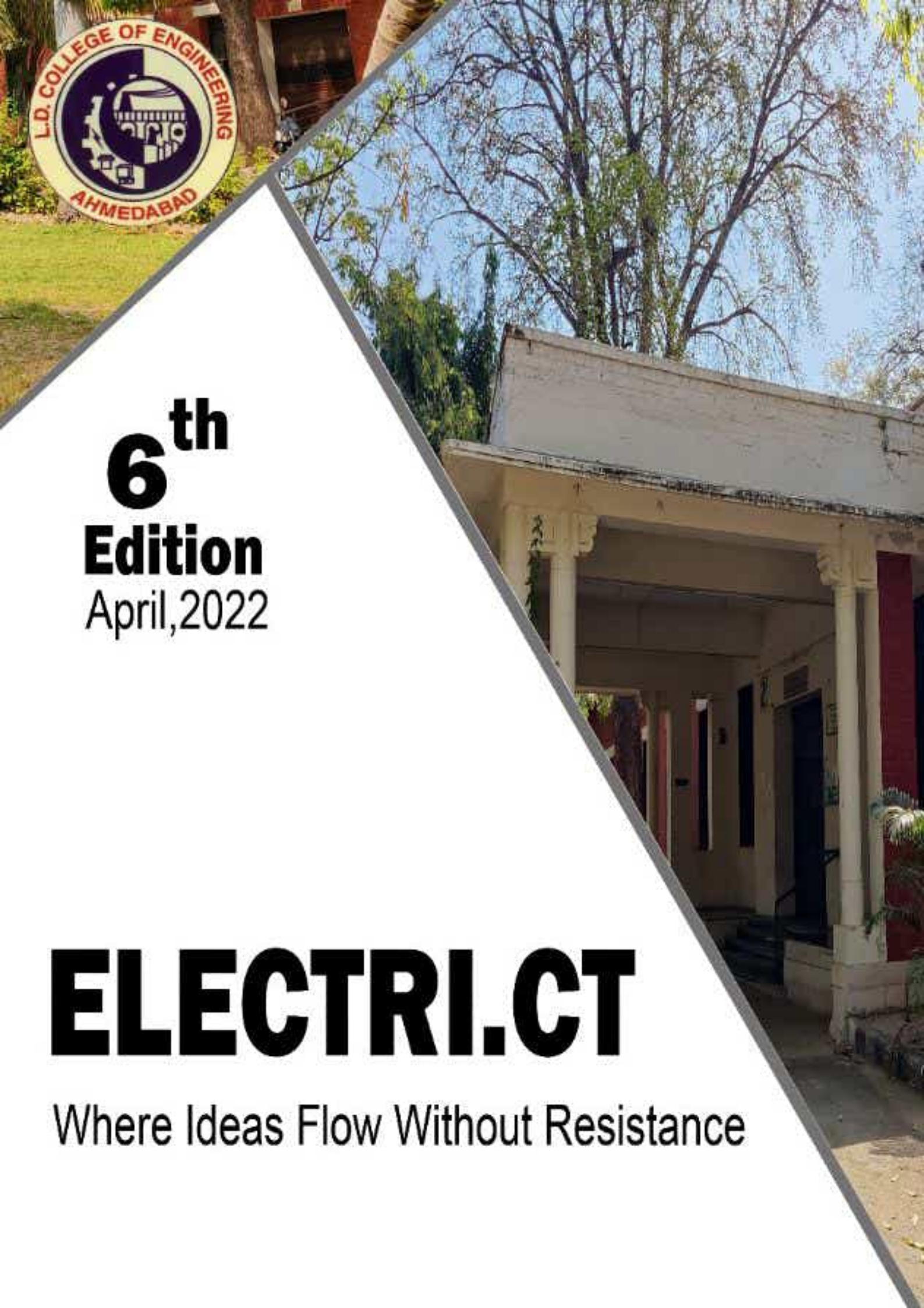
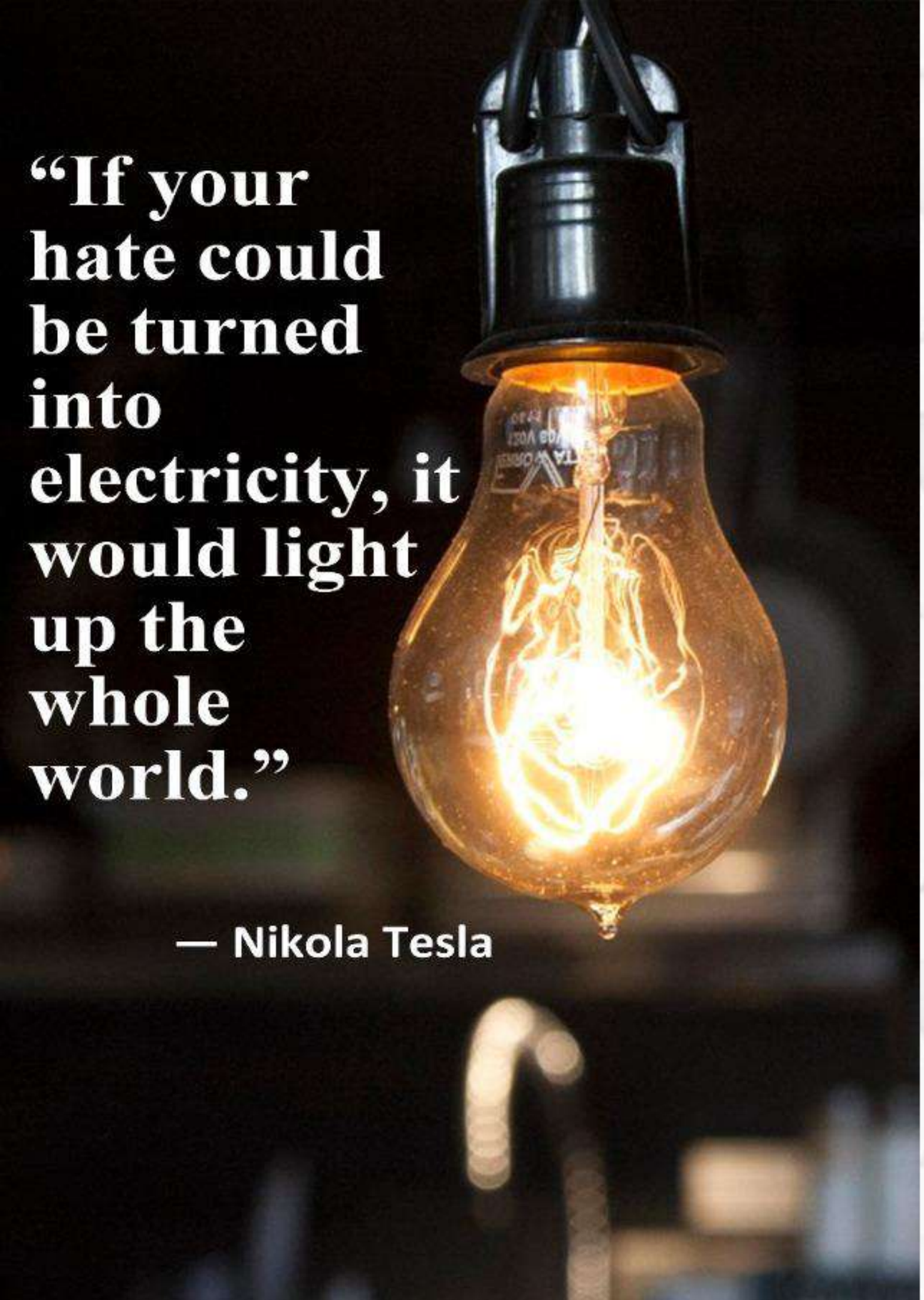


