on, the tree plantation can be done in areas around the University.

In conclusion we can say India has immense youth power. All our nation is missing is channeling of this power.

ACHIEVEMENT OF HBTU STUDENTS IN CAT 2019		
Student Name	Branch	Percentile
Nitij Mishra	PT	99.73
Risabh Agarwal	ET	99.47
Mayur Mishra	CE	99.33
Swapnil Mahajan	CSE	99.20
Risabh Gupta	CSE	99.10
Mayank Mishra	EE	99.02
Irvin Kaur Chawla	CHE	98.7
Sankalp Sinha	CSE	98.6
Shambhavi Gupta	CHE	98.1
Akhil Sachan	ME	96
Vishal Gupta	ME	95.6
Sushant Mithal	IT	94

Big Congratulations to all of you!

Still Updating...

Climate change is making Australia's weird weather even weirder

Fires, heat, drought, and flooding are nothing new. But climate change is making them worse.

By Umair Irfan on January 15, 2020 3:50 pm

Australia's climate is prone to extremes, but ongoing warming has made them worse, fueling the ongoing bushfires across the country. Saeed Khan/AFP via Getty Images

The gargantuan bushfires across Australia continue to rage. They've burned at least 17.9 million acres, destroyed more than 3,000 homes, and killed at least 28 people since September. The choking smoke from these blazes is causing a health crisis and has literally circled the world. At the Australian Open in Melbourne this week, Slovenia's Dalila Jakupovic forfeited her match after keeling over as smoke from the wildfires permeated the tennis stadium and made it difficult for her to breathe.



Australia's bushfires and the conditions behind them are alarming and unprecedented, but not unexpected. Australia is warming faster than the global average due to climate change, and parts of the country are getting drier.

The blazes got going in 2019, which the Australian Bureau of Meteorology has now confirmed was the country's hottest and driest year on record. This rising heat and aridity helped create the conditions for the massive blazes torching the country.

However, climate change is pummeling Australia on top of its notoriously volatile weather that can bring jarring shifts year to year, or even in the same year. That's a big reason Australia is so vulnerable to extremes and why the continent is experiencing some of the world's worst climate-related disasters.

"It's always been a variable continent in terms of weather," said Mark Howden, director of the Climate Change Institute at the Australian National University. "What we saw last year and are seeing this year to date I think both reflect that historical variability but with added components chucked in because of climate change, and that's generated temperatures well beyond what we have seen before."

As the climate changes, the swings in temperature and precipitation are poised to become more vast and frequent. While many of the factors that are driving the vacillating patterns of temperature and rainfall are unique to Australia, other parts of the world may soon face their own volatile weather. So it's important to understand how it occurs and how it's changing in the land down under.

Why Australia's weather is so erratic

Several factors contribute to Australia's notoriously shifty climate. Australia's landmass is large enough to include climate regions from the tropics in the north to deserts in the middle to temperate regions in the south.

The continent is also situated between the Antarctic, Indian, and Pacific oceans. Along Australia's coasts, these oceans act like buffers and help moderate the climate in cities like Sydney. But Australia is a continent, which means it experiences continentality, a phenomenon where inland areas far from water experience a wider temperature range than the coasts. That's not to say that oceans don't influence the middle of Australia. The surrounding bodies of water undergo periodic changes in water and atmospheric circulation patterns: El Niño, the Indian Ocean Dipole, the Southern Annular Mode, and so on.

Depending on the phase of their cycles, these patterns can bring torrential rains, searing heat, high winds, or cool breezes. When several patterns align, they can easily push weather toward extremes, particularly in the middle of the continent. That's a big reason Australia has the most variable rainfall of any continent, explained Howden.

"Another factor in Australia's weird weather is that it doesn't have a large inland system of lakes and rivers. Some large lakes can form during periods of torrential rain, but those lakes aren't very deep, which means they don't store much heat and can evaporate quickly. That reduces their capacity to cushion surrounding regions against temperature extremes.

Australia also doesn't have a large, snow-capped mountain range like other continental landmasses. Melting mountain snow can act as a reservoir for water throughout the year and keep rivers and lakes topped up. For Australia, this makes inland areas more dependent on rainfall and more vulnerable to drying out in droughts than areas that do have white peaks to supply water.

