



THE PULSE OF HBTU

FORTNIGHTLY NEWSLETTER

YEAR II

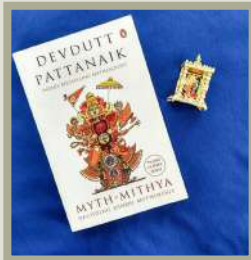
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INTERVIEW OF HONORABLE VC

Ques 1:- Honourable Vice Chancellor sir, the students of our University would like to hear a few words on your journey from HBTU as a graduate and now back to HBTU as a Vice Chancellor .

Ans 1:- Particularly, training and teaching are my passion. I like interacting with students and research scholars very much. Therefore, after working in NTPC from 1987 – 1991 and then in NPTI from 1991 to 2000, I switched over to pure academic. I joined the Delhi College of Engineering as an assistant professor, then NIT Jalandhar as a professor in Mechanical Engineering Department for a short duration. I also held the position of director of National Institute of Electronics and Information Technology for a few years. Then from Delhi Technical University I recently joined as the Vice Chancellor of this prestigious Institute HBTU on 20 th April 2021. This is brief of my journey after passing out from HBTU in 1987 to joining back HBTU as Vice Chancellor on 20 April 2021.

Ques2. HBTU was founded back in 1921 even before the prestigious IITs, it is the parent institute for IIT-K as well. But today, we are having a NIRF-2020 rank of 166! Where do you think HBTU lagged and what is your vision to revive HBTU to its 1980-90's glory?

Ans2:- HBTU formerly HBTI is a very prestigious renowned institution not only in India but globally, because it is a very old institution as it was established in 1921. Based on performance of this institute, it was given academic autonomy. The basic idea behind the upgradation of HBTU into a university was to give more autonomy to the institution but unfortunately it lagged in terms of research work which is the base of a university.

The only difference between a college and a university is that in college, the teaching level should be excellent but, in a university, both teaching and research work should be tremendous. Analysts have long pointed to the problem of students "reproducing" textbooks in examinations without applying critical thinking—and such culture is carried to higher education.

Therefore, students must be inducted into the culture of research as early as is pedagogically possible, i.e., at the undergraduate level. We are also looking forward to admit more PhD students so that we can excel in the research field as it is a major deciding component in the rank of a university. Also, working to improve the infrastructure of the university.

Ques3:- When you reflect back on your career, is there anything important you would have done differently that other young students who are aspiring into this technical world could benefit from hearing your wisdom and experience?

Ans3:- The most important part of my working are my students and they are my strength as well.

Whenever we needed any work to be done whether it is a project or research work, my students were always around me. I am a founder faculty advisor of many societies in Delhi Technical University which is my parent organization.

In Delhi Technical University, I, along with my students started a "SOLAR CAR PROJECT" and before this, there was a project called the "SUPER MILE-AGE VEHICLE"; that was founded by us in between 2005-2006. When we talk about the success of these projects, "SUPER MILEAGE VEHICLE" was the first project of its kind in India. Our students participated in the United States of America many times and they won 1st and 2nd prizes. I appreciated all these initiatives taken by my students and it was my pleasure working with them on such projects.

Ques4:- According to you, how HBTU can contribute to the New Education Policy?

Ans4:- New Education Policy quotes several factors:

1. Recognizing, identifying, and fostering the unique capabilities of each student, by sensitizing.
 2. Teachers as well as parents should promote each student's holistic development in both academic and non-academic domains.
 3. Flexibility, so that learners can choose their learning trajectories and programmes and thereby, choose their paths in life according to their talents and interests, also allow them to chase their passion by providing some flexibility in academics.
 4. Multidisciplinary and a holistic education across the sciences, social sciences, arts, humanities.
- The research component should be included from the UG level itself.
6. Providing vocational training from the 2nd or 3rd year onwards to develop not only theoretical but also practical knowledge.
- Nowadays, students from 2nd year are much aware of their choices so we should allow them to choose several subjects irrespective of their branch. From 3rd year onwards, a component of the project or research should be included so that they start proceeding in that particular direction and the moment they are promoted to the final year, they should be able to write something in that domain. After final year, they will have a clear idea in their mind about their research fields for further future.

We are also planning to start a school of management in our University which will be open to all the students of the university. Apart from this if any student wants to study any subject which is not taught in our university, then the University will make arrangements for the student to learn that subject from any other University either in India or across the globe.

Ques5:- What is the role of HBTU for a city like Kanpur and what we can do to expand our impact to national level?
Ans5:- There are several channels through which universities may affect growth and can make huge impact on national level too. Firstly, and most obviously, universities are producers of human capital and skilled workers who are more productive than unskilled workers. Recently our University has adopted some villages. The students of our University may volunteer in providing free education to the local children of these villages. If you are creating students, not only intellectual ones, but also good human beings then automatically university will outshine.

"Making better humans is way too important than better professionally".

Ques6 :- We have a large pool of departments at HBTU comprising of 7 departments of chemical technology alone, which is quite different from other colleges, so what sort of activities can we do to utilize the maximum potential of these departments?

Ans6:- HBTU is particularly famous for its chemical engineering and chemical technology branches like Paint technology, Food technology, Plastic technology and other Chemical technology branches with every department having its own discipline and strength.

Diversification is a very good asset for a University but it should have certain goals as well.

Ques7:- Recently the Honourable President of India Mr. Ram Nath Kovind made a visit to Kanpur and you made certain proposals to him regarding the multidimensional growth of the University. So, could you please brief us with that?

Ans7:- There were two agendas,

(a) To invite him for the Centennial celebration.

(b) The upgradation of this university into central university.

Ques 8 :- What part do you expect from the Students and the Alumni of our university to play in adding gems to our University's Centenary Year celebration ?

Ans 8 :- This Centenary celebration is not only for the present stakeholders of the university but also for our alumni which are from all around the globe. Since the last two months, I have been in constant touch with various chapters of our Alumni Association, not only in India but also in foreign countries. For example I am in constant touch with the US chapter of our Alumni Association and came across thousands of Alumni. I found out that they are very excited for University's Centenary Celebration and have also promised to raise some funds for the university. In view of this, We are planning to have our Alumni Celebration on 26 th November 2021 prior to the day of Centenary Celebration, which will be on 25 th November 2021. About the present students, I would like to inform you all that I have formed some committees regarding various plans for our centenary celebration. The committee may be managed by some faculty members, but for me, the base of these committees will be our present students. Without our present students, it will not be possible to make this Centenary Celebration successful. Students have to be present in each and every event and functioning. I cannot even imagine anything turning out to be successful without the support of our students. Students should be in touch with the faculty members associated with the events and perform the tasks allotted by them. We have decided to launch a Time Capsule and construct a pillar in the glory of 100 years of our University. Regarding this, we will need some students to collect data of our University's history, its transition from HBTI to HBTU and some other important things which need to be preserved for the future generations to remember. Some cultural activities have also been planned for the Centenary Celebration which will include student performances and 'Kavi-Sammelan'. Students should get in touch with the concerned committee faculties and plan out the activities.