6th Edition
April,2022

ELECTRI.CT

Where Ideas Flow Without Resistance



VISION

- To foster learning environment for electrical engineering education having high technical skills, ethical values and overall global competence.

MISSION

- To provide high quality graduate program in electrical enginecring so that it prepares students for :-

1. Better employability, startups and entrepreneurship.

2. A professional career with essential technical and managerial skills

3. Collaboration with industry through Research & Innovation.

4. Other avenues for higher education

5. Adapting to change in technology and apply the same for the benefit of society at large.

INDEX

PRINCIPAL'S MESSAGE

Dr. R. K. Gajjar

It is with great pleasure that I speak to you as we return to our campus with renewed vigour and zeal. Some of you have returned while some of you are coming to the campus for the first time. Well, let me assure you that this is going to be a remarkable time for us together.

LDCE has progressed by leaps and bounds in the last 75 years and we are gearing up to celebrate the platinum jubilee from 2022 to 2023. Alumni, students and faculty have worked together to create a Centennial Vision. This vision is made more memorable as Honorable CM of Gujarat, Shri Bhupendrabhai Patel unveils the 75th anniversary logo and its Centennial Vision. The 75 year logo is a realization of our founding principles, core values, vision, and our perception of LDCE.

I am delighted to share that 5 of our UG programs – Electrical, Mechanical, Civil, Chemical and Instrumentation & Control were accredited by the National Board of Accreditation (NBA). Two more UG programs – Computer Engineering and Rubber Technology are in the pipeline and awaiting the NBA visit. I am sure they will come through with flying colours. LDCE is ranked 3rd across the nation in ARIIA 2021 (Atal Ranking of Institutions on Innovation Achievements) by Ministry of Education, GoI. The departments have achieved highest number of students' placements across the state with very high pay packages, where-in nearly 270 national and multinational companies have visited the campus among which some prominent recruiters are L&T, Accenture, TATA Group, Hitachi, Ford, SIEMENS and IBM. Team LDCE, which includes faculty, staff and students - are forever committed to realize the vision of LDCE. The departmental magazine - 'ELECTRI.CT - where ideas flow without resistance', gives the students an opportunity to exhibit their talent, teamwork, exchange knowledge and information and of course interact with the illustrious alumni of the department. This platform in its own way contributes to achieving our centennial plan.

I extend my warm wishes to the department and hope they keep marching forward tirelessly towards

"Education is the most powerful weapon which you can use to change the world." -Nelson Mandela

HOD'S TALK

Dr.Jyoti Iyer

Greetings!

I take the privilege to welcome you all to this new edition of "Electri.CT- where ideas flow without resistance" . This magazine is a barometer of the activities taking place in the department and the achievements of students and faculty of the department. It gives an opportunity to the students to exhibit their talent and permits exchange of knowledge and information between the department and its stakeholders.

At last! The campus is once again vibrant and buzzing with activity with you students, the life of the campus!

Even in the online mode, you students have not kept any stone unturned to achieve excellence. We have had 2 patents published, 1 patent granted. There are 11 new POC's in SSIP. We have had a record 64 % placement even during these trying times. Students have taken part in Hackathon, Robocon and many other technical events within and outside the state. Nearly 100 students have taken up internships in different companies and are doing excellently as seen from their internal reviews. My faculty team is highly committed in upholding the legacy of the Electrical department and constantly on the run to attain the department vision. They have started organizing industrial visits, offline expert lectures and workshops , from which the students had been kept away for the past 2 years. They strive hard to harness the multi dimensional potential of the students to take them to new heights in life.

I appreciate the zeal and enthusiasm of the student team and the teamwork put up by them, the outcome of which is the making of this magazine. Kudos to the faculty team behind them. My sincere thanks to all.

I wish all the best to the students, to keep marching forward in their pursuit towards excellence.

FACULTY VISION

"You'll never find a rainbow if you're looking down."

