Volume 9. Issue 1 August 2017

The Editorial Board

-Beckoning Creati'wit'y

TIRESIA

Invigorating the Malaviyan élan

"To learn to read is to light a fire; every syllable that is spelled out is a spark."

-Victor Hugo

Tête-à-tête

WITH

Mr. Rakesh Kumar Srivastava
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Bharat Heavy Electricals Limited
(BHEL), Anpara, Uttar Pradesh

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Message from **The Editorial Board**

The cocoon of homely comforts finally ruptured and our freshmen are exposed to alienated skirts of a new place. But instead of letting the emotional tides drown your potential, take this opportunity to realise that you can develop yourself into a butterfly and let hues of your hidden talents colour your life.

Last month witnessed the ray of women's glory managing to escape the male - dominated sky of cricket, hence glorifying the Indian sports domain. Mother Nature dressed in lush green apparel and adorned with water pearl necklace, welcomes us to this exquisite month of August.

This coming month also brings to us an occasion to rejoice the delicate and exuberant knot of siblings' love. With the arrival of the new Vice Chancellor, veins of MMMUT are rushed with the temperament of developing into a place of excellence it was built to be.

After colouring the canvas of many minds with splendid hues of fervour in Udgaar'17, we are back again in this new academic session with same zest to splash some colours of literature and art in your life.

Amidst the most picturesque phase of nature and with the wish that the name of MMMUT soars high in the sky of technical education, the August issue of **Tiresia** is put forth by **The Editorial Board**.

Tête-à-tête

WITH

Mr. Rakesh Kumar Srivastava

Mr. Rakesh Kumar Srivastava, General Manager (GM) of Bharat Heavy Electricals Limited (BHEL) in Anpara, Uttar Pradesh is a 1985 graduate of Mechanical Engineering Department of MMMEC and has been working there for over thirty years. He has done Advanced Diploma in management through correspondence under IGNOU and has undergone numerous trainings in BHEL. **The Editorial Board** got the opportunity to interact with him and talk to him about his experiences.

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1. How would you describe your life in Malaviya?

The period of my life in Malaviya was excellent. The time of youth is best for any one, and must be utilised to the maximum. However, the congenial environment of the college with lots of friends and no worries was bliss.

2. How difficult according to you is the transition from college life to the corporate world?

The difficulty isn't much. It depends on how the person perceives it and how good he or she is at managing changes. These are both very important phases of life and according to me, we are prepared for the transition during our college phase itself.

3. Would you like to share an incident from college life that makes you nostalgic?

I would not mention any one such incident because I enjoyed the entire period of my college life. Every day in Malaviya was full of energy, new hopes and inspirations. I still look back to those days with nostalgia.

4. How much importance in your opinion, do extracurricular activities hold in college life?

According to me, extracurricular activities are highly important in a student's life. These are essential for grooming our personality. The studies give us the foundation, but the all-round development is honed through extracurricular activities.

5. How has the college helped you in moulding your personality?
Though there was not much availability of facilities and opportunities during our period, it was the group of friends I had that helped me build a good attitude.

6. What would you suggest to students aiming to achieve great heights in the corporate world?
Be honest and sincere to your studies, build a pleasing nature, keep your vision broad, acquire latest knowledge and techniques and keep abreast with the latest changes in your field. Most importantly, believe in yourself and enjoy.

7. What message would you give to the students of Malaviya?
You are at the juncture of a major change in your life. Don't worry about the future. Live in the present with a high goal. Devote maximum time and efforts in gaining knowledge and building your personality. Be good to everyone and try to improve the environment of the college. Don't hesitate in seeking help from seniors and provide guidance to juniors. You are the future of our country, perform your best in all aspects of life. Best of luck!

