



ELECTRIC

“Where Ideas Flow Without Resistance”

12th Edition

January-2025

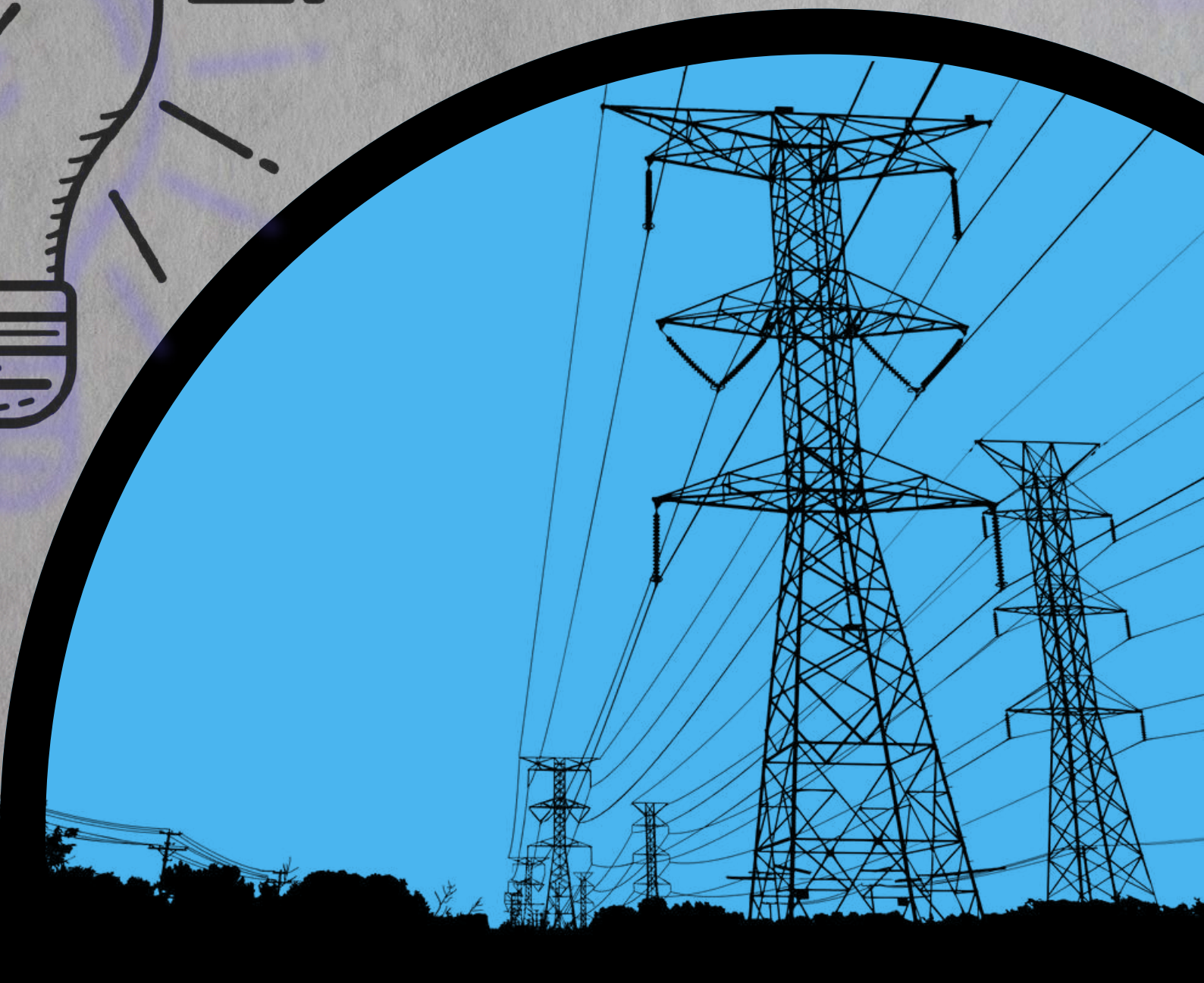


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VISION

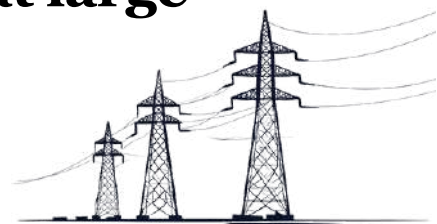


- To foster learning environment for electrical engineering education having high technical skills, ethical values and overall global competence.