– Charlie Chaplin

The year 2022 has brought with it a semblance of normalcy and we are looking forward to life as it was, before the world turned upside down. Our classrooms and corridors are once more abuzz with the sounds of students and faculty.

Our department hosted SAHYOG - an Industry-Academia Collaboration Meet to bridge the gap between industry and institute. We inaugurated the IEI Students' Chapter and successfully conducted expert lectures as well as a workshop. Our campus witnessed the celebration of "Days" reminding us of the vibrancy and festivities that go hand in hand with all the academics, research and projects. We are back with the 6th edition of Electri.CT which gives a glimpse of our activities / achievements and some technical as well as non-technical information. We hope you will appreciate the efforts of our team who have worked whole-heartedly to make this issue not only informative but enjoyable as well.

We always strive to make our newsletters a blend of technology and arts where our students and faculty showcase their talents, share information and some lighter moments too. We would like to thank all the students and faculty who have contributed to the newsletter. We hope that you will enjoy reading this issue. Once again, Team Electri.CT values your contribution and looks forward to your continuous support in the coming issues.

Happy Reading!

BUILDERS OF ELECTRI.CT

Kartik Bhandare
Editor In Cheif

Parth Mashru
Associate Editor

Om Bhatt
Graphic Designer

Jesa Kodiyatar
Content Editor

Abhay Gosai
Managing Director

Shwetal shyara
Assistant Editor

Dhruv Chaudhary
Art Director

Pranvi Patel
Fact Checker

FACULTY ACHIEVEMENT

A Paper titled "Utilization of Sustainable Resources for Promoting Energy Efficiency in Environment Using Smart Technologies" was published in the International Journal of Photoenergy in Feb/2022 by Prof. J.K.Chavda. ISSN: 1110-662X and SJR Impact Factor is 0.43 Thompson-Reuters, H index=51.

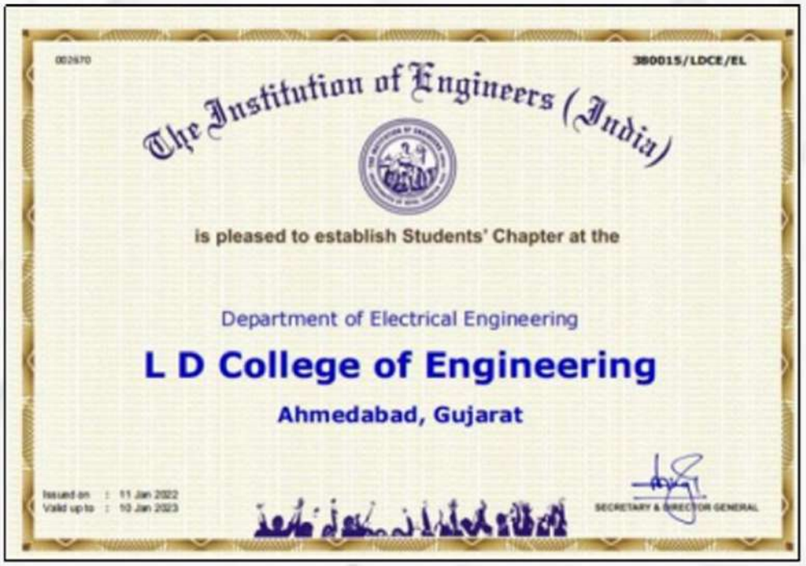
A Paper titled "Comparison of PSIM & MATLAB-Simulink usage in outcome-based Teaching-learning of Power Electronics based Courses" was published in the International Research Journal Of Engineering And Technology- IRJET in Oct/2021, Volume 8, Issue 10, by Prof. Rachana J. Patel, Prof. J. C. Patel and Prof. Fedrik Macwan. ISSN: 2395-0056 and SJR Impact Factor is 7.529.

A Paper titled "Simulation of Quasi-Z Source" on International Journal of All in May/2021, Volume 9, was published by Prof Ashutosh Sadhu and Prof. U.L.Makwana. ISSN: 2455-6211 and SJR Impact Factor is 2.28 Cite Score.

This is Prof. Fedrick Macwan for our department who played a Chess Tournament at All India Civil Services Chess Tournament 2021-22 held at Thyagraj Stadium, Delhi from 10.3.2022 to 17.3.2022. He was put on the AICS starting rank of 101 out of 197 players from all over India. He finished at 79th place after 9 rounds in which he scored 5 wins and 4 losses.

IEI ACTIVITY

Nowadays, it is essential to develop a mechanism by which students are provided updates about recent trends in the field of Electrical Engineering. To promote the students' participation in different state/national level technical competitions, our department had taken an initiative to start a Students' chapter.

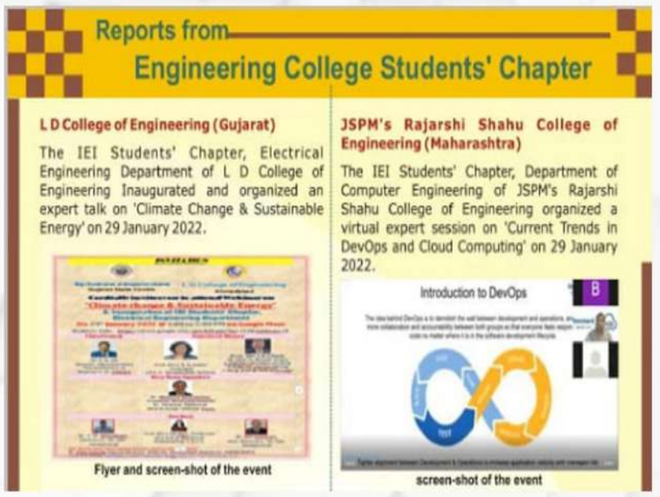


To spread awareness about the benefits of students' chapter, two awareness online webinars were arranged on 21/11/2021 and 25/11/2021. Subsequently, on January 11th, 2022, Department of Electrical Engineering started its' first students' chapter under the aegis of Institutes of Engineers, India (IEI).