Campus Buzz

- **Dr. Sri Niwas Singh** joined the University as the new Vice Chancellor.
- Formation of **Women's Cell** took place on May 19, 2017, according to Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.
- Faculties, staff and students enthusiastically celebrated **3rd International Yoga Day** on June 21, 2017.
- Formation of **Procurement Cell** for improvement of the quality of technical education took place on June 21, 2017.
- The SAE Collegiate Club team, **Speed Wagon Cruisers**, participated in **Student Formula-SUPRA** organised by SAE India at Buddha International Circuit from June 26, 2017.
- For the inauguration of **"Malaviyan Research Conclave-2017"**, Hon'ble Chief Minister Adityanath Yogi visited the University campus on July 8, 2017.
- Admission process for session 2017-18 was completed successfully and orientation for the freshmen was conducted on July 25, 2017.
- Hon'ble Vice Chancellor addressed all the old students on July 27, 2017.
- **Dr. Prasenjit Mondal** (Associate Professor, IIT Roorkee) interacted with the students of Chemical Engineering Department on July 28, 2017.
- **Dr. Govind Pandey**, Associate Professor, Department of Civil Engineering, received "**Deoria Vigyan Ratna**" by **Rashtriya Baal Vigyan Congress, Deoria** on July 29, 2017, for his prominent effort to increase social awareness towards science and significant work in happenings of Science Communication and Baal Vigyan Congress.

Tech InSIGHTS

Here are the questions for this month's competition.

Mail your answers at **literaryedb@mmmut.ac.in**

CHEMICAL ENGINEERING:

The irreversible gas-phase reaction A →3B will be carried out isothermally. The reaction is zero order, the initial concentration of A is 2 mol/lit and the system contains 40% inert gases. The specific reaction gas constant is 0.10 mol/lit-min. What will be the time required to achieve 80% conversion in a constant pressure batch reactor?

CIVIL ENGINEERING:

If the atmospheric pressure on the surface of an oil tank (specific gravity 0.8) is 0.1kg/cm². What is the pressure at depth of 2.5 m?

COMPUTER SCIENCE AND ENGINEERING:

The output of following C program is _____?

```
void f1(int a, int b)
{ int c;
 c=a;a=b;b=c;}
void f2(int a, int b)
{ int c;
 c=*a;*a=*b;*b=c;}
int main ( ){
int a=4,b=5,c=6;
f1(a,b);
```

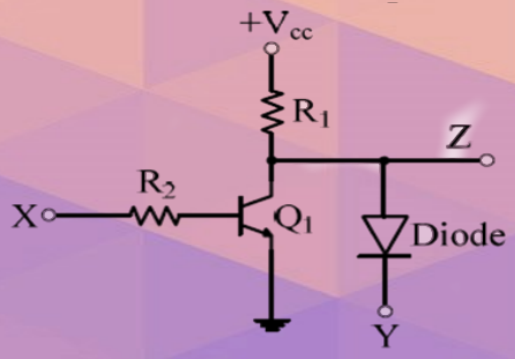
```
f2(&a,&b);
printf("%d",c-a-b);
}
```

ELECTRICAL ENGINEERING:

There are two generators in a power system. No load frequencies of generators are 51.5 Hz and 51 Hz respectively and both are having droop constant of 1 Hz per MW. Total load in the system is 2.5 MW. Assuming that generators are operating under their droop characteristics, the frequency of power system in Hz in steady state is_____.

ELECTRONICS AND COMMUNICATION ENGINEERING:

In the circuit shown below, Q_1 has negligible collector-to-emitter saturation voltage and the diode drops negligible voltage across it under forward bias. If Vcc is +5 V, X and Y are digital signals with 0 V as logic 0 and Vcc as logic 1, then the Boolean expression for Z is_____.



MECHANICAL ENGINEERING:

Two moles of helium gas (γ=5/3) are initially at 27°C and occupy volume of 20 L. The gas is first expanded at constant pressure until the volume is doubled. Then, it undergoes adiabatic change until temperature returns to its initial value. What is the work done by the gas?