Ques 9:- Sir, the Centenary Celebration is very near and we are planning on bringing out to the world our University's glory and the Centenary event itself, through the medium of social media. Is there anything you would like to suggest on this?

Ans 9 :- The only thing I would like to tell you on this is to start this "at the earliest". This is a brilliant idea and the working on this should start from today itself.

All the assistance regarding committees and plans will be provided to you through my office.

Ques 10 :- Sir , we think and also emphasize on the participation of our University in JOSAA Counseling as it will improve the quality and intellect of the gentry being admitted here. Also, since the HBTU Counseling and the JOSAA Counseling go parallel, parents often choose JOSAA over HBTU Counseling as it becomes risky, because the HBTU Counseling is prolonged. What is your opinion on this?

Ans 10:- I have been thinking about this lately and I think the university must be open to all students nationwide. I have come to the conclusion that we can start with the diversification of the university by giving 5% reservation to other state candidates and 5% reservation to NRI candidates and this will be done very shortly.

(Honourable VC sir makes an immediate call to respected Dean of Academic Affairs to get enlightened with the procedure of the University getting enrolled in the JOSAA counselling and even suggests the students to actively assist the concerned authority in fulfilling this motive.)

Ques 11:- Sir, there is an issue regarding our Print and Social Media Sub-Council (PSMSC) , that we do not have any available place to carry out our operations. We have been working in the University gardens since our Sub-Council started its working. Sir, can you please help us out regarding this?

Ans 11:- No worries. It will be immediately resolved. Just find the most suitable place for this Sub-Council and let me know. (Honorable Vice Chancellor calls an employee and asks him to get the selected place ready with 2-3 tables, 18-20 chairs and a RO water cooler.)

Ques 12:- It has been noticed that there is a communication gap between the students because of the East and West campuses being far apart. Sir how can we resolve this?

Ans 12 :- We have already set a committee for this and we will be sorting it out by developing a corridor which will be joining both the campuses. I think this will help us reduce the alienation of students to a large extent.

Ques13:- Sir, regarding the Library hours, earlier it used to open only till 5 p.m. Although now the timings have been extended to 8 p.m., but still some of our days require even longer working hours and after the college library is closed, we do not really have a particular place to dwell on. Again, we need your help on this Sir.

Ans13:- Again the answer for this will be the corridor. Once the corridor is made, the library can be opened 24*7. Even now also I will check how the timings can be increased.

Ques14:- Sir, we do not get Certificates and Letters of Recommendations for various One Day and similar events. How can this problem be resolved?

Ans14:- Regarding this, we already have had a discussion on the day of my first meeting. It should be the duty of the person organizing the event, be it the student or the faculty to distribute the Certificates and LORs. Whatever might be the reason due to which they were nullified, but now it is the time to retire it. Draft the Certificates, get them signed by the respective authorities and distribute them to all the participants because certificates help students in their future career.



Prof. Samsher (Vice Chancellor)

NATIONAL & INTERNATIONAL

YEAR II

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Pregnant women now eligible for Covid vaccination says Health Minister

Pregnant women can now register on the CoWIN platform or visit vaccination centres for COVID-19 shots, the government said on July 2, adding that it had shared rules and procedures with states to roll out the programme. Signaling a major policy shift that follows growing concern over exposure of expectant mothers (and their children) to the Coronavirus, the Union Health Ministry said on June 30 that pregnant women "can and should" be vaccinated against COVID-19. Until as recently as in month of June lactating women were eligible for the vaccine but pregnant women were not; the government had said this was due to a lack of safety and efficacy data since clinical trials for vaccines do not typically include pregnant women as participants. "The Health Ministry has given guidelines that the vaccine can be given to pregnant women. Vaccination is useful for them and should be given," Dr Balram Bhargava, Director-General of the Indian Council for Medical Research, was quoted as saying by news agency ANI. Vaccination for pregnant women was one of the topics discussed by the National Technical Advisory Group on Immunisation (NTAGI), in May. "Considering current situation of pandemic, NTAGI-STSC recommends pregnant women should not be excluded from vaccination because exposure probability is very high and therefore the benefit far outweighs the risk," the committee said in the minutes of its May 28 meeting. Doubts were raised about possible risks to the mother and/or child - including that of clotting (or thrombosis) with the Covidshield jab, but the committee decided "benefit far outweighs the risk". In addition to latter they said, "... before vaccination, pregnant women should be fully informed that long-term adverse reactions and safety of vaccine for fetus and child (has) not yet (been) established."

Modi has reshuffled his cabinet before state elections

Indian PM Narendra Modi has inducted 36 new ministers into his government in the biggest cabinet reshuffle since he came to power in 2014. Resignation of 12 cabinet members, including IT and Health ministers, was observed prior to the reshuffle to make way for their colleagues. The new cabinet is having 77 ministers, up from the past figure of 52. The move comes ahead of elections in important states, including the crucial battleground of Uttar Pradesh. The new cabinet has been announced amid criticism of the government over its handling of the pandemic and a faltering economy. The second wave of Covid-19 killed thousands and ravaged even small towns and cities.

The new cabinet appointments include Mansukh Mandaviya for Ministry of Health and Family Welfare; Jyotiraditya Scindia, a former opposition MP for Civil Aviation Ministry; Kiren Rijju for Law and Justice Ministry; Ashwini Vaishnaw for Railways and IT Ministry; Anurag Thakur for Information and Broadcasting; Dharmendra Pradhan for Education Ministry; Sarbananda Sonowal, former CM of Assam for Ports, Shipping and Waterways Ministry; Union Home Minister Amit Shah for Ministry of Cooperation. Modi has also inducted more women ministers this time. There were four women ministers in the earlier cabinet, but now the number is 11 with seven new members. The list includes Anupriya Patel, the leader of Uttar Pradesh-based Apna Dal (Sonelal) - an ally of the BJP. Ms Patel was also a minister during Mr Modi's first term which began in 2014. Some of the other names are Meenakshi Lekhi, Annapurna Devi and Pratima Bhaumik.

Health Minister Harsh Vardhan is the most prominent minister who resigned on July 7. Dr. Vardhan has been widely criticised for his handling of the pandemic. In early March, he declared the country was "in the endgame" of the pandemic - less than a month before the second wave ripped through India, overwhelming hospitals and even crematoriums. India's vaccination programme has also been criticised. Just over 5% of Indians have been fully vaccinated and 22% have received at least one dose. The pace of vaccination has picked up in recent weeks, but it's not enough to meet the target of fully vaccinating all eligible Indians by the end of this year.