To maintain the high spirit of the students, online inauguration function cum webinar on "Climate change & Sustainable Energy" was organized on 29/01/2022. Many students and faculty members have participated actively. In this event, our Head of Department Prof. (Dr.) J.R.Iyer gave a motivational speech and vote of thanks was given by Ms. Manaswini Joshi, one of the active student members. On the very next day, "Energy literacy training" was conducted under the aegis of Swaraj Energy Foundation, established by Prof. (Dr.) Chetan Singh Solanki, Professor, EED, IIT Mumbai. It covered 12 modules and students had to clear an exam with minimum 60% to uncover the next module. This training included discussion on topics such as Carbon foot prints, individual energy consumption, calculation of solar captive power plants and how to minimize this energy consumption

To update the students on the latest trends in electrical market, a webinar was organized on 4/03/2022 on "Electricity Markets and Treading" by one of the alumni of our department Sh. Dhruv. H. Bhatt, Junior Intraday Power Trader, Eneco Energy Trade, Rotterdam, Netherlands. He cited few real time examples and explained different aspects about Trading in Electricity market..

Further, one-day workshop titled "A,B,C,D about Arduino was conducted on 8/03/2022 at the seminar-hall of our department. In this, architecture about Arduino, sketch card simulation models using Tinker-cad lab., and few real time implementation of projects using Arduino were demonstrated and the same were carried out by the students on their own.



Flyer and screen-shot of the event
screen-shot of the event

Our chapter is also published in IEI Monthly Magazine. It is just starting of the chapter. We are going to learn and make new projects on innovative ideas and make the department proud of the IEI chapter. Every year the freshes can join this chapter.

SSIP

Under the aegis of the SSIP policy of Government of Gujarat, the institute has been selected as one of the beneficiaries. 17 student teams have been granted financial aid to develop PoC.

To avail financial assistance for development of prototype, proof of concept, students are informed to refer to the form available on:

https://forms.gle/qN1tqLy54LyR1kEE7

Maximum INR 2.50 Lakh per PoC/Prototype /Innovation and IP Support up to 100% of expenses will be provided under SSIP – 2.0.

For SSIP related queries, students can contact Prof. Mihir Vasavada – SSIP Coordinator.

Two teams from Electrical department have participated in Smart Gujarat for New India Hackathon 2019-20. They represented our department at Grand Finale Round at LJIT, Ahmedabad in August 2021.

Sr. No.	Name of Project	Name of Students	Faculty Mentor
1	SolarMate – Automatic solar panel cleaner	Shivam Gothi Ravi Hirani	Prof. Mihir Vasavada
2	Temp. based smart fan control	Parth Raste	Prof. Mitul Patel

PLACEMENT DATA

L.D. College of Engineering placement cell works diligently for optimum placement of its students.

Electrical Engg. department students have continued their legacy of performing excellently in the campus interviews. Some of them are listed here.

Sr. no	Student Name	On/Off Campus	Name of the Company
1	CHOTALIYA MILAN KISHORBHAI	On Campus	**Gujarat Gas**
2	PRAJAPATI JIGNESH ACHALAJI	On Campus	
3	KOYANI SHIVANG ATULBHAI	On Campus	
4	PARMAR PARESH NATVARBHAI	On Campus	**GSPL**
5	MEET VAGHELA	On Campus	
6	SHIVANG KAUSHIKBHAI PANDYA	On Campus	**BYJUS**
7	GOHEL NIKHIL HARESHBHAI	On Campus	**Torrent Power**
8	CHAVDA DIPAK VITTHALBHAI	Off Campus	**GETCO 66kV SS**
9	DALASANIYA KUSHAL ARAVINDBHAI	Off Campus	**Infosys**
10	CHAUDHARI SHIVANIKUMARI UMESHBHAI	Off Campus	**PGVCL**

Placements for 2021-22 batch has begun on an optimistic note with about 35 students of the department being placed in renowned companies like Accenture, TCS, Adani, Reliance, Shapoorji and Paloonji, Secure Meter, Keyence, Welspun, Linde, Torrent Power etc with the median salary being more than 5.5 lakhs so far. We are very hopeful of improving our record going ahead.

ABOUT AN AIR GAP

Air gap is very important in electromagnetic circuits. What exactly is the function of the air gap? "It prevents core saturation", generally answered by most engineers. Though, this may be true in certain cases, it's not true in general. In fact, in a transformer, if an excessive ac voltage is applied, air gap will not prevent saturation. We shall understand it with the help of Fig.1. Further, the air gap has several other critical functions.

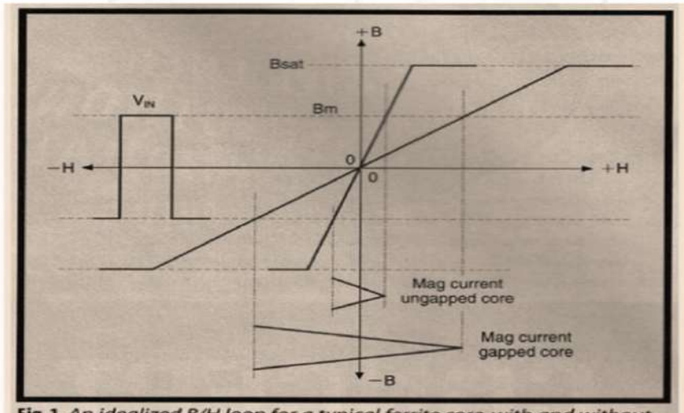


Fig. 1. *An idealized B/H loop for a typical ferrite core, with and without an air gap.*

Fig. 1 shows two idealized B/H loops for a typical Ferrite core. The steep slope (high permeability) is for a core without an air gap. The higher slope is for the same core with a small air gap. To start, we will assume that the core is to be used for a high frequency transformer or an inductor. (A transformer or inductor, is only polarized with ac, while a choke or fly-back transformer has both dc and ac current components).