QUANTUM TELEPORTATION

The illusion created by our marvellous science fiction movies about teleportation is something which has triggered the intellect of every science lover. However, this extraordinary virtue by which an object can be transported from one dimension to another without actually traversing the physical path is no longer a fantasy. The greatest minds of this planet are already a step ahead into the transformation of this virtual theory into a practical reality.

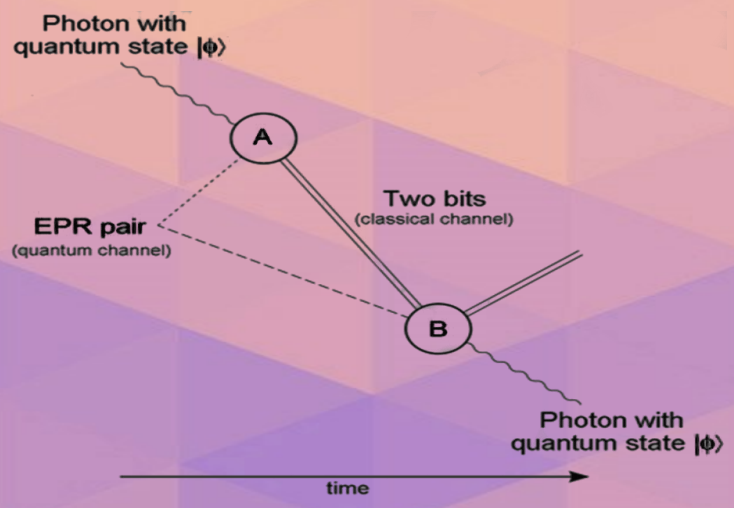
The prerequisite for quantum teleportation is a qubit that is to be teleported, a conventional communication channel that is competent of transmitting two classical bits (i.e. one of four states) and means of producing an entangled EPR pair of qubits. Each one of these qubits is transported to two different locations, A and B, then a Bell measurement is performed on one of the EPR pair qubits and finally, the quantum state of the other pair is manipulated. The protocol is then as follows:

1. Primarily an EPR pair is generated, then one qubit is sent to location A and the other to B.
2. A Bell measurement of the EPR pair qubit and the qubit to be transferred (the quantum state) is performed at location A, generating one of the four measurement outcomes which can be encrypted in two classical bits of information and then both qubits at location A are discarded.
3. The two bits are sent from A to B through a classical channel (due to speed of light considerations this is the only potentially time - consuming step after step 1).

As an outcome of the measurement performed at point A, the EPR pair qubit at point B is in one of the four probable states. One of these states is identical to the original quantum state while the other three are closely related.

One of these four possibilities which are actually obtained is encoded in the two classical bits. Knowing this, the qubit at coordinates of B is modified in one of three ways, or not at all, resulting in a qubit which is a twin to the qubit that was chosen for teleportation.

Research done regarding quantum teleportation in 1998 verified the primitive predictions and the distance of teleportation was incremented in August 2004 . Subsequently, for quantum teleportation, the record distance has been gradually elevated to 16 km, then to 97 km and now it is 143 km (89 miles), set in open air setups done between two of the Canary Islands. There has been a recent milestone set (as of September 2015) using superconducting nanowire detectors that have reached the distance of 102 km (63 miles) over optical fibre.



Though the concept of this fervent technology may have commenced in the form of a hypothetical theory, the landmark achieved by it in such a short span of time is remarkable. Although its practical advancements may seem weak as compared to the attributes presented to us in its fictitious counterparts, its future definitely has some profuse features to offer to the mankind.

MMMUT And its Legacy

"True guidance is like a small torch in a forest. It doesn't show everything once, but gives enough light for the next step to be safe."