Together, these elements leave many parts of Australia ping-ponging between deluges and droughts as well as heat and cooler air.

Source- vox. Com

Bad at maths? Microsoft Math Solver can solve those problems for you

The software giant has developed a Math Solver app, which is currently in beta, that claims to have solutions for all mathematical expressions – be it basic equations or more complex integrations.

If you have hated maths all your life and still have to do it, fret not, Microsoft has a solution for you. The software giant has developed a Math Solver app, which is currently in beta, that claims to have solutions for all mathematical expressions – be it basic equations or more complex integrations.

And what if the app cannot solve it? It directs you to a Bing search result that should "potentially" help you find a solution to your problem.

To use Microsoft's Math Solver app, you can scan your handwritten problem, you can enter it by using the built-in calculator or you can draw it on the screen. The app will then solve it to give you a solution.

However, the Microsoft Math Solver is not the only app out there that claims to solve your math problems. There is Photomath as well. Photomath has no option for you to 'draw' out your problems on the screen though. Also, Photomath does not display Bing search results either. In the Microsoft app, depending on the solution, it can show you search results or how-to videos to help you better understand the concept.

The Microsoft Math Solver is currently being beta tested, so it is going to be a while before it becomes open to public. Source- Hindustan times



Like Adding 'Five to Six Hiroshima Bombs of Heat Each Second,' Study Shows Oceans Warming at Record Rate

"If you want to understand global warming, you have to measure ocean warming." (by Eoin Higgins, staff writer on Tuesday, January 14, 2020)

A gas platform for flaring of gas at offshore during bad weather. A gas platform for flaring of gas at offshore during bad weather. (Photo: Puneet Vikram Singh/Getty Images) A new study published Monday shows that the Earth's oceans reached the highest temperatures and warmed the fastest since records began, highlighting the urgent need for global action to address the climate crisis before it's too late.

The study (pdf), "Record-Setting Ocean Warmth Continued in 2019," which was published in *Advances in Atmospheric Studies*, found the oceans have warmed by around 0.075 degrees C above the

average of 1981-2010.

That level of warming, the paper found, is equal to 228,000,000,000,000,000,000,000 (228 Sextillion) Joules of heat. Study lead author Lijing Cheng, associate professor with the International Center for Climate and Environmental Sciences at the Institute of Atmospheric Physics of the Chinese Academy of Sciences analogized the level of heating to something more manageable for the human mind.

"The amount of heat we have put in the world's oceans in the past 25 years equals to 3.6 billion Hiroshima atom-bomb explosions," said Cheng. "This measured ocean warming is irrefutable and is further proof of global warming. There are no reasonable alternatives aside from the human emissions of heat trapping gases to explain this heating."

The warming is speeding up, the scientists found.

"We are now at five to six Hiroshima bombs of heat each second," study co-author John Abraham, a professor of mechanical engineering at the University of St. Thomas, told CNN.

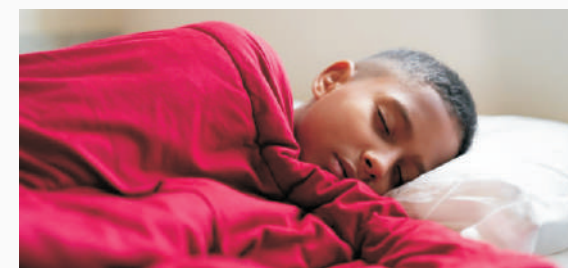
Abraham said in a statement Monday announcing the study's publication that the public needs to be aware "how fast things are changing."

"The key to answering this question is in the oceans—that's where the vast majority of heat ends up," said Abraham. "If you want to understand global warming, you have to measure ocean warming."

The ocean warms slowly, said Cheng, but due to its vast size has dire consequences.

"The price we pay is the reduction of ocean-dissolved oxygen, the harmed marine lives, strengthening storms and reduced fisheries and ocean-related economies," Cheng said. "However, the more we reduce greenhouse gasses, the less the ocean will warm." *Source- common dreams*

Surprise! Exam scores benefit from months of regular sleep



And night-to-night consistency is at least as important as how long you snooze

You've probably heard it a dozen times by now. But here it goes again: Sleep is important. Just how important? Scientists know that our weight, mental health and immune system are connected to our sleep habits. So are your grades — to a surprising degree, a new study finds.