If we assume that the core size, primary turns, and frequency are predefined, the vertical scale B (flux density, Tesla) is proportional to the applied voltage (Vin) (it can be considered in terms of volt seconds). For this example a square wave voltage (Vin) is to be considered. This is shown to the left of the diagram. Notice that when the peak value of (Bm) is projected right so as to intersect with the non- gapped and gapped B/H loops, the margin between the peak working point (Bm) and the saturation value (Bsat) remains the same with or without the air gap. Hence, it is clear from the Fig.1 that introducing an air gap does not help to prevent the core getting saturated if the applied voltage reaches to the saturation point.In the case of a transformer or inductor, the air gap only reduces the slope of the B/H loop, reducing permeability and inductance, and hence increasing the magnetizing current in the primary. Remember that magnetizing current flows in the primary — even if the secondary is open circuit.

The horizontal scale H (magnetizing force, Oersted) is proportional to current when the core size, permeability, and turns have been defined. The increase in the magnetizing current between non-gapped and gapped cores is clearly shown by projection from the intercepts on the B/H loops. Thus, in the example of transformer, the gap is used to reduce the inductance (perhaps for resonant applications). In some cases, a very small air gap may be used in a transformer to define the primary inductance and reduce manufacturing variations. Keep in mind that the gap will not prevent saturation in true transformer applications.

In continuous conduction chokes, flyback "transformers," and single-ended forward transformers, the function of the air gap is different (flyback transformers are really chokes with extra isolated windings).

In choke applications, we normally know the dc current (typically, the mean dc load current applied to the output filter in a switch-mode power supply).
Fig.2 depicts the previous B/H loop in the first quadrant only for a ferrite core, with and without an air gap. This is made with the known parameter (dc current) on the horizontal scale,H

By projecting Hdc upward, the gapped core intercept at Bdc is not saturated, while the non-gapped core intercept (top line) is well into saturation (at Bsat). Thus, the first action of the air gap in this application is to prevent saturation (it also changes the permeability and hence the inductance as well).

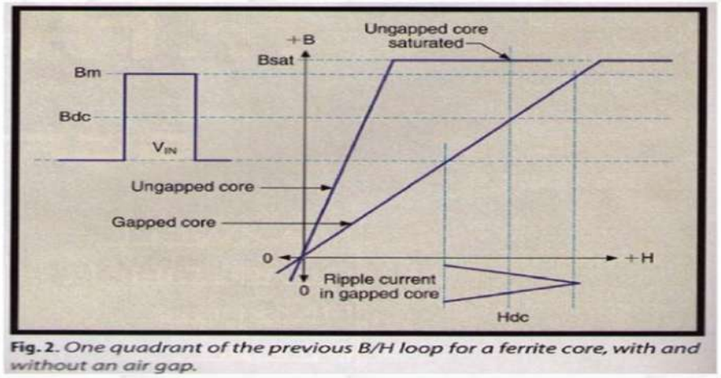


Fig. 2. *One quadrant of the previous B/H loop for a ferrite core, with and without an air gap.*

Let's take another case. As the applied ac voltage on the choke is normally known to us, we can apply this to the vertical scale, B, using the dc flux line (Bdc) as the mean value. This is set up by projecting to the left the intercept of the Hdc on the gapped B/H loop, as shown in the Fig.2. See that the maximum value of flux density (Bm) is now the sum of the dc and ac values, and it is much nearer to saturation; leading to a selection of still larger gap. The projection of the ac component back to horizontal scale H shows the ripple current. Remember that increasing the air gap further will reduce the flux density generated by the dc current, but won't reduce the peak-to-peak ac flux change, as this is a function of the applied voltage. If one tries to draw it , it can be verified that the mean flux density will reduce while the peak-peak ac flux change will remain the same (notice that the peak-to-peak ripple current will increase).

Finally, even discontinuous forward designs will benefit from an air gap, as the residual flux value will be nearer zero, allowing a larger working flux density range.

Dr. K.B.Kela
Associate Professor
Electrical Department

INDUSTRIAL VISIT

After 2 years of pandemic, which kept the students away from industrial visits, 2 visits were organized for the students of 6th Sem. Electrical in March, 2022.

FIRST VISIT:- The first visit was to Oritech Solutions, Changodar, Ahmedabad on 14th and 16th March.

Oritech commenced its operation in the year 2005
They are involved in the manufacturing of Induction Heating and Hardening Equipment using the IGBT technology in Power Electronics which is more advanced and sophisticated as compared to the Thyristor based Induction Equipment commonly used in India. This visit was conducted by Prof. S.N.Shivani and Prof. Mihir Vasavda.

SECOND VISIT:-

The second visit was to Autonova Solutions Ltd., Bareja On 15th March. They manufacture lead acid batteries and electrodes for batteries. Owner of the company, Mr. Dineshbhai explained the entire manufacturing process to the students. He divided the production process in 3 stages, molding of lead, pasting and finally curing. The students understood the entire designing and manufacturing process. Students were accompanied by Prof. Mitul Patel, Prof. Mitesh Sathwara, Prof. Mitesh Priyadarshi and Prof. Tejas Patel.

E-WASTE

Waste which is generated from the electronic and electrical equipments is known as E-Waste.
We see it's as a waste but it a treasure of the number's of precious metals found in the chips and the circuits of the electrical or electronic equipments.
Metals like:- Gold (Au), Silver (Ag), Copper (Cu), Platinum (pt), Palladium (Pd).
All above precious and valuable metals are found in the E-Waste.

