



# TRESIA

Volume 14, Issue 1

The Editorial Board  
-Beckoning Creati'wit'y

November Issue

*Indelibly Inked*

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#National  
Legal Services Day

**Interviewing**  
Mr. Rajnish Kumar Goyal  
Divisional Railway Manager, Central Railway, Mumbai



# Message From The Editorial Board

Marking a perfect pause between the conflicting despair of summers and winters, November arrives with its dark, misty evenings, bracing winds and piercing winter frost. The last crimson leaves fall to the ground in slow drifting whirls, leaving behind the bare and withered trees that glisten with pearl white snow, lighting the way to the winter. While the red embers smolder down, let us forgo our saddened past, embrace our imperfections and amaze the world with our glorious achievements. Enjoying the tranquility and beholding the wonders of the chilling winters, Malaviyans illuminate the corners within themselves that have dimmed out of fear, doubt and insecurity, allowing new opportunities to make way.

Meanwhile, The Indian Air Force on October 03, 2022 got its fleet of the first indigenously built light combat helicopter named 'Prachand'. Taking a significant step towards empowering the rural economy in India, Union Minister of Petroleum & Natural Gas inaugurated Asia's largest Compressed Bio Gas plant in Lehragaga, Sangrur, Punjab on October 18, 2022, which aims to boost self-sufficiency in India, reducing air pollution, and assisting India in taking the lead globally in the transition to clean energy. In what is believed to be a world's first, the Chinese city of Shanghai administered an inhalable needle-free COVID-19 vaccine on October 26, 2022. In a historic moment, India formally assumed the G20 Presidency, from Indonesia, on December 01, 2022. India's G-20 Presidency will be grounded in the theme 'Vasudhaiva Kutumbakam' or One Earth, One Family, One Future.

The University conducted the 7<sup>th</sup> Convocation Ceremony on September 26, 2022 and witnessed the students being presented with their degrees by the Hon'ble Governor, Smt. Anandiben Patel, wishing good luck and prosperity to the graduates. A three-day long Diksha Utsav was organized by the Cultural Sub-Council showcasing various cultural and literary events. Icing on the cake, Ravi Kishan, renowned politician visited the University on the occasion of Gandhi Jayanti and Lal Bahadur Shastri Jayanti. The Football Team represented MMMUT at IIM Indore, where they finished as runner-up and received a cash reward and certificates.

With the arrival of the new month, let us accept ourselves for who we are and acknowledge, appreciate and celebrate every aspect of ourselves while welcoming, adapting and improving the less savory aspects within us. Let us slowly climb the mount of aspirations, look past the walls surrounding us, open the drape and plan our escapes. Prepare ourselves to muster the best that is in us and set out to meet and vanquish every obstacle that prevents this day from being the one we will prize the most. Fight every inch of the way, as success is forged through failure. Pluck up your courage, dream and discover by sailing away from the safe harbor as ripples are made by those reckless enough to jump into the ocean. As we set out on our expedition to explore, **The Editorial Board** is glad to bring out a new edition of **Tiresia**, wishing the Malaviyans success in their upcoming ventures.

*bienvenidos!*

## Our Team

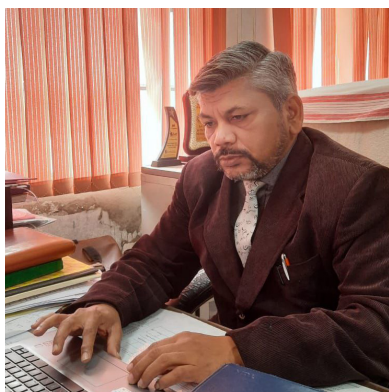
**Final Year Members:** Abhishek Singh Chauhan, Akansha Saxena, Divyansh Srivastav, Divyansh Vinod, Divyanshi Yadav, Harshita Pandey, Hritik Mohan, Laxmi Pandey, Navrachit Kulshrestha, Radhika Srivastav, Ritvik Maurya, Shashvat Rastogi, Swarnima Mishra, Tanya Shukla, Tarun Sonkar, Yuvraj Rajyadhayksh

**Third Year Members:** Animesh Kumar Singh, Anoop Singh, Bhuwan Awasthi, Dilip Kumar Singh, Ishita Srivastava, Kaushki Tewari, Mohammad Ifham, Sankalp Sharma, Shivam Srivastava, Shreyashi Rai, Unnati Verma

**Second Year Members:** Abhijeet Yadav, Aditya Raj, Akanksha Pal, Akshat Saxena, Awantika Krishna, Harshita Mishra, Khwaab Jaiswal, Lavanya Gupta, Mayank Jaiswal, Nadeem Ahmed Warsi, Nikhil Tiwari, Nikhil Tripathi, Ritika Yadav, Saanvi Gupta, Shreyas Kumar, Swati Tiwari

# MESSAGE FROM

## Faculty Advisor



Dr. S. N. Singh  
Faculty Advisor

Madan Mohan  
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Gorakhpur - 273010



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I feel immensely pleased to enunciate this message for the November issue of the exclusive issuance of **The Editorial Board**, MMMUT, **Tiresia**. I am elated to set forth through this colloquy that Malvika and the other journals have earned boundless praise from the academe as well as socio-political network. We promptly manage to compile and shortlist the finest articles of the students in Malvika. Honourable Governor of Uttar Pradesh, Her Excellency Smt. Anandiben Patel Ji applauded various segments of the magazine during the 7<sup>th</sup> Convocation Ceremony of our University organized on September 26, 2022 and September 27, 2022. Two paintings by students of the University were admired and adored by her excellency, Smt. Anandiben Patel Ji. Later, this year, Carvings, an assortment of notional illustrations and artworks by undergraduate and postgraduate students of engineering and management, were published. Our University also organized Alumni Meet this month where the batches were felicitated on quadrenscennial anniversary to reinvigorate former connections.