IT minister Ravi Shankar Prasad is another prominent name who has been dropped from the cabinet. His resignation comes amid growing tensions between the federal government and social media platforms over India's controversial new IT laws. Environment minister Prakash Javadekar and education minister Dr Ramesh Pokhriyal Nishank have also resigned. Experts say state elections in 2022 in Uttar Pradesh, Goa, Uttarakhand, Manipur and Punjab appears to have influenced some reshuffle decisions.

PM Modi inaugurated 9 new Medical Colleges in UP

With the aim of providing all the districts with one medical college, the Uttar Pradesh Government had announced setting up nine new medical colleges in the State in the month of July. These new medical colleges were inaugurated by Prime Minister Narendra Modi on July 9. These new medical colleges would be set in Deoria, Etah, Fatehpur, Ghazipur, Hardoi, Jaunpur, Mirzapur, Pratapgarh, and Siddharthnagar districts. With the inauguration of these 9 new medical colleges, the total number of medical colleges in the State would go up to 48. Construction work is going on for setting up 13 more medical colleges in the State. Uttar Pradesh Chief Minister Yogi Adityanath has announced that there should be a medical college in each district to prevent patients from traveling to other districts for treatment. The official statement by the Uttar Pradesh Government mentioned, "It is a belief of Chief Minister Yogi Adityanath that every district should have a medical college. In the state with the highest population, there were only 12 medical colleges till 2017 and now the number under the present government has increased to 48 so far. Construction work of 13 more medical colleges is going on at a great pace." "The government has already recruited around 70 percent faculty of the new medical colleges. The appointment process of over 450 faculty members in these colleges is going on. CM has directed the authorities concerned to ensure full transparency in the recruitment process," the statement fur-

ther added. "It is for the first time in the history of UP that such a large number of medical colleges will be inaugurated simultaneously," they said. **The Second Indian-Born Woman To Fly To Space: Sirisha Bandla**

Sirisha Bandla has joined five others including Richard Branson to fly to space aboard 'VSS Unity' of Virgin Galactic. It was scheduled to launch on July 11 from New Mexico. Bandla is now the second Indian-born woman to go to space, the first being Kalpana Chawla. Bandla has joined the 6-member crew as a researcher experience. The 34-year-old is also the fourth Indian to ever go to space; preceded by Rakesh Sharma, Kalpana Chawla and Sunita Williams. The Virgin Galactic was set to launch nine days ahead of Jeff Bezos' Blue Origin mission. Taking to Twitter, Bandla shared she was "incredibly honoured" to be part of the crew. She further expressed her gratitude towards the overwhelming number of messages she has received congratulating her. Bandla started working at Virgin Galactic in 2015 and is currently Vice President, Government Affairs and Research Operations of the company. According to an Economic Times report, she was born in Guntur, Andhra Pradesh and grew up in Houston, Texas. She is a graduate in aeronautical engineering from Purdue University and also holds a Master of Business Administration degree from Georgetown University. Prior to working at Virgin Galactic, she worked as an aerospace engineer in Texas, following which she had a job in space policy at the Commercial Spaceflight Federation (CSF). Former Andhra Pradesh Chief Minister N Chandrababu Naidu on July 2 tweeted two pictures of the VSS crew and said "Indian-origin women continue to break the proverbial glass ceiling."

Mithali Raj Takes Top Spot In ICC Women's ODI Rankings For 8th Time In Career

India women's captain Mithali Raj's excellent show in the three-match series against England has helped her grab the No.1 position in the ICC Women's ODI Player Rankings for the eighth time in her stellar 22-year international career. The 38-year-old struck 59 in the second match and then guided India to a four-wicket victory in the final match of the series with an unbeaten 75, gaining four spots to reach the top of the ladder in the latest weekly rankings update for women, carried out on Tuesdays. Mithali Raj had started the tour in the eighth position but her series-topping aggregate of 206 runs has helped her reclaim the top position, which she had last occupied in February 2018. The first time she reached the number one position was in April 2005 after scoring an unbeaten 91 against New Zealand at the ICC Women's Cricket World Cup in Potchefstroom and the difference of more than 16 years at No.1 is the largest for any woman batter. England's Janette Brittin was number one for the first time in 1984 and the last time in 1995, while New Zealand's Debbie Hockley is the only other female batter to have been No.1 more than 10 years apart - first achieving the feat in 1987 and for the final time in 1997. In other gains for India players, big-hitting opener Shafali Verma's scores of 44 and 19 in the last two ODIs of the series sees her gain 49 places to reach 71st position while Jhulan Goswami is up to four places to 53rd. In the bowlers' list, all-rounder Deepthi Sharma is up to one place to 12th after finishing with figures of three for 47 in the final match.

End of an Era: Legendary actor Dilip Kumar dies at 98

Legendary Bollywood actor Dilip Kumar passed away on July 7. The actor had been recuperating from age-related health issues for days and had to be admitted to the hospital multiple times. He was admitted to the ICU of Mumbai's Hinduja Hospital on June 30. He was buried with full state honours at Juhu Crematorium at Santacruz in Mumbai around 5 p.m. later that day, in the presence of family and friends. Kumar's wife Saira Banu had been with him throughout. Sharing the sad news, his family friend Faisal Ferooqi tweeted through the actor's handle: "With a heavy heart and profound grief, I announce the passing away of our beloved Dilip Saab, few minutes ago. We are from God and to Him we return" Many Bollywood celebrities including filmmaker Madhur Bhandarkar, Vidya Balan, Sidharth Roy Kapur, Shabana Azmi and others arrived at Dilip Kumar's house to pay their last respects to the legendary actor. Earlier, Saira Banu had assured fans that Kumar's condition was stable. Banu's last tweet read, "Dilip Kumar Sahab's health is still stable. He is still in ICU, we want to take him home but we are waiting for doctors' approval as they know his medical condition as soon as doctors allow, will take him home. He will not be discharged today. Need prayers of his fans, he will be back soon."

World must invest more to avoid covid 19 repeat: G20 pannel

The world must invest much more to avoid a repeat of the coronavirus pandemic, experts convened by the G20 warned the next health crisis could come within a decade. It said even as Covid-19 rages, "there is every likelihood that the next pandemic will come within a decade - arising from a novel influenza strain, another coronavirus, or one of several other dangerous pathogens. Its impact on human health and the global economy could be even more profound than that of COVID-19." The report recommended governments collectively commit to increase financing for prevention and preparedness by at least \$75 billion over the next five years. This would fund a coordinated surveillance and research network for infectious diseases, more resilient healthcare systems, better governance to manage crises and an improved global capacity to produce vaccines.