MISSION

- Better employability, startups and entrepreneurship
- A professional career with essential technical and managerial skills
- Collaboration with industry through Research & Innovation
- Other avenues for higher education
- Adapting to change in technology and apply the same for the benefit of society at large



PRINCIPAL'S DESK



**"Futures don't make themselves,
you have to create them"
- Anonymous**

Dear Readers,

It is a pleasure to greet you on Republic Day. I am pleased to share that significant infrastructure upgrades are currently underway on our campus. We are introducing advanced laboratories equipped with cutting-edge technology, modernized classrooms for interactive learning, and dedicated spaces for research and innovation. These upgrades ensure that our students are well-prepared for the challenges and opportunities of the future. Our annual event SAHYOG is a testimony to our efforts to bridge the industry academia gap.

Further we hosted the third Global Alumni Convention (GAC) on the 4th of January 2025 which saw our past and present students come together to celebrate our shared legacy and pave the way forward. It is always inspiring to witness the remarkable achievements of our alumni, and I encourage everyone to participate actively. Your insights and experiences are invaluable to our current students. These gatherings foster networking and mentorship opportunities. Together, we can continue to elevate our institution's status and inspire future generations of engineers.

I congratulate the Department of Electrical Engineering for coming up with the 12th issue of the magazine ELECTRI.CT and wish them success in continuing this endeavour.

Thank you for your unwavering support and dedication.

Jay Hind !!!

Dr. N. N. Bhuptani

H.O.D.'S TALK

**Dear Readers,
Wishing you all a joyous Republic Day!**



It is with immense pleasure that I present to you the 12th edition of our department magazine ELECTRI.CT.

SAHYOG, the annual industry-institute interaction meet was organized by the Department on 19th October, 2024.

Our interactions with the industry and alumni have taken our student placements on a sustained surge over the years. Our department infrastructure is enriched with new computers in all the laboratories.

Our faculty members have been publishing research papers and mentoring students for Startups, Hackathons and other activities. Our students represented the institute at ROBOFEST-GUJARAT 4.0 and the grand finale of SIH 2024, at MIT, Pune. Our student team also visited the SEMICON EXPO at New Delhi.

The credit for these accomplishments goes to the dedicated efforts of our hardworking faculty and students. We are immensely grateful for the unwavering support from all our stakeholders.

I congratulate the faculty team of Prof. N. V. Sinha and Prof. V. M. Dholakiya and the student editorial team for the wonderful edition of the magazine and wish them success ahead.

Together, let's continue to uphold the legacy of our department and institute.

Warm Regards,
Dr Jyoti Iyer

FACULTY INSIGHTS

Happy Republic Day!

We are immensely happy to present the 12th edition of our department magazine "Electri.CT - where ideas flow without resistance". It has been an eventful time since we last met. Our student team visited the SEMICON EXPO in New Delhi and had the opportunity of interacting with various industries. It was a welcome experience. Many students have participated in co-curricular and extra-curricular activities and have performed wonderfully in GTU sports, Robofest, Smart India Hackathon, etc. Students and Faculty attended the 4th Global Renewable Energy



Investor's Summit at Gandhinagar. The exhibition and discussions gave insights into how the energy scenario is evolving. All our laboratories are now enriched with new computers. New equipment is also under purchase process. Our Principal sir is taking

keen interest in upgrading existing infrastructure and building new ones. Our alumni have generously contributed to upgrading our infrastructure and have also been helping with repairing and maintaining our lab equipment. We always strive to make our newsletters more than just newsletters by being informative and using them as a platform to showcase the multifaceted talent of our students and faculty. Having said that, we are open to any ideas that will help us improve our newsletter. We would like to thank all the students and faculty who have contributed to the newsletter. We appreciate the student editorial team who have done a commendable job. Kudos to you boys & girls!