-Swami Vivekanand

Madan Mohan Malaviya University of Technology (MMMUT), the erstwhile Madan Mohan Malaviya Engineering College, is one of the oldest institutes of higher education in Uttar Pradesh established in 1962. Named after the Indian educationalist and freedom fighter, Mahamana Pandit Madan Mohan Malaviya, its unparalleled reputation for the outstanding academic achievement of its students in GATE, ESE and various other national - level competitions is acknowledged throughout the nation. A recipient of funding from World Bank's International Development Association (IDA) in the phase one (2004-2009) of the TEQIP, the varsity was granted the status of an "autonomous institution" in 2013.

Departments of Mechanical Engineering, Civil Engineering, Electrical Engineering and Applied Sciences were started in 1962 itself, whereas those of Electronics and Communication Engineering and Computer Science and Engineering in 1973 and 1984 respectively. The college - reconstituted as a deemed University on December 1st, 2013 - is paving the way for an unprecedented advancement in contemporary teaching through digital classrooms and industrial learning. Besides increasing the intake of undergraduates from 300 to 660, the University now also offers Chemical Engineering for pursuing B.Tech., in addition to M.Tech., MCA, MBA and Ph.D. courses. Since its inception, the University has organised several national conferences, seminars and programs. National - level cultural and literary festivals – Abhivyakti and Udgaar are held annually. The National Board of Accreditation (NBA) accreditated three UG programs (CSE, EE, and CE) last year. With more than 3000 students from across the nation including NRIs and highly competent faculties, no two days are ever the same at the University.

The University plays host to a number of technical-cum-professional societies. The Institute of Electrical and Electronics Engineers (IEEE) student branch founded in 1988 - one of the 1600 student branches over the world - keeps the budding engineers in touch with the pioneering advancements in technology. The Society of Automotive Engineers (SAE) established in 2004 - a chapter of the SAE International - allows students a chance to garner practical 'know how' of mobile engineering. Robotics Club, Design Innovation & Incubation Centre (DIIC) and The Editorial Board are but a few of the other prominent boards and societies.

Over the years, the University has seen an accelerated rate of development in all spheres. The rich and glorious legacy of MMMUT has been firmly established by our eminent alumni holding high positions at Public and Private Sector companies both nationally and internationally.

Sustaining such a top notch and prominent University demands investment in latest facilities, trending courses and, most importantly, fine brain selection. Believing in its motto "योगः कर्मसु कौशलम्" and continuing its legacy as a leading technical institute, MMMUT has invested in "Panchvarshiya Yojna" to transform its 137 hectares of lush green campus into a world - class establishment of advanced learning, research, innovation and entrepreneurship.

How To?

How to solve the problem of missing fonts?

Sometimes we receive a document consisting of fonts having different symbols, languages and mathematical formulae that are unavailable on our system. MS-Word says some fonts are missing and hence the document becomes illegible.

How can this problem be solved?

Initially, you may individually select the font of the texts that are missing and apply it with the available fonts. But, what if there are a lot of pages? Here is the **solution.**

The problem can be resolved by '**font substitution**'.

- Click on 'File' menu for MS-Word versions 2016, 2013 & 2010 or click on button for MS-Word 2007. Then, click 'options' menu and move to 'advanced' option.
- Click the 'substitution' button at the bottom left, to know the unavailable fonts which are/were used in the document.
- Select each and every font in the list and then by clicking on 'substitution' box, select those fonts which are to be used instead of the missing fonts.
- Click on the OK button.

Now the missing fonts would have been replaced.