Afghanistan not heading to dark age ties with India intact says envoy

Afghanistan is not heading back to the "dark age" as 40 member states of the North Atlantic Treaty Organisation (NATO) are currently fighting a war on terror, said the country's envoy to India Farid Mamundzay. After the withdrawal of the NATO forces, it was expected that the country would have to face a difficult period. Speaking on ties with India, Mamundzay said it has been a significant associate of Afghanistan and can play a constructive role in "our peace process, together with other regional actors."

"India can utilise its convening power to put more pressure on the Taliban through diplomatic channels to come to the negotiating table. We are concerned over the intensity of violence and we call on the Taliban that they need to cease violence since the withdrawal of international forces is complete to a larger extent. If's time to put an end to the bloodshed of innocent people," he said while urging the latter to cease violence as the process of withdrawal of US troops nears completion. Mamundzay's statement came hours after AFP reported that Taliban negotiator Shahabuddin Delawar has claimed the group now controls "85 per cent of Afghanistan's territory", roughly covering some 250 of the country's 398 districts.

Joe Biden nominates LA mayor Eric Garcetti for India ambassador

President Joe Biden has nominated Los Angeles Mayor Eric Garcetti to serve as ambassador to India, the White House said, selecting a high-profile ally to serve in one of the most difficult diplomatic posts. Garcetti, if confirmed, would be dispatched to India as it has been overwhelmed by a surge in coronavirus infections and deaths. Garcetti, who considered a 2020 White House bid and later became part of Biden's inner circle, emerged as a widely discussed possibility to join Biden's Cabinet last year. But he took himself out of the running, saying the raging coronavirus crisis made it impossible for him to step away. In picking Garcetti, Biden is rewarding a loyalist who was one of his national campaign co-chairs, who served on the committee that vetted his pool of vice-presidential contenders and who served as one of several co-chairs for Biden's inaugural committee.

Diamond sold for \$12 million in cryptocurrency

A 101.38-carat diamond was sold at Sotheby's for HK\$95.1 million (\$12.3 million) in cryptocurrency, becoming the most expensive piece of jewellery sold through such type of payment, the auction house said. The pear-shaped diamond was sold to an unidentified private collector, Sotheby's said in a statement. Before the sale, the international auction house said it would take Bitcoin or Ether as payment for the diamond, which fetched less than the estimate of as much as \$15 million in the single-lot offering in Hong Kong. The auction was live-streamed and attracted no more than a dozen bids. According to Sotheby, it was the most expensive physical object ever publicly offered for purchase with cryptocurrency.

US troops to be completely withdraw from Afghanistan by August

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The United States expects to finish withdrawing its troops from Afghanistan by the end of August, officials said Friday, after announcing all American and NATO soldiers had left the conflict-scarred nation's biggest airbase. Following 20 years of war, US President Joe Biden had set a September 11 deadline for the final pullout of the few remaining soldiers on the ground. The news that American troops had left Bagram Air Base fueled expectations that the pullout would be completed within days, but White House Press Secretary Jen Psaki said the troops would be out of the country "by the end of August."

"The president has long felt... that the war in Afghanistan cannot be won militarily," she told reporters, adding that the United States would continue to provide security systems and humanitarian assistance in the months ahead. Bagram served as the linchpin for US-led operations in the rugged country, where the long war against the Taliban and their Al-Qaeda allies started in 2001 following the September 11 attacks. A US defence official confirmed their departure, while the Taliban said it welcomed the latest phase of the pullout. "Their full withdrawal will pave the way for Afghans to decide about their future between themselves," spokesman Zabihullah Mujahid said.

130 countries back deal on global minimum tax plan pushed at G7 Summit

Summit

130 countries have backed a global minimum tax as part of a worldwide effort to keep multinational firms from dodging taxes by shifting their profits to countries with low rates. The agreement announced by the Organization for Economic Cooperation and Development also provides for taxing the largest global companies in countries where they earn profits through online businesses but may have no physical presence. The agreement followed a proposal from US President Joe Biden for at least a 15% rate, an initiative that propelled the talks toward meeting a deadline for a deal by the middle of this year. The deal now will be discussed by the Group of 20 countries at meetings later this year in hopes of finishing the details in October and implementing the agreement in 2023. Under the deal, countries could tax their companies' foreign earnings if they go untaxed through subsidiaries in other countries. That would remove the incentive to use accounting and legal schemes to shift profits to low-rate countries since the profits would be taxed at home anyway.

Wildfire: 1,000 people evacuated in and around western Canadian village

Amid an unprecedented heatwave in Canada, which is believed to have killed hundreds, wildfires charred the western Canadian town of Lytton, forcing the authorities to evacuate 1,000 residents in and around the town, news agencies reported. The province of British Columbia has recorded 62 new fires in the past 24 hours. Almost 90 per cent of Lytton, which is 250 kilometres northwest of Vancouver, has been burnt. Prime Minister Justin Trudeau spoke with British Columbia Premier John Horgan and assured him of the government of Canada's support for the people of Lytton. Lytton has 250 residents who were evacuated, a day after the temperature soared to 49.6 degrees Celsius (121 degrees Fahrenheit). The evacuation order was extended to residents of about 100 properties north of Lytton. So far, no injuries or death related to the fires have been reported. In the past 5 days, Vancouver reported 486 "sudden and unexpected" deaths, which is far above the regular number of 165 deaths for a similar period. The cause of the wildfire is yet to be ascertained, while the fire has been classified as "out of control" and is estimated to be 6,400 hectares in size, reports said.

HBTU, KGMU to excel collectively in Biomedical Sciences



Gone are the days of tedious X-rays or MRI reports: With digitalization touching each aspect of our lives, three-dimensional study of body organs is not a forlorn hope. Three-dimensional examination will not only help have a better scanning of organs but also an effective diagnosis of body segments. Soon the combined efforts of the esteemed universities namely, Harcourt Butler Technical University (HBTU) and King George Medical University (KGMU) will transform this vision into reality. A Memorandum of Understanding was signed between Lt Gen Bipin Puri, vice chancellor of King George's Medical University, Lucknow, and Prof Samsheer, vice chancellor, Harcourt Butler Technical University, Kanpur at KGMU on 8th July 2021. The agreement revolved around the notion of establishing a collaborative program in healthcare technologies using reverse engineering and 3D printing. "This will bring together the disciplines of engineering and medicine to conduct research and development in the field of biomedical application," said Dr Sudhir Singh, spokesperson, KGMU. The professionals of Mechanical Engineering Department of HBTU have been devoted to the technology of 3D printing since the past two years. Three-dimensional printing machines can generate a representation of body organs through radiographic images, which in turn will help in the treatment of chronic neurotic or cardiac disorders, explained Prof Jitendra Bhaskar. Collaboration between the universities will simultaneously behave as an exchange programme, since students will have the advantage of pursuing training under both the universities, periodically. Dignitaries like Prof Divya Mehrotra, Faculty In-charge of the 3D DHR GeMS Lab, Prof RK Garg, Faculty in charge MoU Cell at KGMU, graced the event as well.