Sleep accounted for nearly one-fourth of the difference among students' grades in a class, it showed. So even if you spend hours studying for a test but get too little and inconsistent sleep, you might still do poorly. And boys with poor sleep habits appeared to suffer most.

The researchers reported their findings online October 1 in *Science of Learning*.

Many sleep studies have linked someone's performance to sleep. Most of them had people sleep in controlled environments, such as a sleep lab. But people might sleep differently when they're away from home. Other studies have had people report their own sleep schedules. They have found that people might fib about or not remember precisely when they slept and for how long

The researchers recruited 100 students from Grossman's chemical engineering class. Almost all were around 18 years old. Each got a Fitbit to wear all semester long (and to keep when the testing was over). At the semester's end, the scientists looked at the students' sleep data. They focused on patterns in the days and weeks before quizzes and exams. They then compared those patterns to the students' test scores. The results confirmed sleep's importance for students — but included some surprises.

Source - Science news (SN)

Struggle Is Just A Part Of Life

Question no-1

Anjaney : You completed your bachelor's degree from Christ Church college and obtained B.Tech. degree from HBTI (now HBTU). Also now you are the president of 'K-Tech' .Which phase of your life, you find the most struggling ?

Mr. Subhash Srivastava - I am at present 63 years of age. I am still a learner. Everyday and every second of time you learn. Human being has limited mind capacity. A person who has a mission in his life removes unwanted learnings from his mind to learn better things and hence become a better person. Again nothing is permanent in life. I am currently a technocrat.

After completing my bachelor's from Christ Church college I started preparing for the post of Chartered Accountant. However I could not compute it. Hence I applied for B.Tech. in H.B.T.I. and I was not charged any fee for studying this course. So my time while studying in HBTI was the most fantastic struggling phase of my life. It was like a child struggle inside a mother's womb. I would recite line of a famous Poet 'Amir Khusrau' to describe it -

Khusse is sansaar ki dekhi ulti dhaar, Jo taiira wo doob gaya, jo dooba wo paar

This phase had a permanent effect on my life. After completing my course, I started working with some German companies and other large companies. I did not ask to work with them, I was simply chosen. Coats of India Limited was the largest company and I was happened to be there. I also happened to be in German Company _____ which was the largest company after World War II . I was under qualified but I struggled and went on learning for 25 years. The turning point was coming of disruptive technologies in 1999. At that time I decided to serve my motherland. I abandoned all high paying jobs in international....

Question no-2

Anjaney- What is the most important thing to be an Entrepreneur?

Mr. Subhash Srivastava- According to Sanskrit language, Entrepreneur is a person who is self-motivated. A girl before becoming a mother is very careless, unpunctual and after becoming a mother she will become very wise. She will take all responsibilities of her child and will be surrendered and enlightened for the cause. This all happens naturally. So a Entrepreneur should be-internally inspired. In old times there were two friends, one of them was blind. Once the blind friend went to visit his other friend. The time came for the blind friend to leave. So he said he would place a fire near him to avoid other people from crashing into him. However a person happened to crash into him. The blind man asked if he was blind too. The other man replied that he could not see him as the was extinguished. In the same way a entrepreneur should be motivated from outside but rather be internally motivated. Entrepreneurship can't be taught. It comes through your genes and inspirations.

Question no-4

Anjaney-what roles can be played by technical institutes in shaping a entrepreneur?

Mr. Subhash Srivastav- Your institute is loke your mother. It will teach you various teaching methods. But its you who will apply the brain and find your experience. Just surrender to your mother. She is not to be questioned. A child may become a soldier.

On the other hand a child may become a terrorist. The another mother of both children are great. As an entrepreneur the role of the institutes is the most primary.

Question no-5

Anjaney- our institute is going to cross 100 years of excellence. What can be done to celebrate this auspicious occasion?

Mr. Subhash Srivastav- You should strive hard to make sure that your mother(the institute) lives for another 100 years at least. The institutes are the cradle place of technocrats. It is our wish that our motherly institute plays the same role till eternity. May all the upcoming generations do so.