Our honourable vice-chancellor, Prof. J. P. Pandey, accompanied a congregation with the ambassadors of 15 different nations to probe sundry opportunities for academic partnerships and alliances. Not only does the University engage to expunge the academic challenges and abstract issues of the campus' elite and educated

class but also prop up the commune as well as the underprivileged sections of the society. I notify with delectation that the carvings have culminated to a novel stature and concurrently, we are an NAAC 'A'-grade institution. Not only did we acquire this certification in phase one but also it made us the lone state technical institution to achieve such a feat. The placement packages have increased to as much as 50 LPA in the recent years.

I deeply appreciate the oppurtunity to acknowledge and credit the entire team of **The Editorial Board** for their wondrous efforts. I wish them success for their forthcoming events and expect that they persevere to captivate scholar recognition as well as socio-political concern in and around the state. Malvika, Pravaah, Carvings, and **Tiresia** are akin to plump for dainty delicate flowers from a garden; This is where the beauty, aroma, and grandeur of the **Tiresia** shall be unveiled.

As we outset, I wish and hope that everyone is blessed and graced with vivacity and accomplishments in all facets of life. Kudos to the members of **The Editorial Board** for pulling out all the stops for this magnificent work to bring out **Tiresia**'s latest November edition.

With best regards  
Dr. Sudhir Narayan Singh  
Faculty Advisor,  
**The Editorial Board**  
MMMUT



# Tête-à-tête

## *A talk with Mr. Rajnish Kumar Goyal*

Mr. Rajnish Kumar Goyal, a distinguished alumnus of the Electrical Engineering Department, MMMEC, Gorakhpur (1990 batch), is currently working as the Divisional Railway Manager, Central Railway, Mumbai. After completing his Master's in Power Electronics from IIT Delhi, he cleared the prestigious Indian Railway Service of Electrical Engineers Examination (1991) and got appointed as an assistant Electrical Engineer. His career and life are the epitome of his equanimity and fortitude. **The Editorial Board** had the opportunity to interact with him and talk to him about his experience. Here is an excerpt from the interview.



**Q** How would you describe your journey in Malaviya?

**A** To recap my academia, Malaviyan life was exquisite. Made some revered and fortunate mates. Several officials in my working sector were once an integral part of the University. It is forsooth and verily a privilege to have once been a fundamental segment of it.

**Q** Would you like to share any incident from your college life that makes you nostalgic?

**A** Times were once when we used to stroll for a kilometre stretch and had time on one's hand. Here and now, it is rather onerous to with all the preoccupied tasks at hand. College unquestionably upskills and escalates your personality and amplifies you inside out.

**Q** You underwent extensive training of 18 months after your recruitment. Would you share with us the journey that helped you develop into the admirable and inspiring person you are today?

**A** When you are enrolled in professional training, you are trained to address the problems you might stumble on everyday. It also provides you the prospect to travel to provincial suburbs. You make a start on and witness various installation components, each being distinct from the others. I have travelled the most of India over those 18 months, and it is persistently akin. I give credence to the fact that a person is not learning and grasping enough if they are not travelling. And this makes the training constructive and favourable.

**Q** How has this college helped shape your career?

**A** In general, I belong to a small-scale town where possibilities were slender, taking decisions was tough, and truthfully, I was rather a timid and panicky person. However, Malaviya made me courageous and succoured me to grow as a person that I am today, made me a more confident and powered personality. Every other institution provides education regardless of the course materials' contents, and I believe that more than knowledge, it's your character and willingness to put in the effort that incite your success.

**Q** Tell us about the energy management SCADA that you designed and implemented in railways.

**A** Under the Indian Electricity Act of 2003, government organizations were free to purchase electricity in the open market, alongside the state governments. Nevertheless, we did not do so until 2015. We addressed this issue because the government of those states were charging exorbitant energy rates. Initially, purchasing power from the state of Gujarat costed us steep, so we switched to cheaper alternatives. Our first obstacle was to overcome the legislative limitations. Fortunately, we have had help from eminent and top-notch officers of our department, who interpreted their regulatory provisions in our favor and permitted us to do that. However, in cases where they were unable to do so, they instructed us to go to the Central State and obtain the necessary orders. To mention, this was a dramatic change in our energy management since we are now saving 3,000 crores per year compared to what we were paying the State



*The secret to success is unwavering faith in oneself, regardless of what other people may believe.*

Electricity Regulatory Commission in 2015. Currently, there are 14 states where an identical plan has been implemented. And the second aspect is that previously there were no statutory requirements in favor of railroads and no SCADA systems, but now there are several SCADA system available in the market as per the users' requirements. The system is functional with all data being generated automatically, RTOs present, the load prediction present, etc.