Webinars on MATLAB for Signal Processing

As a part of the centenary year celebration, the Department of Electronics Engineering, HBTU Kanpur had organized two day free webinars on "MATLAB for Signal Processing". The webinars were conducted on 12th and 14th of July. The guest of honor was Mr. Himanshu Vashishtha (HBTU Alumni), currently working as Deputy Manager (Materials) at India Government Mint, Noida. He said that it is a proud moment for all the Harcourtiens that the university has come so far and also that it will keep serving the nation in the best possible manner. He shared his experience on working with MATLAB in his robotics project and its usefulness in simulating mathematical models during his M.Tech thesis. The Chief Guest of the webinar was Sh. Munish Kumar Jain (HBTU Alumni), presently working as Chief of Operations India for a Finnish Co.-GSF ltd. Helsinki. In his address to the attendees, he said, "We Indians are a very intelligent breed and our contributions to the world are immense." He described the university as a "premium university" and a "heritage institute", and encouraged all the participants to adopt a little bit more proactive approach to the alumni so that the university is well known to the industry. The speaker and convener of the webinar was Prof. Krishna Raj, Head of Department, Electronics Engineering, HBTU Kanpur. His simple teaching methods encouraged active participation from 149 students who rated the event at 4.58 out of 5. The parameters of rating were content and relevancy, content delivering capacity of the speaker, structure and organization of the lectures. Starting from the very elementary concepts to the advanced concepts of signal processing, the webinar provided great insights into the practical aspects of MATLAB. Prof. Samsheer, Hon'ble Vice-Chancellor, HBTU Kanpur was the patron of the program. Dr. Manish Kumar Singh and Dr. Suman Kumar Mitra were the coordinators of the event.

Successful completion of the virtual FDP cum STTP program

The five-day virtual FDP cum STTP program on "Simulation, Modelling, and Application of Advanced semiconductor devices" which was organized as a part of the centenary year celebration of HBTU, Kanpur was successfully concluded on 9th July 2021. The program was inaugurated by Prof. Krishna Raj (HOD Department of Electronics Engineering, HBTU Kanpur). The program began with the introduction of the department, its faculty members, and emphasis was laid on the vision and mission of the department. Sir took the opportunity to highlight the department's achievements and contributions in the various online curriculum like NPTEL, SWAYAM, MOOCs, etc. Prof. Samsheer, Hon'ble Vice-Chancellor HBTU, Kanpur, who was also the patron of the program highlighted the importance of these programs which play an integral role in keeping the faculty members updated with the current advancements of the field so that they are equipped with the knowledge necessary to face and answer the questions of their students. He emphasized the importance of simulation in an engineer's life while recalling his time in NTPC where simulation was an important part of his job. The IEEE sponsored program was a huge success with 267 participants from all corners of the country as well as from Karachi and Switzerland. There were 122 faculty participants, 05 industry participants, 35 research scholars, 25 PG. participants and 80 UG participants. Among the industries, All India Radio (Agra), DRDO, GPI Textile, and Indus Towers Ltd. were the participants. 82 institutes from across the country participated actively in the program with participants from IITKGP, NIT Patna, NIT Silchar, AKTU Lucknow, etc. The speakers of the program were Prof. Partha Pratim Sahu (Senior Member, IEEE), Prof. Krishna Raj (professor and HOD Department of Electronics engineering), Dr. N.B. Balamurugan (Senior Member, IEEE), Dr. Sunil Pandey (Analog Design Engineer, Intel Corp. India), Dr. Rupam Goswami (Member IEEE), Dr. Rajesh Saha (MNIT Jaipur, Senior Member, IEEE), Dr. Kavindra Kandpal (IIIT Allahabad Senior Member IEEE) and Dr. Suman Kumar Mitra (Member, IEEE), who was also the coordinator of the program. The fact that the program succeeded in its mission to enhance the teaching skills of the faculty members and increase the problem-solving capacity of students was evident from the excellent feedback collected from the participants. With a minimum of 4.56 and a maximum of 4.8 out of 5 ratings, the program can be said to have given an outstanding performance in the fields of the relevance of the content, the delivery capacity of the speaker, and the overall structure of the presentation. The valedictory session was organized on 9th July 2021. Chief Guest Dr. Ashutosh Karnataka (Alumni HBTU, Kanpur) Hon'ble Technical Member (P& NG), Appellate Tribunal for Electricity, Govt. of India and Guest of Honor: Mr. Sushil Kumar (Alumni 1995, Electronics HBTU Kanpur, GM at GAIL), Hon'ble Vice-Chancellor HBTU, Kanpur Prof. Samsheer gave their blessings. The program was concluded with a Vote of Thanks by the Coordinator of the Program Dr. Manish K. Singh and certificates were provided to all the participants.

"Let's crack the GATE "

The Graduate Aptitude Test in Engineering (GATE) is an examination that primarily tests the comprehensive understanding of various undergraduate subjects in engineering and science for admission into the Master's Program and Job in Public Sector Companies. GATE is conducted jointly by the Indian Institute of Science and seven Indian Institutes of Technologies at Roorkee, Delhi, Guwahati, Kanpur, Kharagpur, Chennai (Madras) and Mumbai (Bombay) on behalf of the National Coordination Board - GATE, Department of Higher Education, Ministry of Education (MoE), Government of India. With a proactive vision to increase awareness about the GATE examination among its students HBTU, Kanpur hosted a free webinar on "Let's Crack the GATE", in association with TEQIP Faculties on 13th July 2021 through YouTube live to give them a brief idea about effective preparation strategies they can adopt to achieve their desired result. The webinar enlightened the students with the various prospects after GATE and made them aware of the vast availability of the free online GATE material. The fact that the webinar was a huge success was quite evident from the overwhelming participation and response received from the participants. Prof. Samsheer, Hon'ble VC of HBTU Kanpur, the patron of the webinar while Prof. Krishna Raj, Head of Dept. ETD HBTU Kanpur was the Convener and the Chairperson. The prominent speakers of the webinar were Mr. Anshul Awasthi (Asst. Professor), Ms. Bijaylaxmi Sahoo (Asst. Professor), and Mr. Dibyanshu Pandey (Asst. Professor). The webinar coordinated by Dr. Suman Kumar Mitra (Asst. Prof Dept. ETD HBTU Kanpur).