FINAL YEAR MEMBERS

Abhijeet Singh
Abhilasha Gupta
Divyany Pandey
Harsh Vardhan Tripathi
Hemant Singh
Himani Raj
Ishita Shahi
Rajan Kumar Soni
Rajat Srivastava
Shivangi Srivastava
Shwetank Srivastava
Srijan Singh

जीवन का सार

"सौभाग्य ना हर दिन सोता है,

देखें आगे क्या होता है।"

श्री रामधारी सिंह दिनकर ने अपनी एक कविता 'श्री कृष्ण की चेतावनी' की उक्त पंक्तियों के द्वारा मानव जाति को यह संदेश दिया है कि क्षणिक विफलताओं को अपने लक्ष्य के मार्ग का अंत नहीं मानना चाहिए। प्रकृति के संदर्भ में भी यह बात सही सिद्ध होती है। यदि नदी अपने राह में आने वाले अवरोधों से रुक जाती, तो सागर से मिलने के अपने लक्ष्य को पूर्ण नहीं कर पाती। निराशा से ग्रसित व्यक्ति को हर अवसर में मुश्किलें दिखाई देती है, वहीं एक आशावादी व्यक्ति नदी की तरह पत्थरों को काटते हुए अपने रास्ते स्वयं बना लेता है। सकारात्मक सोच किसी मुश्किल का हल नहीं परंतु उस हल तक पहुँचने का मार्ग है।

कर्मभूमि की बात करें तो भाग्य का महत्त्व हमको प्रायः तब याद आता है जब दुर्भाग्य से हमारा कठोर सामना होता है, परंतु दुर्भाग्य ना सिर्फ़ हमारा आत्मबल गिराता है अपितु सौभाग्य की ओर रुझान भी ख़त्म कर देता है। क्षणिक पराजय के काले बादल भी हमारे दृढ़ निश्चय रूपी सूर्य को छिपाने में असफल रहेंगे यदि हम परिस्थितियों को खुद पर हावी ना होने दें। हमारा दृष्टिकोण ही हमारे जीवन को परिभाषित करता है। हमारी सफलता और विफलता हमारे दृष्टिकोण पर ही निर्भर करती है।

THIRD YEAR MEMBERS

Aaruni Khare
Anurag Dhar Dubey
Archish Jaiswal
Arushi
Krati Tiwari
Manisha Mishra
Narendra Mishra
Pragya Pandey
Shreya Mishra
Shreyansh Srivastava
Shubham Pathak
Somiya Bhandari
Tanmay Kumar

हार एवं जीत एक सिक्के के दो पहलू हैं| यदि हम हार को प्रेरणा स्त्रोत के रूप में देखें तो यह हमारे शिथिल पड़े जीवन रूपी समुद्र में उत्साह की लहरें उत्पन्न कर सकता है| अब यह हम पर निर्भर करता है कि हम डूबते सूर्य को दिन का अंत मानते हैं या चंद्रोदय का संकेत| एक पल का अंत ही आने वाले पल का आरंभ है, इस तथ्य को स्वीकार करने के उपरांत ही मनुष्य का उद्धार हो सकता है| आवश्यकता है तो बस इनसे प्रेरणा लेकर खुद में छुपी प्रतिभाओं को निखारने की एवं सफलता की राह में आ रहे अवरोधों को दरकिनार करते हुए नज़र अपने लक्ष्य पर केंद्रित करने की|

जीवन में हर दिन होली और हर रात दिवाली नहीं हो सकती परंतु इसका अर्थ यह कदापि नहीं कि हम अपने हर दिन को बेरंग मान लें और हर रात तम के साए में गुज़ार दें| विफलता रूपी तूफ़ान से डर कर अपने मन एवं मस्तिष्क की खिड़कियों को बंद कर के बैठने से अच्छा है कि उस उग्र हवा के झोंकों का प्रयोग अवसर के द्वार खोलने हेतु करें| अंततः जीवन की यही परिभाषा है - रात अंधेरी तो क्या, हर दिन एक नयी आशा है|

SECOND YEAR MEMBERS

Aditi Shukla
Ankit Kumar Tripathi
Anurag Sonkar
Ashwani Dubey
Mayank Prasad
Pragya Singh
Praveen Kumar Gupta
Rishabh Tiwari
Rishika Jaiswal
Sarthak Srivastava
Saumya Rai
Shivani Dubey
Sungtiben Jamir
Vineeta Singh
Yashasvi Anand