**Q** You are also active in law and have handled crucial cases as well. Tell us how you got into this, given it is very different from your field?

**A** I believe you come across copious hindrances when you witness the processes initially and it becomes even more tedious if no one is acquainted with the procedures and structure. And since this crucial change was inexorable, I set about to operate on complementary cases. Alongwith, I might be able to suggest subjects from a technical point of view that could aid us in defending such legal challenges and problems.

**Q** How different is it to work in a legal setting than to work in a technical setting?

**A** The legal system is moderately sluggish, to the point where it irritates you. Secondly, disagreements since technical reasons are lucid and can either be technically feasible or not. In my opinion, the image you offer to the judge is more important than any other consideration. For technical issues, we have variable options, but in legal issues, a single word or sentence can alter the outcome of your case, and it may even get to the point where the substance of your argument is irrelevant.

If you can condense a two-sentence argument into 20 or 40 pages, you might be favoured, but it is tedious and frustrating for a techie.

**Q** What are your views on privatisation of Indian Railways and the various challenges related to it?

**A** It is requisitioned but fatiguing. There must be a perfect strategy compiled to balance between the privatised and government segment that undertakes management or any aspect of security. Private firms would not be inquisitive and gripped in investing a huge capital without a high rate of return which will eventually lead to high cost services making it economically inefficient for the majority of the Indian passengers. Hence, the government has to participate in the field of infrastructure since the concern is not only about the transportation, but also the socio-economic transformation in that region.

**Q** What advice would you like to convey to the young budding Malaviyans through this newsletter?

**A** I'd simply mention a few things. Have faith in oneself. If you don't excel in your academia, you can make an impact and engender change. I was never a scholar but making to the railways is a significant accomplishment. Therefore, it is not about the grades you are awarded with, or what others perceive of you; it is about your attentiveness and engrossment you will put in to make a change in your academe; you will undoubtedly attain victory and fortune.



Mr. Rajnish Kumar Goyal  
being felicitated on  
his promotion



# CAMPUS

**MAY 28** The **Editorial Board** successfully completed its induction drive for the first year students.

**MAY 31** **Sports Sub Council, MMMUT** organized the **Inter-year Basketball Tournament** from May 31, 2022 to June 02, 2022.

**JUN 01** **Computer Society of Software Engineers (CSSE)** conducted its annual formal event **Technokratos'22** from June 01, 2022 to June 03, 2022.

**JUN 02** **Sports Sub Council, MMMUT** organized the **Inter-branch Badminton and Table-Tennis Tournament** from June 02, 2022 to June 04, 2022.

**JUN 05** **Entrepreneurship Cell, MMMUT** organized a webinar on **Finance and Trading**.

**JUN 07** In the process of evaluation and accreditation by the **National Assessment and Accreditation Council (NAAC)**, a peer team of eminent academicians visited **MMMUT, Gorakhpur** for assessment and interacted with the students from June 07, 2022 to June 09, 2022.

**JUN 12** **NSS, MMMUT** organized a webinar on "**Challenges due to Mental Disturbance**" by Art of Living faculty, **Mrs. Mamta Pandya**.

**JUN 14** **MMMUT, Gorakhpur** became the first state university in Uttar Pradesh to have secured 'A' grade by **National Assessment and Accreditation Council (NAAC)** after evaluation in the very first round.

**JUN 16** **Cultural Synod** successfully conducted its induction drive for the first year students.

**JUN 22** Hon'ble Governor of UP and Chancellor of **MMMUT, Her Excellency Smt. Anandiben Patel** honored the members of the **NAAC** team committee of **MMMUT, Gorakhpur** by giving a citation for getting an 'A' grade in the **NAAC** evaluation at the **Pragya Room of Raj Bhavan** on June 22, 2022.

**JUL 02** The campus placement drive was conducted by **HummingWave Technologies** under the **Training and Placement Cell Student Body, MMMUT**.

**JUL 02** The **Great Employment Fair** was launched in the University by Hon'ble Chief Minister of UP, **Shri Yogi Adityanath**.

**JUL 05** A tree plantation program was organized in **MMMUT, Gorakhpur** on July 05, 2022 under the Uttar Pradesh government's tree plantation campaign "**Van Mahotsav**".

**JUL 05** A Six-week **Summer Internship on Drone, and Artificial Intelligence (SIIDAI-2022)** was organized by **Electronics & Communication Engineering Department, MMMUT** from July 05, 2022 to August 16, 2022.

# BUZZ

**JUL 18** Training and Placement Cell Student Body, MMMUT in collaboration with ETS India organized a webinar on TOEFL & GRE on July 18, 2022.

**JUL 24** Electronics and Communication Engineering Society successfully conducted its induction drive for the first year students.

**AUG 12** Cultural Synod organized a photography competition on the theme "Patriotism" to mark the celebration of Independence Day.

**AUG 13** MMMUT, Gorakhpur, observed Azadi Ka Amrit Mahotsav from August 13, 2022 to August 17, 2022. Several literary, sketching and photography events were held to commemorate this delightful occasion.

**AUG 17** Rashtriya Kavi Sammelan was organized by the Cultural Sub Council to mark the presence of the famous Hindi poet Hari Om Pawan.