650 saplings planted in the HBTU West Campus during the tree plantation drive

On the occasion of Van Mahotsava, Harcourt Butler Technical University organized a tree plantation drive thus, contributing its part to the Uttar Pradesh government's record-breaking grand feat to plant 30 crore trees by planting 650 saplings in the universities' West Campus. The evening of 6th July 2021 was witness to the successful plantation drive that truly upholds the slogan of the annual forest festival "aao sapri bhool sudharein, paryavaran ka roop nikharein". The event was inaugurated by planting the sacred sandalwood saplings by Hon'ble Vice-Chancellor Prof. Samsheer and Chief Guest Dr. Raj Shekhar, IAS, Divisional Commissioner, Kanpur. Prof. Alak Kumar Singh (Dean, School of Chemical Technology), Dr. Neeraj Kumar Singh (Registrar), Prof. Pradeep Kumar (Controller of Examination) participated actively in the drive and planted mango saplings. The faculty members of the university were also active participants of the events. 650 tree saplings, those of mango, guava, pomegranate, Indian gooseberry (awla), amalata, lemon, Ashok, Jamun, peepal, tamarind, lemon, mahua, and kaitha were planted. During the celebration, VC sir took the opportunity to propose connecting the East and West campuses of the university. Dr. Raj Shekhar responded to the proposal positively and assured that it would be brought to the notice of hon'ble chief minister Yogi Adityanath. Hon'ble vice chancellor also remembered and acknowledged the hardships being faced by his students.

A FELICITOUS INITIATIVE TOWARDS CENTRAL UNIVERSITY

Central University is established by an Act of Parliament and is under the direct purview of the Department of Higher Education (DHE) under the Ministry of Human Resource Development (MHRD), these universities are funded and run by the Central government and have their perks. A commendable proposal has been put forward to the Union Education Ministry by the honorable Prof. Samsheer, VC of HBTU Kanpur, and a meeting scheduled on 20th July to discuss the same. The request was put forward before the respected President Ramnath Kovind on his Kanpur visit. The administration started working instantly on the prerequisites of the proposal of turning HBTU into a central university, after receiving an affirmative response from the President. After HBTU receives the status of CENTRAL UNIVERSITY, the research and study work here will get an extraordinary boost, new courses will be introduced, the faculty number and the annual budget will increase too and therefore one can say that this auspicious endeavor is much awaited.

SEWING AND STITCHING COMPETITION ORGANISED ON THE OCCASION OF WORLD POPULATION DAY



The exponentially rising rates of population growth can be curbed only when the rather deep-rooted illiteracy and poverty are eliminated from the system. To spread this message loud and clear, on the occasion of World Population Day 11th July 2021, Harcourt Butler Technical University, Kanpur organized a sewing and stitching competition with the help of Nav Chetan Mahila Samiti. More than sixty women and young girls participated in the event and showcased their talents by adorning the rather dull pieces of cloth with beautiful intricate embroidered patterns. The skills that the participants showcased while stitching the cloth pieces on their Singer machines were admirable. Dr. Vikas Yadav, Dr. Archana Singh, Prof. Reena Singhal, Ms Ankita Gautam represented the university at the event. The Committee Secretary of Nav Chetan Mahila Samiti Smt. Neetu Gupta and the Samiti's Chairman Sarita Chaurasiya rewarded all the participants of the event. Hon'ble Vice-Chancellor HBTU, Kanpur Prof. Samsheer congratulated all the participants of the competition. Prof. Neeraj Kumar Singh, Registrar HBTU, Kanpur extended thanks to all the participants and the members of the Women Education Centre, whose cooperation made the event a successful one.

"Dr. RK Trivedi"

Former professor and head of Oil Technology Department of HBTU and former president of Oil Technologist's Association of India (OTAI) "Dr. RK Trivedi" has been appointed as the President of the South Asian Regional Standards Organization. He has been given this responsibility for standardization and certification of food and agriculture products.



EDITORIAL

YEAR II

JULY 20 2021, TUESDAY

AFGHANISTAN -- OFF THE STATES ?

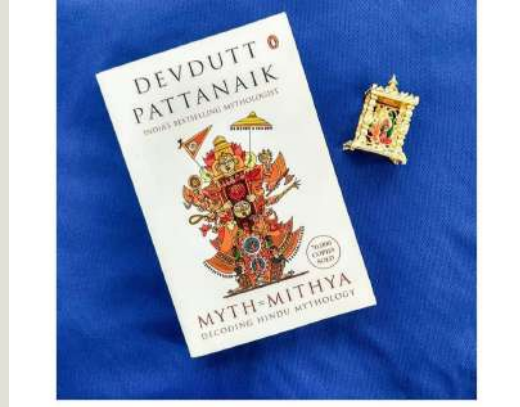


The war in Afghanistan is the longest ever waged by the United States. It started on October 7, 2001 following the September 11 attacks. Looking into statistical in(s) and out(s), United States has always provided the largest military contingent. As of February 2020, when Washington signed a deal with the Taliban committing to withdrawing its troops, the Pentagon estimated that around 14,000 remained in the country.

Now the theme of the discussion shifts to the aspect of- what remains at the stake, when government and the military contingent are struggling too hard? Or, what for all these enclosures and deal breakers? Talking about the losses, Just over 38,000 civilians were killed between 2009 and the end of 2020, according to the United Nations Assistance Mission in Afghanistan, which began systematically recording civilian casualties in 2009. The deadliest year was 2018. More than 70,000 others were wounded over the same period. In the last three years, more than 395,800 Afghans have been displaced, the Ministry of Refugees and Repatriation said. The United States has paid the highest price in terms of foreign fatalities in Afghanistan, with more than 2,400 military personnel killed and more than 20,700 wounded. As for other NATO coalition members, Britain lost the second-highest number of personnel, with 455 killed, according to icasualties.org, which monitors the dead and wounded in conflicts such as Afghanistan. The Afghan government no longer publishes data for losses within its army, which are significant, but President Ashraf Ghani in 2019 said more than 45,000 members of the country's security forces have been killed since 2014, when he became leader. The mentioned numbers can be really disturbing to be taken into consideration, and at the end of everything going on right now, all what's left is that The Taliban continued making key advances as foreign troops withdraw from the war-ravaged country, taking over the important Spin Boldak border crossing with Pakistan. Cutting the superficial (though stone-proofed) foam, and getting into concrete bases, the hour needs something else. It demands forums on women education and their rights. Not only this but to focus on setting up hands together with the world, wiping out the uncertainties and what not. But the clouds are denser than they appear to be. As they say, all of it is truly uncertain and gloomy. Also, too fluid right now.

Vaishnavi Tripathi (II B.Tech, CHE)
Editor, PSMSC.