According to a Central Pollution Control Board Report in financial year 2019-2020, India generated 1,014,961.2 tonnes of E-Waste for 21 types of Electrical and Electronic Equipment. Under the Environment (Protection) Act 1986, central and state governments can enact legislation to safeguard the environment and people from exposure to toxic and hazardous nature of waste. Any violation of the provision of this act or notified rules is liable for punishment. There is Government organization such as Gujarat Energy Development Agency (GEDA), Gujarat Cleaner Production Centre (GCPC) which run the program in which they give guidance to how to mange

WHY SHOULD WE RECYCLE THE E-WASTE ?

It's critical to keep electronic waste out of landfills.The EPA has stated that e-waste is dangerous when improperly disposed of. Electronic devices are comprised of toxic substances and heavy metals. Materials such as chromium, cadmium, mercury and lead can leach into the soil contaminating the air and waterways. EPA estimates there are about 60 million tons of e-waste per year globally. Recycling this material will save landfill space. For these reasons, there are numerous state laws that now ban e-waste in landfills.

"As the pace of technology increases, the amount of toxic electronic waste is piling up at home and abroad."

- Gene Green

STUDENT ACHIEVEMENT

1	Dhruv Mahendrabhai Bhalala	200280109518	CLOCKED IN EDUCATION TECHFEST LAKSHYA 2021	National Level	1st
2	SAMIR GWALIA	200280109514	LAKSHYA 2021 (GD / PI)	State Level	1st
3	Prajapati Niraj Jatashankar	210280109504	Circuit Development IRADA-2022, Techfest	National Level	2nd
4	Dhiman Tanmay	200280109140	GENERAL QUIZ IN EDUCATION TECHFEST LAKSHYA 2021	National Level	2nd
5	Darshan V. Pathak	200280109024	Group dance competition at NSS STATE DAY CELEBRATION	State Level	3rd

Bodar Khyati stood 3rd runner up in the Inter zonal Chess Tournament held by GTU at Mehsana and selected for the Nationals.

GATE QUALIFIER

SHIVAM GOTHI
AIR 827

9 more students of Electrical dept. Have cracked GATE 2022

सवालों की थैली

बचपन मे थी एक छोटी थैली मेरे पास में
जिसमे बोहोत सारे सवाल थे,
खो जाते क्यो है तारे सुबह आसमान से
सबका जवाब था, की करते है, भगवान ये,
क्या खुदा हरेक सवाल का गलत जवाब है
या वो महज एक खूबसूरत ख्वाब है,
है एक, तो क्यो है इतने सारे चेहरे उनके
या सारे के सारे ये नकाब है;
क्या खुदा ने बनाया है ये जहां
या ये महज एक इतेफाक है,
है अगर न बनना मुमकिन
जिंदगी का अपने आप से,
तो क्या खुदा में है जिंदगी
या वो खुदा ही बेजान है,
फिर कौन सी भाषा उनकी
कहां उनका जुबान है,
क्यों करना है खुश उनको
फिर क्यो इतने ताम-झाम है,
फिर क्या है खुदा का फरमान
क्यों उनके नाम से कत्लेआम है;
क्या खुदा ने बनाए है, कायदे इतने
या उन्होंने, होते इनसे फायदे जिनके,
तुम- मै, सारा जहां, ये ब्राह्मण ही भगवान है
समझ रहे है उनको हम धीरे-धीरे
शायद उनकी भाषा, गणित और विज्ञान है।

- SAMIR GWALIA
6th semester, EE

- MANASHI PANDEY
8th semester, EE

मेरी हंसी भी किसी को चुबती है,
पता नहीं क्यु,
ये घड़ी भी मेरे गमो के समय ही रुकती है।
अगर नाविक ही कमजोर हो ना,
तो नाँव भी बिना तूफान डूबती है।
ये उड़ान ही शायद हमारी ऐसी है,
जिस से हर दुश्मन की साँस घूंटती है।
पता नहीं इन हाथों का क्या कसूर,
इसके थोड़ा सा छूने पर भी लोगो की हर
कोई नस दु:खती है।

- DEVYANI BHAMMAR
4th semester, EE

- MANISHA KURMI
6th semester,EE

ASHOKA AND THE 9 UNKNOWNS

It is said that Emperor Ashoka believed that knowledge is power, and the key to preserve that power is to collect, nurture, and use knowledge in a way that can be used for great deeds, but can also prove to be terrible if exposed to the wrong hands. So, he summoned nine of the most brilliant minds in India at the time, from various fields and disciplines, to form a secret society called 'The Nine Unknown Men'.

However, it was designed in such a way that should a member quit because of death, disease, or other reasons, a worthy member would be chosen in his place as the successor, and the society would continue with the pattern of having exactly nine members at any given point in time.

There were nine disciplines based on the expertise of which, the nine were chosen. They were Propaganda, Physiology, Microbiology, Alchemy, Communication, Gravity, Cosmogony, Light, and Sociology. Between these 9 disciplines, everything that a strong ruler needed to be all-powerful, was covered. There were subjects in between these nine disciplines that were controversial, mysterious, and sometimes also referred to as 'forbidden'. For example, how to kill someone with only one touch, also called 'The Touch Of Death' was studied. It is said that modern day Judo originated from the leaked knowledge of this very stream.

Other topics include communication in its most advanced form, which apparently also dealt with extraterrestrial communication with aliens. Alchemy includes transmutation of metals, the most popular form of which is converting metals to gold.

The most interesting thing? They say the most famous and influential people in history, mostly scientists and artists, have invariably been part of secret societies. Apparently, Isaac Newton, Albert Einstein, as well as our very own APJ Abdul Kalam were members of Ashoka's Nine Unknown Men. Mind blown? Here's a small tip for anyone who is interested in finding out more on this topic: controversial yet extremely revered works such as Dan Brown's 'The Da Vinci Code' or 'The Nine Unknown' by Talbot Mundy, would have enough material to quench your thirst on this topic.