Once again, Team Electri.CT values your contribution and looks forward to your continuous support in the coming issues.

Happy Reading!

RESEARCH & DEVELOPMENT

Name of the Faculty	Title of the paper	Name of Journal
Dr. K.B. Kela	Reliability Enhancement of Electrical Distribution Systems considering Active Distributed Generations	Published in a book titled 'Reliability Analysis of Modern Power Systems' in the form of two book chapters, published by John Wiley & Sons.
	Reliability Enhancement Strategy for Electrical Distribution Systems considering Reward and Penalty	
Dr. J.K. Chavda	A Novel Approach to the Design and Development of a C-Core Sandwich Type Radial Field Switched Reluctance Motor with On-Shaft Implementation in EV Application	SAE International Journal of Electrified Vehicles
Prof. S.M. Patel, Prof. M.I. Siddiqui, Prof. D.R. Patel	UPQC-S, A Frontline Deployable Power Line Solution for Holistic Power	Journal of Engineering and Technology for Industrial Applications (JETIA)

PROFESSIONAL DEVELOPMENT

Faculty Name	Activity	Details	Date	Place
Dr. J.R. Iyer	Conclave	One day conclave organized by GTU on "Strategic Leadership Conclave for Principals on NEP & Innovation for Technical Institutes"	21/10/2024	GTU Ahmedabad
Dr. K.P. Badujar	Workshop	2 days Workshop organized by IIT Bombay on "Impact of Inverter-based Resources on Power Systems"	04/11/2024 to 05/11/2024	IIT-Bombay
	STTP	5 days STTP organized by CTE/GTERS & NITTTR on "Train the Trainer Program on effective Implementation of NEP 2020"	14/10/2024 to 18/10/2024	VSK, Gandhinagar
	Orientation Program	Orientation Program on Study in India	31/11/2024	i-Hub, Ahmedabad
	Coordination of the one day workshop	NBA Reaccrediation	07/12/2024	Govt. Polytechnic Ahmedabad
	STTP	Expert Lecture on "AI and Education: A Partnership for progress, not peril"	6/01/2025 to 9/01/2025	Govt. Polytechnic Ahmedabad

PROFESSIONAL DEVELOPMENT

Faculty Name	Activity	Details	Date	Place
Dr. K.P. Badujar	Workshop	Keynote Speech "Bridging Borders: Implementing NEP-2020 through Internationalization"	23/01/2025	Gandhinagar University
	Expert Lecture	Train the trainer program on effective implementation National Education Policy 2020 in professional educational institutes of Gujarat	17/09/2024	VSK, Gandhinagar
Prof. N.V. Sinha	STTP	5 days STTP organized by CTE/GTERS & NITTTR on "Train the Trainer Program on effective Implementation of NEP 2020"	14 to 18/10/2024	VSK, Gandhinagar
Prof. M. R. Vasavada	STTP	5 days STTP organized by i-ACE on "Electrical Vehicle & Hybrid Vehicle"	16 to 20/12/2024	i-ACE training Centre, Gandhinagar
Prof. S.M. Patel	STTP	5 days STTP organized by GTU on "Design Thinking"	7 to 11/10/2024	GTU Ahmedabad
Prof. M.I.Siddiqui	STTP	5 days STTP organized by IITRAM on "Basics of Drone Design, Navigation and Regulations"	18 to 22/11/2024	IITRAM, Ahmedabad

FACULTY ACHIEVEMENTS

- **Dr. K.P. Badgujar :**



Shri Mayur Gojia Received doctorate Degree title : "Enhancing the sweep frequency response analysis test procedure for better deformation diagnostics of power transformer winding" under the supervision of Dr. Ketan P Badgujar. Dr.Gojia Defended his thesis on 10.1.2025.