BOOK REVIEW : MYTH = MITHYA



What matters more: the mundane world of space and time or the transcendental realities that are dimensionless and timeless ? Does worldliness justify existence? Or is the world with it's conditional truths aand transient values to be shunned, outgrown, in the quest for something greater, more permanent and absolute? Do we really exist? Our world really exist because we are aware of it. This book by 'Devdutt Pattanaik' tells sacred Hindu stories and decodes Hindu symbols and rituals, it reveals the myths that influence our culture, it helps in better understanding of what is dharma and why it exist . It successfully manages to telescope the confused space of Hindu Cosmos and it's logical interpretation. It unfolds relation between Myth and Mithya , that they are really same ; Myth is reality and Reality is Myth. From the concept of jiva to the tensions between the stillness of soul and the restlessness of matter this book enlightens the reader with the philosophy behind the relative truths, many a times taken as absolute by its followers. A 3/5.

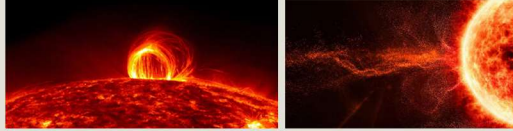
Swarn Srivastava (III B.Tech, ChE)
Senior Editor, PSMSC.

SCIENCE & TECHNOLOGY

YEAR II

JULY 20 2021, TUESDAY

Sun blasts biggest solar flare in 4 years, causes radio blackout over Atlantic



The Sun emitted a significant solar flare peaking at 10:29 a.m. EDT on July 3, 2021. NASA's Solar Dynamics Observatory, which watches the Sun constantly, captured images of the event. Solar flares are powerful bursts of radiations. Harmful radiation from a flare cannot pass through Earth's atmosphere to physically affect humans on the ground, however when intensity is enough, they can disturb the atmosphere in the layer where GPS and communications signals travel. The flare was classified as an X1.5-class flare. X-class denotes the most intense flares, while the number provides more information about its strength. An X2 is twice as intense as an X1, an X3 is three times as intense, etc.

Researchers develop material that gives robots self-repair ability

Singapore researchers have developed a smart foam material that allows robots to sense nearby objects, and repairs itself when damaged, just like human skin. Artificially innervated foam, or AiFoam, is a highly elastic polymer created by mixing fluoropolymer with a compound that lowers surface tension. This allows the spongy material to fuse easily into one piece when cut, according to the researchers at the National University of Singapore. To replicate the human sense of touch, the researchers infused the material with microscopic metal particles and added tiny electrodes underneath the surface of the foam. When pressure is applied, the metal particles draw closer within the polymer matrix, changing their electrical properties. These changes can be detected by the electrodes connected to a computer, which then tells the robot what to



A Super New Theory to Explain Superconductivity

A scientist from the Division of Quantum Condensed Matter Physics at the University of Tsukuba has formulated a new theory of superconductivity. Based on the calculation of the "Berry connection," this model helps explain new experimental results better than the current theory. The work may allow future electrical grids to send energy without losses. The established way of thinking about the transition from normal to superconducting is called the Bardeen-Cooper-Schrieffer (BCS) theory. In this model, as long as thermal excitations are kept small enough, particles can form "Cooper pairs" which travel together and resist scattering. As an illustration, Josephson junctions are formed when two superconductor layers are separated by a thin barrier made of normal metal or an insulator. Although widely used in high-precision magnetic field detectors and quantum computers, Josephson junctions also do not fit neatly the inside BCS theory. Thus, this research may lead to advancements in quantum computing as well as energy conservation. Rare meteorite found in UK gets official classification The rocky material that fell to Earth in a fireball over the Cotswold town of Winchcombe in February has had its classification formally accepted. As per UK scientists, the object dates back to the very beginning of the Solar System, some 4.6 billion years ago. It is now being deemed as extremely valuable. As per the formal classification, it was concluded that that the dark grey-to-black material picked up in Gloucestershire earlier this year is now absolutely recognised as being meteoritic in nature. The term "Winchcombe" is used to describe it. It is mostly made up of phyllosilicates, or clays. The H₂O is bound up in those minerals. It is said to be "Mighei-like", which is a reference to a particular type specimen, or standard, of meteorite that was found in Ukraine in the late 19th Century.

NASA's satellite data used to track ocean microplastics from space

Scientists from the University of Michigan have developed an innovative way to use NASA satellite data to track the movement of tiny pieces of plastic in the ocean. Microplastics form when plastic trash in the ocean breaks down from the sun's rays and the motion of ocean waves. These small flecks of plastic are harmful to marine organisms and ecosystems. Microplastics can be carried hundreds or thousands of miles away from the source by ocean currents, making it difficult to track and remove them. Currently, the main source of information about the location of microplastics comes from fisher boat trawlers that use nets to catch plankton - and, unintentionally, microplastics.

Making Seawater Drinkable in Minutes: A New Alternative Desalination Membrane

According to the World Health Organization, about 785 million people around the world lack a clean source of drinking water. Despite the vast amount of water on Earth, most of it is seawater and freshwater accounts for only about 2.5% of the total. One of the ways to provide clean drinking water is to desalinate seawater. The Korea Institute of Civil Engineering and Building Technology (KICT) has announced the development of a stable performance electro spun nanofiber membrane to turn seawater into drinking water by membrane distillation process.

Microsoft giving Rs.1.1 lakh pandemic bonus to employees worldwide

Microsoft is handing out bonus pay to employees worldwide as a reward for making it through the trying pandemic year. The \$1,500 bonuses are meant to recognize the "unique and challenging fiscal year that Microsoft just completed," according to an internal memo from Microsoft chief people officer Kathleen Hogan that was viewed by the outlet. A Microsoft representative confirmed to Insider in an email that it did give out a bonus, but did not confirm the amount. "As a symbol of our appreciation for coming together as One Microsoft during a uniquely challenging year, we are proud to recognize our employees with a one-time monetary gift," the spokesperson said. All told, Microsoft is paying out about \$200 million to roughly 130,000 employees, The Verge estimates. That's a drop in the bucket compared to Microsoft's \$53 billion profit in 2020. Lots of companies have taken a similar approach to workers during the coronavirus pandemic.



Special "Time Neurons" in the Human Brain Encode Specific Moments in Time

Neurons in the hippocampus fire during specific moments in time, according to research recently published in JNeurosci. The cells may contribute to memory by encoding information about the time and order of events. Episodic memories involve remembering the "what, where, and when" of past experiences. The "where" may be encoded by place cells in the hippocampus, which fire in response to specific locations. Rodents have hippocampal neurons that fire in response to specific moments in time - the "when" - but until recently it was not known if the human brain contained them too. Reddy et al. recorded the electrical activity of neurons in the hippocampus of epilepsy patients undergoing diagnostic invasive monitoring for surgery. The researchers could decode different moments in time based on the activity of the entire group of neurons. These results demonstrate the human brain contains time-tracking neurons.