Question no-6

Anjaney- the field of paint technology is a innovative one. What is the scope of paint technology today and what should the seehnoerat keep in his mind while entering this field.?

Mr. Subhash srivastava - In Sanskrit paint word means a coating. In eternity there is 'pu h ' rus



(man) and prakriti (nature). The Union of two results in samsara(संसार).In world 'purush' is not allowed to make changes but is the 'prakriti' that does it. Though the 'purush' may do Innovation. Paint is applied to a surface to make it look refresh . The science of paint and technology is very ancient . The name of chemicals changed from Time to time but the technology remained the same . As long as there is human life , the need for paint technology will exist . Paint technology is a ever existing field . It is of young interest . Doing old things as it is conservatism while doing them in new ways is innovation and success

Question no-7

Anjaney- today the major issue is the employability of the students . As an employer what skills you wish to see in a candidate to hire him/her?

Mr.subhash Srivastava - time has changed students have become customers .

They pay fee for education . So now there are educators and customers .

Whenever there is a financial transaction the relationship of a teacher and a student dies. The bond between Arjun and dronacharya was formal while with eklavya it was eternal . Although eklavya was not honoured with the title of greatest Archer yet it was him who preserved that real knowledge of archery and passed it on to his upcoming generation . When Arjuna fought them he got defeated .

The industry today is not open for customers and hence un-employability is going to increase . The students ask to get paid for training and they would rather have paid for

Mr. Subhash Srivastava
Faculty - Oil Technology

if that was given to them by the institute . The employer has to get the job done at any cost . There are already other experienced people who can get this job at lesser cost . Just studying in an institute for 1 year does not qualify you to high salary job. You have to dedicate yourself to a particular company for at least 25 years or more to get good benefits. They do not serve their term and run away in the middle. They try to cheat. Hence they receive what they pay. Our students are not fully learned. They need to shed their anxiety and start learning happily. They have to work hard to expertise in the field. The multinational company give lucrative offers for short time and after that they abandon them. Hence the whole eco-system suffers. The industry is your second mother. You start your job to learn more not to earn. You have surrender to them to get the benefits. Many industries are running without our students. This is a tragedy! Due to load of the fee and unemployment the students feel pressurised and guilty. Education should be free. Today the government is hypnotising the youth with political issues and diverting their mind from employment issues. This is all the problem of attitude of students. The unemployment can be curbed within a very short span of time. The world is looking towards India with great expectations because we are the youngest nation in the world.

Anjaney : Thanks Sir for giving us the opportunity to take your interview.

Mr. Subhash Srivastava : I thank you too for taking out time as you were busy in attending your lecture when I called you. I love the company of young people.

Anjaney : As far as I know your life journey has been quite hard. You also achieved many milestones. How do you see your life journey ?

Mr. Subhash Srivastava : In life everything is predestined. You don't have to create anything new, but find your things. You did not choose your mother and father, place and religion when you were born. Everything is in the hands of almighty God.

He designs the journey and you just have to walk the journey. Hence nothing is bad in life. You just need to be patient and work hard with honesty, keep integrity and most above all compassion. In life nothing is permanent. You were born to realize this. Every human being struggles. Struggle is just a part of life. If you won't have struggled inside your mother's womb, you would not have been born. For example, if you take two caterpillar cups, allow one to be open by cutting it and other left by itself, you will find that the butterfly which comes out hunting itself lives an overall better life. In my life I took marriage only to put myself in struggle. So _____ was my first guru. Then I had several other gurus. Human Body is a chemical factory. The mind produces several hormones such as oxytocin and dopamine which produce various sensations in the body. Observe yourself as you struggle. Do you loose your focus, clarity and integrity ? Luckily I did not by blessing of my gurus and almighty God. What I am today is not me but altogether a result of effect of everybody. Every relation in our life is a blessing and pre destined. Everyone has to pass through the journey of life.

A word to the first year. HBTU: A broken dream or a boon in disguise?