- **Prof. (Dr.) J.R. Iyer, Prof. (Dr.) K.P. Badgujar And Prof. (Dr.) K. A. Bhatt :**

Name of the Faculty	Achievement
Prof. (Dr.) J.R. Iyer Prof. (Dr.) K.P. Badgujar Prof. (Dr.) K. A. Bhatt	Published Patent on "Power Theft Detection in Distribution Network Using NodeMCU, Current Transducers, and Server Integration" on 20/12/2024

STUDENT ACHIEVEMENTS

- **Girls Kho-Kho Team :**



Our department's girls' Kho-Kho team has once again brought glory by representing GTU at the All India University Interzonal Competition and emerging as champions for the second consecutive time. Led by the exceptional captaincy of Devika Rajput, team members Patel Kiran, Jaimi Shah, and Dhruvi Palas showcased incredible teamwork and determination. The team also displayed their talent in the Khel Mahakumbh, advancing to the district level with outstanding performances. Congratulations to all the students for their remarkable achievements and for making us proud!

- **Shubhangi Shukla :**

Our talented 6th-semester student, Shubhangi Shukla, has once again made LDCE proud by securing 1st place in the GTU Interzonal Table Tennis Competition held at SVIT, Vasad. This marks her second consecutive victory, showcasing her unwavering dedication and exceptional skills. Shubhangi's remarkable achievements continue to inspire her peers and bring glory to our institution. Congratulations to her for this outstanding accomplishment!



- **Manan Trivedi :**

Our talented student, Manan Trivedi, had the incredible opportunity to serve as Manager and Anchor for the Gujarat cultural team representing the state at the Independence Day celebrations in Lucknow, Uttar Pradesh, on August 15, 2024. The highlight of this inspiring journey

STUDENT ACHIEVEMENTS



was being honored with a memento of appreciation by the Honorable Chief Minister of Uttar Pradesh, Shri Yogi Adityanath Ji. This prestigious recognition is a testament to Manan's exceptional dedication and leadership, making our department immensely proud.

Also Manan Trivedi showcased his exceptional talent at the Youth Festival organized by the District Youth Sports and Cultural Department. His captivating performance in Lokvarta (Folk Tale) earned him 1st place at the zonal and district levels, 2nd place at the South Gujarat level, and the honor of representing Gujarat at the state level. Additionally, his participation in the "Duha-Chhand" competition secured 1st rank at the zonal level and 2nd rank at the district level.



- **Nishant Chauhan :**



Nishant Chauhan, a third-semester electrical engineering student, has achieved a significant milestone by becoming a finalist for the AMA SR Bhandari Best Speaker Awards in Ahmedabad. Competing against top talents, Nishant's eloquence and confidence set him apart on this prestigious platform. Balancing his demanding studies with public speaking, Nishant's dedication and versatility are truly commendable. His achievement not only highlights his personal growth but also serves as an inspiration to his peers.

STUDENT ACHIEVEMENTS

- **Smart India Hackathon - 2024 :**

Our 6th-semester students, Aryan Raiyani (Leader), Jaimie Shah, Niket Vaishnav, Parth Parmar, and Vardhaman Solanki, have made history for the Electrical Department by securing 3rd position in the grand finale of the 7th edition of Smart India Hackathon 2024, held at MIT Pune. Among 208 participating teams, their remarkable achievement brought immense pride to the department. Their success was also recognized in The Gujarat Samachar newspaper. With the guidance of faculty mentors Dr. K.A. Bhatt and Prof. F.A. Macwan, the team has set an inspiring milestone. Congratulations to the team for their outstanding accomplishment!