Flying car completes first-ever test flight between airports in 35 minutes

A prototype flying car has completed the first-ever test flight between airports in Slovakia, taking to the skies and landing in 35 minutes. AirCar, described as a "dual-mode car-aircraft vehicle" in a news release, travelled from the international airport in Nitra to the airport in Bratislava on Monday. According to the company that created it, Klein Vision, the flying car completed its 142nd successful landing and the flight marked a key development milestone. With a click of a button, the aircraft turned into a sports car in under three minutes - and it was driven by its inventor, professor Stefan Klein. After exiting the AirCar following the test, Klein declared the flight has started a "new era of dual transportation vehicles."

Rare meteorite found in UK gets official classification

The rocky material that fell to Earth in a fireball over the Cotswold town of Winchcombe in February has had its classification formally accepted. As per UK scientists, the object dates back to the very beginning of the Solar System, some 4.6 billion years ago. It is now being deemed as extremely valuable. As per the formal classification, it was concluded that that the dark grey-to-black material picked up in Gloucestershire earlier this year is now absolutely recognised as being meteoritic in nature. The term "Winchcombe" is used to describe it. It is mostly made up of phyllosilicates, or clays. The H₂O is bound up in those minerals. It is said to be "Mighei-like", which is a reference to a particular type specimen, or standard, of meteorite that was found in Ukraine in the late 19th Century.

Climate Changed the Size of Our Bodies - And Our Brains



An interdisciplinary team of researchers, led by the Universities of Cambridge and Tübingen, has gathered measurements of body and brain size for over 300 fossils from the genus Homo found across the globe. By combining this data with a reconstruction of the world's regional climates over the last million years, they have pinpointed the specific climate experienced by each fossil when it was a living human. The study reveals that the average body size of humans has fluctuated significantly over the last million years, with larger bodies evolving in colder regions. Larger size is thought to act as a buffer against colder temperatures: less heat is lost from a body when its mass is large relative to its surface area. The results are published today (July 8, 2021) in the journal Nature Communications.

"Wonder Material" Can Be Used to Detect COVID-19 Virus Quickly and Accurately



Researchers at the University of Illinois Chicago have successfully used graphene - one of the strongest, thinnest known materials - to detect the SARS-CoV-2 virus in laboratory experiments. The researchers say the discovery could be a breakthrough in coronavirus detection, with potential applications in the fight against COVID-19 and its variants. In experiments, researchers combined sheets of graphene, which are more than 1,000 times thinner than a postage stamp, with an antibody designed to target the infamous spike protein on the coronavirus. They then measured the atomic-level vibrations of these graphene sheets when exposed to COVID-positive and COVID-negative samples in artificial saliva. These sheets were also tested in the presence of other coronaviruses, like Middle East respiratory syndrome, or MERS-CoV.

ISRO satellite launch: Geo Eye over Indian Ocean, internet connectivity in J&K, NE

Indian Space Research Organisation (ISRO) on Wednesday launched high throughput communication satellite GSAT-29 from the Satish Dhawan Space Centre at Sriharikota in Andhra Pradesh. The exercise was called GSLV MkIII-D2 mission. The Geosynchronous Satellite Launch Vehicle Mark III (GSLV Mk-III) carried GSAT-29 off the ground on its second developmental flight at 5:08 in the evening. The load carried by GSLV Mk-III included what is being called as Geo Eye to monitor sensitive regions along the borders.

New beetle species found in 230-mn-yr-old faeces: Study Shows

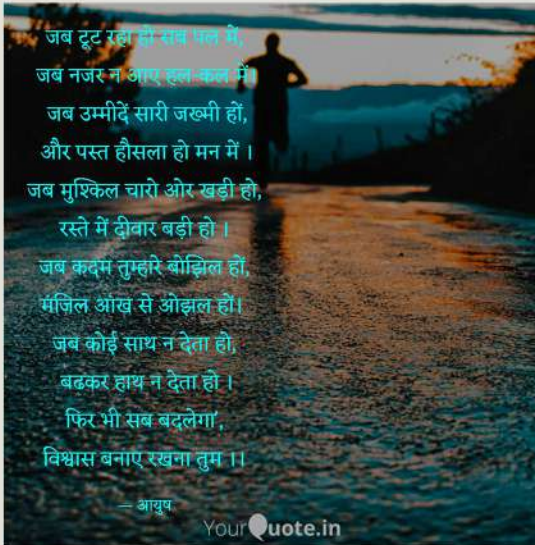


Researchers have found a new, but extinct, beetle species that was inside a 230-million-year-old fossilised faeces specimen that was found in Poland several years ago, Uppsala University reported. Named *Triamya coprolithica*, the beetle was found in the poop of *Silesaurus opolensis*. The coprolite, fossilised faeces, was scanned using a special technique called synchrotron microtomography.

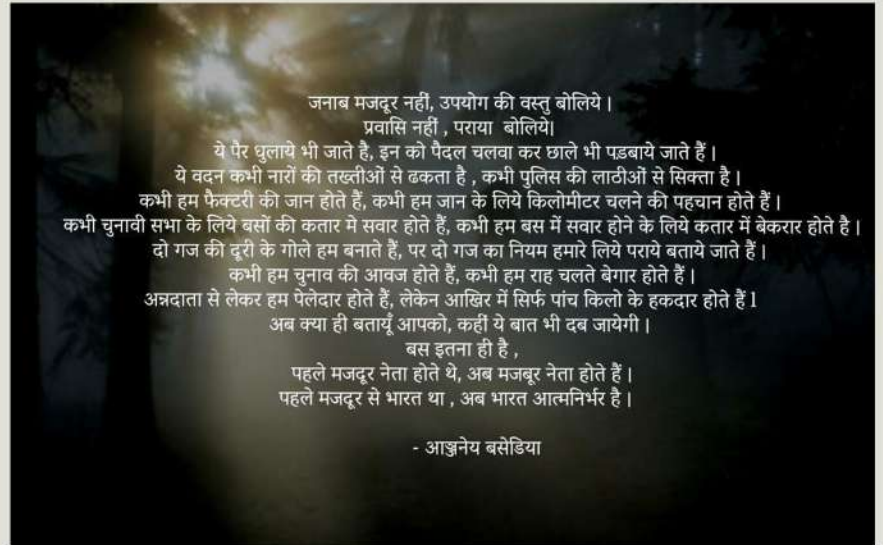
CREATIVE CLUSTER

YEAR II

JULY 20 2021, TUESDAY



Ayush Yadav
I BTech Oil Technology



Anjaney Basedia
Final BTech Paint Technology



Piyush Prasad
I BTech Electrical Engineering



Jahnvi Sachan
I BTech Mechanical Engineering