**SEP 22** NSS, MMMUT organized a seminar on "The Adverse Effects of Poor Mental Health on Student Life" by Dr. Sandeep Atrai.

**SEP 26** Under the guidance of Hon'ble Chancellor Smt. Anandiben Patel, the University organized Diksha Utsav to celebrate the 7<sup>th</sup> Convocation Ceremony of MMMUT. The Council of Student Activities, MMMUT, organized a number of cultural and sporting events.

**OCT 02** The University celebrated Gandhi Jayanti and Lal Bahadur Shastri Jayanti. The celebration witnessed the presence Shri Ravi Kishan, Member of Parliament, Gorakhpur as Chief Guest.

**OCT 09** From October 09, 2022 to October 11, 2022, the University Innovation Cell successfully conducted its event Bytegram to help students sharpen their programming and logical acumen.

**OCT 09** IEEE Student Branch, organized a book donation drive on the occasion of IEEE Day celebration. Honourable Vice-Chancellor Prof. J. P. Pandey distributed the books and gave assurance to the students of Shiksha Niketan to help them in every way possible.

**OCT 22** The Day Scholars' Club successfully conducted its event Flash by donating clothes and other essentials to the deprived section of the society.

**NOV 05** Malaviya Alumni Association (MAA), MMMUT Gorakhpur organized Alumni Meet 2022 under the chairmanship of Honourable Vice-Chancellor of MMMUT, Prof. J. P. Pandey. The celebration felicitated Golden Jubilee Batches (1970, 71 & 73), Silver Jubilee Batches (1995, 96 & 97) and Decade Batches (2010, 11 & 12).

**NOV 26** The Editorial Board, MMMUT organized the preliminary round of the event Arunoday on November 26, 2022.





# Spy-where



*Privacy isn't about something to hide.  
Privacy is about something to protect.*

In the 21<sup>st</sup> century, it has become increasingly hard to imagine a life without being present on the internet. With most of our productivity happening online, it has become crucial to understand and protect ourselves from the dangers lurking in this virtual abyss. Even though social media is just one aspect of our virtual lives, it takes a disproportionately large chunk of our data and screen time. Therein lies one of the most concerning aspects of the internet, i.e., cyber surveillance.

Social media platforms like TikTok, Instagram, Facebook, etc., though seemingly free, track all of our internet activity and feed it according to their preferences into their recommendation engines. On the one hand, this method gives its users a tailored feed, while on the other, it trains an Artificial Intelligence Model based on user activity to deliver targeted ads that the companies use. The automobile industry is one of the many industries that utilize user data to generate AI

Models. They cleverly use internet captchas that ask users to identify everyday road objects like fire hydrants, cars, bikes, traffic lights, etc. They feed that into a machine learning algorithm to teach it to identify those objects on the road in real-time. While this can appear harmless and very well might be, it only causes problems in how much of our information and inputs are misused. Either this is hidden from us or only vaguely shown. Apple recently beta tested a feature that notified the user each time an app accessed the phone's clipboard. It was found that TikTok was accessing complete clipboard information every few keystrokes. Now, while TikTok claimed that this was an anti-spam feature that was trying to maintain the safety of its users, it is not the first time the company has been caught red-handed doing something fishy with their users' data. This data is perhaps of the most significant importance for the world's governments, particularly those of the big powers such as the Government of



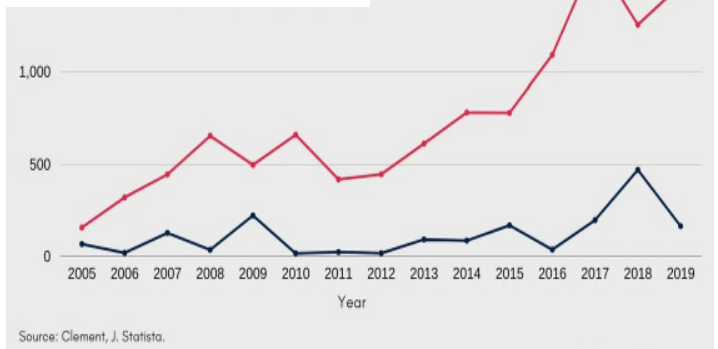
the United States of America and the Government of the People's Republic of China (the native country of TikTok). A few years ago, Edward Snowden, an ex-NSA spy, made several allegations about how extensive government surveillance enabled by modern technology is. His claims may or may not be factual, but there are several examples of governments from various nations claiming the user data of their residents for purposes like homeland security. The FBI urged Apple to provide a backdoor in the iPhone's encryption, but the company refused. This was based on its policy of not undermining the security of its users. Apple's CEO Tim Cook backed their decision publicly by pledging to protect the data and privacy of its users. All of it, however, was for nothing when the FBI revealed a week later that they had already cracked the encryption. While it may appear that businesses like Apple are fighting for a good cause by refusing to cooperate with government mass monitoring, it is important to remember that Apple's business model is centered on selling pricey products. In contrast, Facebook and Google are primarily based on advertising, so there may be no incentive for them to collect any data. Besides, being the privacy hero is good PR.