SHARK TANK

Shark Tank India is an Indian Hindi-language business reality television series that broadcasts on Sony Entertainment Television. It shows entrepreneurs making business presentations to a panel of investors or sharks, who decide whether to invest in their company. The first season of Shark Tank India premiered on 20 December 2021 and concluded on 4 February 2022.The show features a panel of potential investors, termed as "Sharks", who listen to entrepreneurs pitch ideas for a business or product they wish to develop. These self-made multi-millionaires judge the business concepts and products pitched and then decide whether to invest their own money to help market and mentor each contestant.

These are the sharks who will now help the Indian entrepreneurs to find a suitable investor for their business idea, prototypes, or active businesses. Business experts aka Sharks will evaluate their business and will invest in their business if they see a good return on their investment. For convincing the Sharks you also have a presentation skill

“Business opportunities are like buses, there’s always another one coming.”

-Richard Branson

ELECTRICAL SUDOKU

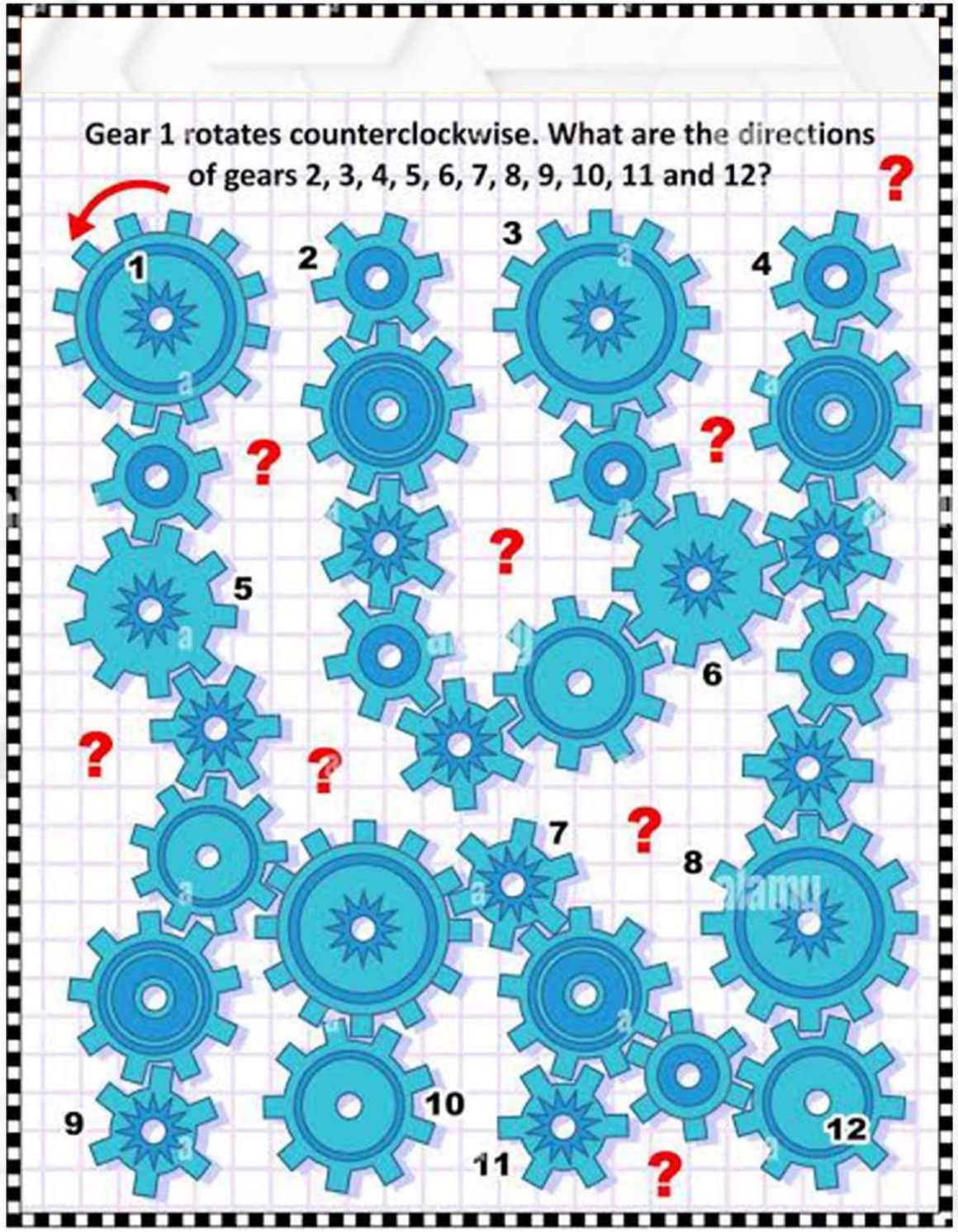
1)RESISTANCE--R
2)INDUCTOR--L
3)CAPACITOR--C
4)VOLTAGE--V
5)CURRENT--I
6)POWER--P
7)MOTOR--M
8)GENERATOR--G
9)TRANSFORMER--T

T	C						P	
		L	R			V	C	I
				C	L	G	M	T
P				L				M
	L	T	M		G	P	I	
G				T				V
L	P	M	I	R				
C	I	R			P	M		
	T						R	P

	M			G	V			I
				R		P	M	
	R		L		M			
	L	M	C			I	G	
			G		L		C	R
		G	R			T	P	L
V	P					G	R	C
I	C	R			G		T	M
		T		C		L		

Rule 1 - Each row must contain the numbers from 1 to 9, without repetitions.
Rule 2 - Each column must contain the numbers from 1 to 9, without repetitions.
Rule 3 - The digits can occur only once in every
3x3 block.

DIMAG KA HUNGAMA



ANSWER: 4, 12 - clockwise, 2, 3, 5, 6, 7, 8, 9, 10, 11 - counterclockwise.