Welcome to the realm that is older than your grandads, freshers. 99 years and counting, HBTU, or HBTI as people know it, has been a home to some of the best talents in the world. A premier institution located in the heart of British occupied India, HBTI has been one of the few constant in the vast history of the past century. And age has taken a toll, like every other thing in the world. Once a top-class institute which nurtured IIT Kanpur as a mother, has now jaded in comparison. Honestly, your first impression and even the notions developed over the three-odd months would not be good, let alone the dream college from Harry Potter or Karan Johar classics. We get aghast. I did. My seniors did. My juniors did. We all do. We regret not putting that extra efforts for JEE. Or even less so as to get private colleges with better infra atleast. Many get demotivated, accept it as fate and lose the zeal. But is this the time in your life to lose the spark? At the age of 18-19? Just because you won't get everything served on a plate? Nope. That's not it. You are still better than at least 90% of the students who attempted the JEE with you. Look at the brighter side. As Shakespeare stated: "Sweet are the uses of adversity." HBTU, as I have always maintained, is a mini version of India. Different mindsets, unique culture of every department, easy and difficult people to deal with, freedom and yet no freedom, everyday fuss for pointless issues and yet a calm and easier life compared to other colleges. For those who are willing to fight any circumstances to get a positive result, you'll come here as a tender teenager and you'll leave a man of steel. Analogous to the movie "Super 30", "HBTI chhalang maarna sikha dega, aur waqt aane pe sabse lamba chhalang hamhi maareng."

Mayank Mishra
Final, B-Tech, Electrical



Piyush Kumar
1st., B-Tech, Chemical

Maybe She's my moon

You see?
That's her.
Unpredictable.
Uncertain.
Crazy.
Smart yet dumb.
Beautiful yet insecure.
Crazy yet calm.

Maybe she's like the moon...
The one that keeps on changing everyday.
The one that disappears once in a while.
The one that keeps her part hidden.
And if you're lucky, once in a while you'll get to see all of her...

All of her crazy, cute, mature, deep, dark, pretty, ugly, dirty, motherly, pure, stupid, insecure, confident parts.

ALL OF IT.
ALL OF HER.

Maybe she's like the moon indeed.
You can either complain about her changing everyday or you can just enjoy her beauty in every new way, every day!

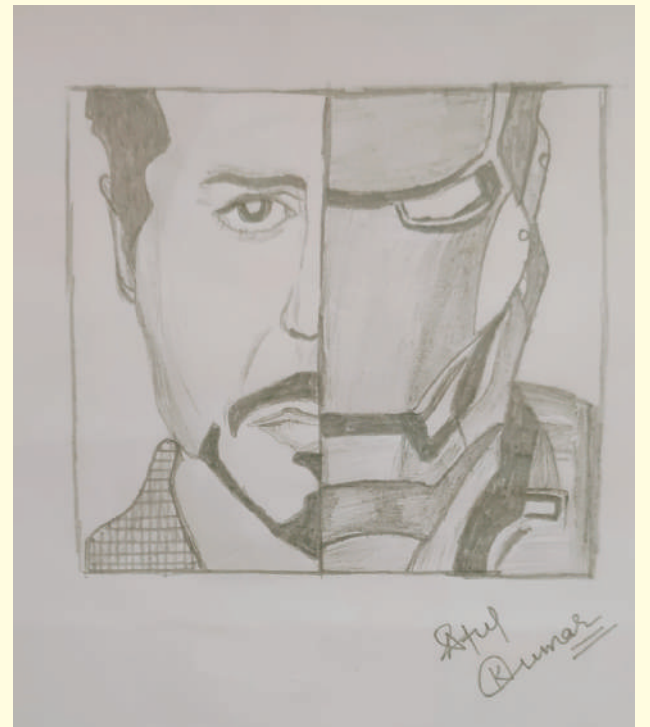
Divas Srivastava
3rd, B-Tech, Biotechnical

SUPERWOMAN WEEK

When you feel reddishness flushing into your cheek,
Don't count yourself among the bowed down or

meek,
Let it remind you that it's your Superwoman Week.
It ain't a hurdle, rather mark it as a blessing,
Days when you demand of much love and caressing,
Be it black or white, own it in either ways of dressing.
It's something within, name it though 'hormonal',
So why hide it or make it too ignorant or formal,
Rather why not discuss it and make it normal?

-Nandita Saxena
1st, MCA



Atul Kumar
1st., B-Tech, Electrical



Akanksha Singh, 1st B. Tech. Food Technology