Moreover, some may argue that, "there is nothing to fear if you have nothing to hide", it may sound valid, but keep in mind that in a working democracy, people are promised the right to privacy as a human right. They should have control over their data. Besides, profiling each citizen without any prior history of crimes sounds very draconian. It is remarkably similar to the use of "Telescreens" in Orwell's 1984, which depicts a dystopian world with government control over everything. We keep little information about all the functionalities of social media platforms. However, if we tune ourselves with some basic technical details, we may protect ourselves from being surveilled. Let us take the example of Instagram. It



Mark Zuckerberg apologises for breach of data

Data compromises and individuals impacted in the US



tracks all our activities like contacts, location, habits, and conversations. Nevertheless, you can protect your privacy by following a few simple steps. To protect your contacts from being tracked, click Account, then Contacts syncing, and untick Connect contacts. Likewise, you may go to General > Settings > Location and deactivate its access to your location. Besides this, many other small technical details may protect your privacy; we need to keep an eye on them and try to stay up to date with new technical advances.

Most of our information comes from social media and online platforms, so it is elementary for companies. By proxy, any government can drive the popular opinion among people by simply tweaking what they have shown on their homepage. It is easy to drive public opinion by selectively hiding and showing content to the masses. Social media brainwashes people and diversifies their ideologies. How far are we from a future in which AI could thoroughly profile your personality, given how far AI technology has come in the last ten years, this is an intriguing but unsettling thought. What control does a person have over their ideas, feelings, or lies, and what prevents the government from flagging those who might disagree with their activities and then taking all necessary steps to ensure that they are taken care of? With a commitment to truth, our responsibility is to prevent these so-called "Social Spy" platforms from brainwashing our minds and to dismantle false ideologies that we believe in, even when the evidence does not exist but platforms keep pushing them. While the arrival of Web3 may provide users with much more control over their data, it is important to keep in mind that, unlike now, when we still have some authority over social media, they may be controlling us tomorrow.



# Scrimping Agronomy

*“Farming looks mighty easy when your plow is a pencil and you're a thousand miles away from the corn field.”*

India has practised agriculture since the Neolithic era. In terms of agricultural production, India ranks second in the world. In 2018, agriculture employed more than half of the Indian workforce and contributed approximately 17-18% of the GDP. In most rural areas, agronomy is the primary fuel of development. In the emerging countries, there is a rising demand for basic foods and agricultural products and in order to meet these surplus demands, we use the process of implementation of coarse and recurrent strategies of agricultural production and thus, suffer from huge losses. To be more precise, the waste is half of its produce. Since soil is a finite resource, its loss and deterioration cannot be reversed in the course of a human lifetime. The government is keeping into account all the mar along with reflecting upon various practices and processes, encouraging organic farming and adopting ZBNF as a

way to preserve the soil's fertility, boost the farm yield, ensure better health and rejuvenate soil health.

ZBNF or Zero Budget Natural Farming is a cumulation of farming strategies, without using any external inputs, inclusive of insecticides and fertilisers. The marketplace orientated reform rules of the Indian financial system open directly to a gaping agricultural predicament. Privatized seeds, inputs, and markets have proved to be exceedingly taxing for farmland. The word 'Zero Budget' refers to zero cost of production of agronomy, which guarantees to give up dependency on loans and acutely decrease manufacturing costs, which helps in boosting the revenue of farmers due to the cheap cost of production. This concept of ZBNF was aggrandized by agriculturist and Padma Shri awardee Subhash Palekar in the mid-1990s as an opportunity to develop Green Revolution strategies. This method entails the

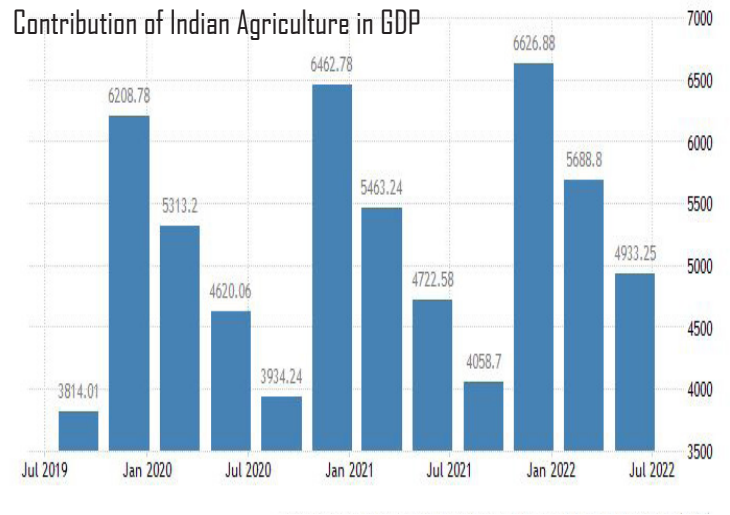


use of native seeds, mixed cropping, pest management through botanical extracts and no use of synthetic fertilizers, pesticides, or herbicides as it focuses on organic farming. For all the selected crops, the ZBNF process focuses totally on generating poly-cultures, or short and long-time period (foremost crop) vegetation together, so that it will get better at keeping the price of elevating the primary vegetation from the earnings of short-time period on vegetation, ensuring in cipher expenditure for the primary crop and a worthwhile keep of resources and capital. It promotes the use of indigenous seeds and locally accessible natural fertilisers and lessens the reliance on purchased inputs. Through multiple aerations, this method drastically reduces the methane emission in the atmosphere. This technique is a boon not only for the environment, but also to the farmers, as this approach reduces farm expenditure and eliminates subservience to farm loans.