PERSONALITY DEVELOPMENT ACTIVITY

Footprint is national level fest organized by MS University , Vadodara.

In this national level fest there is one technical event name Monocrome, Where three students of our department Abhay Gosai, Shwetal Shyara and Parth Mashru represented our college in this mega event and make us proud.

NSS stands for National Service Scheme. NSS unit works for society and people. NSS's basic motto is "Not me but you" which means to do social work for everyone without any personal greed. Here No. Of students of our department have done volunteering work with great efforts and dedication & some of them represented in state level competitions. They also participate in bring in sponsors as well as campingin for participants.

The National Cadet Corps (NCC) is the youth wing of the Indian Armed Forces. The soldier youth foundation in India is a voluntary organization which recruits cadets from high schools, higher secondary, colleges and universities all over India. The NCC provides opportunities to the youth of the country for their all-round development with a sense of Duty, Commitment, Dedication, Discipline and Moral Values so that they become able leaders and useful citizens. The NCC provides exposure to the cadets in a wide range of activities., with a distinct emphasis on Social Services, Discipline and Adventure Training. The NCC is open to all regular students of schools and colleges on a voluntary basis. The students have no liability for active military service. The Cadets who have joined NCC are given basic military training in small arms and drill. Many students of our department including a girl student are in NCC,which is a matter of pride for our department.

MERCHANT NAVY STUDY

Hello!! My name is Mohasin Kapadvanji. I belong to Moti Paneli a small village of Rajkot. I am a 2016 batch student whose college life started with demonetization and ended with pandemic. So I was jobless. In this job searching journey, one day I found merchant Navy video on my youtube and clicked on it. And that click changed my life. Till December 2020 I had no information about about merchant navy. Now I got my dream job.

These are the perks offered if you join merchant Navy.

1) Its not 9-5 job waiting for Saturday- Sunday. Its has different job profile.

2) You get your uniform and rank in merchant Navy. And respect in society.

3) Good salary in dollars

4) Opportunity to explore the world

5) 4-5 month long vacation

6) Meeting new people around the world

7) Tax free income.

There are many advantages in this field. That's why I chose Merchant Navy over Corporate job. Working profile of Merchant Navy Officer is Six months work on ships and six month rest.

Some tips as to how to join as Electrical Officer in Merchant Navy. You have to complete 17 weeks pre sea training for Electro technical officer (ETO) from Merchant Navy Institute. To get admission you have to fill their application forms and go through the entrance process. Exam, Interview, Medical Test. Eligibility for this course is 12th with PCM 65% aggregate. B.E/ B. Tech from recognized University with 65% aggregate from branches like EE/EEE/EC/IC and related branches. Age limit is 27 years. Fees of this course is around 3-4 lakh. Once you complete your pre sea course you will join ship as a trainee ETO and will be paid 500$/ month. After that your salary gradually increases. And once you qualify ETO licence from Govt. Of India you will get 3000-5000$/ month..

Entrance is not tough. You have to have good basic knowledge of your stream. For me, I had no one to guide me, as to how to prepare. That's why I created YouTube channel to guide new aspirants for entrance and clearing their doubts related to Merchant Navy. I will join Anglo eastern maritime academy one of the best institute of India for pre sea course for ETO in May 2022.Must subscribe my channel. Many video are there about Merchant navy and about electro technical officer. For any other guidance contact me on Instagram @_the_marine_man

At last, I am very grateful to every faculty for building my Knowledge in the field of electrical which helped me a lot in the entrance exam and same will be helpful in my merchant Navy life.

Thank you

SAVE OUR SOIL - CALL FOR THE DAY

Soil is the mixture of mineral and organic matter that contains air, water, micro organisms. Thirty six inches of top soil is the basis of 87% of life on the planet.

Soil is the very significant carbon sink and soil is the largest water soak on the planet. Hence to curb climate change and keep our decaying rivers alive healthy soil can play very important role.

What is the problem with soil?

The main problem is Organic content/ Biomass/ Humus of our soil is depleting rapidly in recent time.

In rain forest organic content in the soil is more than 70%. For normal agricultural soil organic matter should be within 3% to 6%. But today, 62% of Indian soil has less than 0.5% organic content or below that. So we are on the verge f desertification of most of our land. In last 30 years 80% of the biomass and insects have disappeared from the soil. The situation of soil quality degradation is same all over the world.

If the same degradation of soil will go on, then in next 50 years there will be severe shortage of food and water and climate change problem will be elevated due to high Carbon Dioxide in the air.

What are the possible solutions?

We have to bring back atleast 3% to 6% organic content in the soil.

1. By bringing at least 40% of the land under shade by providing vegetation of any kind like trees/ grass/ weeds. Pavering of land should be avoided.
2. Reducing use of Chemical fertilizers, pesticides, herbicides, weedicides and shifting on the path of organic farming
3. By creating awareness among common people and appropriate government policies
4. Proper management of grazing and wastelands.

Source: Sadguru Jaggi Vasudev Isha Foundation : Save Our Soil Movement, Conscious Planet Movement and Run For River Movement. Sadguru is travelling 30000 km from London to India on bike, passing through 27 countries, meeting eminent personalities for creating worldwide awareness about this global issue.

SPE INAUGURATION

Inaugural Function of The Society of Power Engineers- Students' Chapter

SPE (Society of Power Engineers) Students' Chapter was started in Electrical Engg. Dept. LDCE. The inaugural function was held on 22ndMarch, 2022 followed by an expert talk on "Awareness of Energy Audit" by Er. Nikhil Shah, Secretary SPE, Ahmedabad. More than 70 students of under graduate and post graduate studies and faculty members attended the inaugural ceremony and expert talk.


DEPARTMENT OF ELECTRICAL ENGINEERING
LDCE
ELECTRICAL
IC, COMPUTER
DEPARTMENT
BLOCK - 2

THANK YOU