Despite India being the sixth largest market for food and groceries, more than 25% of the Indian farmers live below the poverty line and about 52% of them find themselves in a casual nexus of debt. According to the Central Government, since 2013, over 12,000 suicides have been reported in the agricultural sector annually and 10% of suicides in India are farmer suicides. There is no escaping from the fact that farmer suicides are a real menace and go against our hopes of taking use of our demographic dividend. Small and marginal farmers are the backbone of Indian agriculture. Therefore, the productivity of these farmers determines the future of food security and sustainable agricultural growth. The goal of natural farming is to increase the net income of farmers through cost reduction, risk reduction, increased yields, increased crop intensity and obtaining a fair price for the commodity grown. According to recent studies, rice farmers who use chemical inputs



New techniques for preparation of biological compost



typically spend INR 5,961 per acre, while those that use natural farming techniques only pay INR 846 per acre for natural inputs. A similar tendency has been seen regarding the cultivation of groundnuts and maize. Moreover, it also helps in employment generation, water conservation and in the protection of the environment.

It's high time we emphasise organic farming. Farm expenditure should be brought down and natural farming needs to be fostered. The Union government supports and promotes organic farming and Zero Budget Natural Farming through various schemes, like the Network Project on Organic Farming (NPOF), Intensive Agriculture District Program (IADP), National Mission for Sustainable Agriculture (NMSA), National Food Security Mission, etc. The Indian Council of Agricultural Research (ICAR) is also investigating the ZBNF method, which is used by some basmati and wheat farmers in India, to assess its impact on productivity, economics, and soil health. This farming technique provides resilient food systems through two of their initiatives, Paramparagat Krishi Vikas Yagna (PKVY) and Rashtriya Krishi Vikas Yagna (RKVY). The NITI Aayog is also a strong supporter of the ZBNF method.

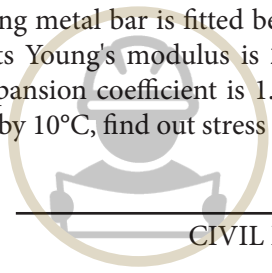
Intensive agriculture, which is practised to meet the food needs of an ever-growing population, has a negative impact on soil, so maintaining our soil's health and productivity is crucial as the demand for food production is rising with the increase in the population. The menace possessed by unsustainable farming practices needs to be addressed delicately. ZBNF method promises to substantially reduce farming costs and eliminate the dependence on farm loans as it reduces the reliability on purchased inputs and promotes the use of local seeds. Here, agriculture is practised in harmony with nature and not with chemical fertilizers.

# inSights

# TECH

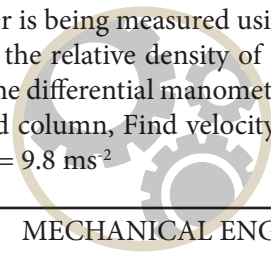
Mail your answers at  
[literaryedb@mmmut.ac.in](mailto:literaryedb@mmmut.ac.in)

A 10 cm long metal bar is fitted between two rigid supports. Its Young's modulus is 200 GPa and its thermal expansion coefficient is  $1.2 \times 10^{-5}$  per  $^{\circ}\text{C}$ . If it is heated by  $10^{\circ}\text{C}$ , find out stress developed in the bar.



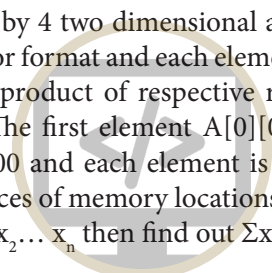
CIVIL ENGINEERING

Velocity of water is being measured using a Prandtl tube ( $C_v = 1$ ). If the relative density of manometric fluid is 10 and the differential manometer reading is 10 mm of liquid column, Find velocity of water in  $\text{ms}^{-1}$ . Assume  $g = 9.8 \text{ ms}^{-2}$



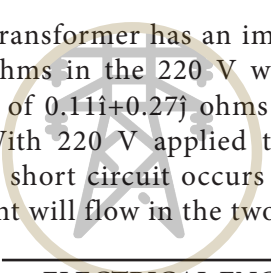
MECHANICAL ENGINEERING

Given a 10 by 4 two dimensional array 'A' is stored in row major format and each element stores a value that is the product of respective row and column numbers. The first element  $A[0][0]$  occupies base address 1000 and each element is a 32-bit integer. If all instances of memory locations holding '10' are given as  $x_1, x_2, \dots, x_n$  then find out  $\sum x_i$ .



COMPUTER SCIENCE  
AND ENGINEERING

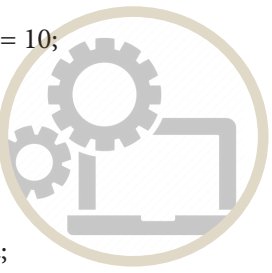
A 220/110 V transformer has an impedance of  $0.32i + 0.85j$  ohms in the 220-V winding and an impedance of  $0.11i + 0.27j$  ohms in the 110 V winding. With 220 V applied to the high voltage side, a short circuit occurs on the 110 V. What current will flow in the two windings?



ELECTRICAL ENGINEERING

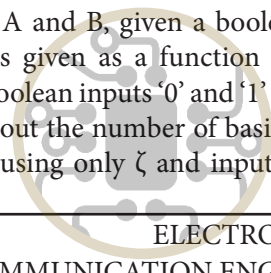
Find the output of:

```
#include <stdio.h>
void calc(int **ptr)
{
    static int y = 10;
    *ptr = &y;
}
int main()
{
    int z = 20;
    int *x = &z;
    calc(&x);
    printf("%d", *x);
    return 0;
}
```



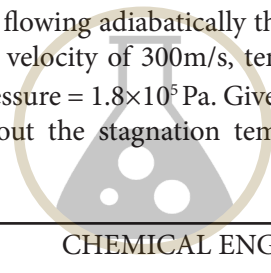
INFORMATION TECHNOLOGY

For two inputs A and B, given a boolean gate ( $\zeta$ ), whose output is given as a function of A and B as  $F = B \rightarrow A$ . If boolean inputs '0' and '1' are available separately, find out the number of basic logic gates implementable using only  $\zeta$  and inputs '0' and '1'.



ELECTRONICS AND  
COMMUNICATION ENGINEERING

A perfect gas is flowing adiabatically through a gas opening with a velocity of 300m/s, temperature =  $26.85^{\circ}\text{C}$  and pressure =  $1.8 \times 10^5 \text{ Pa}$ . Given  $C_p = 1.005 \text{ kJ/kg-K}$ . Find out the stagnation temperature in Kelvin.



CHEMICAL ENGINEERING



Winners of the Tech inSights of Tiresia Volume 13, Issue 2 couldn't be decided as the answers received were either late or unsatisfactory.



# -- Zuhause --

## Varanasi



The **Ganga Aarti**, also known as Subah-e-Banaras is an effluent balefire of piety that imbues devotion and espouse divinity and sanctity.

**Savvy Chaube**  
EE, 2<sup>nd</sup> Year

## Lucknow



Lucknow's **Charbagh Railway Station** looks like a chess board. Apart from the fact that it has pillars and domes, the structure is also one of the most attractive train stations in the country. Another feature of this station is that, when viewed from above, it resembles a chess board with pieces engaged in a game.

**Vaibhav Singh**  
IT, 2<sup>nd</sup> Year

## Moradabad



Moradabad, also known as "**Peetal Nagri**", bespeak of its heritage and folklore in its brass articles.

**Lavanya Gupta**  
IT, 2<sup>nd</sup> Year

## Gorakhpur



Traditional art with hand-applied ornamentation dating back hundreds of years is Gorakhpur's **terracotta** work.

**Saanvi Gupta**  
CSE, 2<sup>nd</sup> Year

## Kanpur



The renowned **JK Temple** of Kanpur remains under perpetual construction as according to an urban legend, the family will meet their doom the day the temple's construction completes.

**Akshat Saxena**  
ECE, 2<sup>nd</sup> Year

We invite all the students to send the clicks of their city (preferably their own) along with a caption on [literaryedb@mmmut.ac.in](mailto:literaryedb@mmmut.ac.in) (Basic editing is allowed). Best ones will be published in the next issue of **Tiresia**.

# पिंजरा

“

जिंदगी के पिंजरे में इक  
नया उकूबत का पिंजरा बनाता है,  
तमाम फंदे में कैद कर,  
हर शख्स खुद को आजाद बताता है।

पुरातनकाल में स्वयं गुफा-रूपी पिंजरे से पनपी मानव सभ्यता, सदियों से पिंजरे का प्रयोग पशु-पक्षियों को कैद करने के लिए करती आ रही है। यद्यपि पिंजरे में परिंदों का होना, पिंजरे की एक भौतिक परिकल्पना का आभास है परंतु पिंजरा शब्द कई बहुआयामी मायनों को खुद में पिरोए हुए, अपनी तथाकथित भौतिकता से काफ़ी परे है, और यही विशेषता इसे अत्यधिक रोचक बनाती है। बीते कुछ वर्षों में पिंजरे के विभिन्न स्वरूपों ने खुद मानव को ही नहीं, बल्कि मानवता को भी खुद में समेट लिया। तर्कसंगत है कि कोविड जैसी महामारी ने मानव और प्रकृति के मध्य संघर्ष में प्रकृति का वर्चस्व स्थापित करते हुए, यह सिद्ध किया कि मानव का सर्वप्रिय आशियाना भी पिंजरा मात्र ही है। कभी मानव अपनी महत्वाकांक्षाओं के पिंजरे में जीवनपर्यन्त उलझ कर रह जाता है और मानव जीवन की सार्थकता अनायास ही इच्छापूर्ति के भागदौड़ में व्यय हो जाती है। इस पुरुष प्रधान समाज ने अपनी इच्छा-स्वरूप सामाजिक पाबन्दियों में महिलाओं को बांधकर उन्हें पक्षियों की भांति कैद कर दिया। स्वामी विवेकानंद जी ने कहा है कि, "इच्छा की अनुभूति ही सच्ची प्रार्थना है।" परन्तु मनुष्य अपनी इच्छा की

तीव्रता में समझ ही नहीं सका कि यह प्रार्थना उसके लिए अभिशाप बनती जा रही है। मौजूदा परिवेश में आधुनिकता और आविष्कार अपने चरम पर हैं, वर्तमान के पृष्ठभूमि पर सोशल मीडिया कृत्रिम आधुनिकता के मापदण्ड को स्थापित करता प्रतीत हो रहा है।

आधुनिकता के अतिवाद में नित नए आविष्कार मानव सहूलियत में भागीदार हैं, तो वहीं कई आविष्कार मानवता पर हावी भी होते जा रहे हैं। इसी कड़ी में सोशल मीडिया और उसका अनुचित प्रयोग पिंजरे का ही एक नया स्वरूप लेता जा रहा है। इसका परिणाम यह है कि इसने मानव दिनचर्या को खुद में समेट लिया है और इसका अभिन्न अंग बन चुका है। वर्तमान आंकड़ों की बात करें तो औसतन विश्व का हर व्यक्ति अपने दिन के 2.5 घंटे तो वहीं हर भारतीय 2.4 घंटे इसकी गिरफ्त में है। आगामी पीढ़ी का युवा वर्ग और भी अधिक ग्रसित और लाचार मिलता है, जिसमें कभी किशोर आत्महत्या जैसे कदम उठा रहे हैं। वर्तमान में मानसिक रूग्णता, उत्कंठा, अवसाद, अनिद्रा आदि सोशल मीडिया के दुर्व्यसन के लक्षण हैं। इन प्रभावों के मद्देनजर इसे एक प्रकोप कहना गलत नहीं होगा। सोशल मीडिया रूपी पिंजरे में



कैद मानव अपनी संकीर्ण हो रही मानसिकता का परिचय तब देता है जब किसी घटना-स्थल पर मानवीय मूल्यों को सिद्ध करने के बजाए, वह सोशल मीडिया पर परिदृश्य चित्रण में लग जाता है। सोशल मीडिया के ज़रिए हो रही साइबर ठगी के धन ठीक उसी प्रकार है जैसे पिंजरे में कैद पक्षी को नियमित आहार मिलना। साइबर अपराध, यौन उत्पीड़न और भ्रामक जानकारियों का स्रोत होने के बावजूद इसकी जनप्रियता चिन्ता का विषय है।

कहा जाता है कि मनुष्य गलतियों का पुतला है और उससे त्रुटि होना सामान्य है, पर उन गलतियों से सीखकर आगे सतत बढ़ना ही प्रगति का मार्ग है। यदि इन त्रुटियों में निरंतरता रहती है तो यही पिंजरे की सलाखें भी बन जाती हैं। जीवन यात्रा को सुगम या दुर्गम बनाने में निर्णय की अहम भूमिका रहती है। शायद इसीलिए जीवन के प्रश्नों को हल करना सबसे कठिन माना जाता है। प्राचीन काल में माता सीता द्वारा लक्ष्मण रेखा पार करने का निर्णय उन्हें रावण की कैद में ले गया, उसी प्रकार स्वयं की गलतियों के पिंजरे में फंसा मनुष्य जीवनपर्यंत संघर्ष करता रहता है। जीवन के प्रारम्भिक दौर में व्यक्ति फैसले लेने में निपुण नहीं होता और वह माता-पिता या सामाजिक परिवेश के दबाव में जीवन के अहम निर्णय कर लेता है। यही कारण है कि आए दिन प्रतियोगी परीक्षाओं की तैयारी कर रहे परीक्षार्थियों का जीवन

सामाजिक या पारिवारिक फैसले की भेंट चढ़ जाता है। इसी प्रकार से जीवन के विभिन्न पड़ाव पर हमारे फैसले हमारी स्वतन्त्रता या निर्भरता का निर्धारण करते हैं। जीवन साथी चुनने का निर्णय हो या अपना पेशा, सतर्कता आवश्यक है।

पिंजरे की विभिन्न प्रासंगिकता उपर्युक्त है। इसका अर्थ कदाचित् यह नहीं कि पिंजरा सदैव अहितकर रहा, इसकी महत्ता इस बात से है कि बीते दिनों कोविड महामारी में पिंजरे में होना ही सुरक्षित था। प्रत्येक व्यक्ति को यह ज्ञात होना आवश्यक है कि वह पिंजरे के किस आयाम में है, और उससे बाहर निकलना कितना आवश्यक और किस प्रकार संभव है। पुरातन काल में पिंजरे में जन्मे श्रीकृष्ण ने अपने सभी बंधनों और बाधाओं से लड़कर गीता जैसा ज्ञान दिया। वर्तमान में लोकप्रिय क्रिकेटर महेन्द्र सिंह धोनी ने टिकट कलेक्टर के पिंजरे से निकलकर देश के महानतम कप्तान की पदवी हासिल की। किसी पिंजरे को भेदने के लिए हृदय में इच्छा की तीव्रता होना आवश्यक है। कहा जाता है कि जब आप पूरी दृढ़ता से कोई कामना करते हैं तो ब्रह्मांड की समस्त शक्तियां आपकी सहायता करने लगती हैं। अतः व्यक्ति हर पिंजरे को तोड़ने में सक्षम है। जब लक्ष्य की प्राप्ति के लिए आवश्यक कर्म को पूर्ण मनोकामना के साथ संपन्न किया जाता है, तभी कर्ता और उसकी कृति कुंदन सी चमकती है।





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*-Beckoning Creati'wit'y*



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