- **Patel Sneha & Team :**



Our department's students have successfully registered a patent for their innovative project titled "Power Theft Detection in Distribution Network Using NodeMCU, Current Transducers, and Server Integration." This system detects and prevents unauthorized electricity usage in real-time using advanced technologies like Wave Current Transducers and ESP8266 NodeMCU. The patent, developed by Patel Sneha Bharatbhai, Pal Gaurav Rameshprasad, Shailendra Gupta, Pandya Vaibhav Umeshbhai, Raj Thwani, Prince Goswami, and Adwani Deepak, is currently published and under examination. Guided by mentors Prof. (Dr.) J.R. Iyer, Prof. (Dr.) K.P. Badgujar, and Prof. (Dr.) K.A. Bhatt, this achievement brings pride to the department.

STUDENT ACHIEVEMENTS

- **Shubhangi Shukla & Madhav Raval :**

Our students, Shubhangi Shukla and Madhav Raval, have been sanctioned a grant of ₹54,000 under SSIP for their innovative project, mentored by Prof. M.R. Vasavada. The project aims to design a boat powered by ionic wind generators and lightweight 3D-printed materials. Utilizing copper wires and tubes as electrodes, the boat generates thrust through ionized air, eliminating the need for fuel or a mechanical engine. This eco-friendly innovation demonstrates the potential of electricity-driven propulsion and brings pride to the department.



- **Team Atya-i :**



Atya.i, an innovative farming surveillance device, has achieved a significant milestone under the SSIP of the Government of Gujarat. Led by Team Leader Rahulsinh Dodiya and supported by Harsh Pithava, Sujan Juneja, Neha Chaudhary, Susmita Mallick & Rudra Bhatt the team

secured ₹41,470/- for their Proof of Concept (PoC). Mentored by Prof. M.R. Vasavada and Prof. H.N. Raval. Atya.i detects intruders, alerts farmers in real-time, and ensures crop protection without harming animals. The project reflects the team's dedication to empowering farmers with smart, humane solutions while safeguarding wildlife. Congratulations to the team for this remarkable achievement, making our department proud!

VISITS

- **SEMICON - 2024 :**

Prof. F.A. Macwan and 7th semester students from LDCE actively participated in SEMICON India 2024, South Asia's largest electronics manufacturing event, held from September 11-13, 2024. Co-located with Electronica and Productronica India, the event was organized in collaboration with the India Semiconductor

Mission, SEMI and industry associations to position India as a key player in the global semiconductor supply chain. Under Prof. Macwan's guidance, with his expertise in machine learning, AI and power electronics, the students attended workshops, interacted with industry professionals, and explored the latest trends in the semiconductor industry. Their involvement demonstrated LDCE's dedication to fostering innovation and preparing students for future advancements in electronics. This achievement marks a milestone in their academic and professional journey.



- **RE-INVEST Expo :**



The 4th edition of the Global Renewable Energy Investors Meet and Expo (RE-INVEST) organized by the Ministry of New and Renewable Energy, was held from 16th to 18th September at Mahatma Mandir, Gandhinagar, Gujarat, inaugurated by Prime Minister Shri Narendra Modi. Attracting over 15,000

delegates globally, most of our department's faculty members and students actively participated, showcasing LDCE's commitment to renewable energy. Their engagement with global industry leaders emphasized academia's role in advancing sustainability, reinforcing LDCE's contribution to India's clean energy goals and a sustainable future.

INDUSTRY INTERACTION

Event	Date	Target audience	Place	Coordinator
An Expert Talk on "Application of Controlled Switching for Transmissin Lines" was delivered by Dr. Urmil Parikh of Hitachi Energy.	05/08/2024	Students of semester-7	EED, LDCE	Dr. K.A. Bhatt
Visit to Research Park-IIT Gandhinagar	20/12/2024	Students of ME Sem-1	IIT Gandhinagar	Prof. N.V. Sinha Prof. H.N. Raval Dr. J.K. Chavda
An Expert Talk on "Design Software for Electrical Engineering' on 22nd October 2024" was delivered by Mr. Jagrut Patel, Technical Director, JP TECHNOSOFT (Alumnus of LDCE)	22/10/2024	Students of semester-7	EED, LDCE	Dr. B.J. Shah
An Expert Talk on "Generator Protection " was delivered by Prof. V.B. Babaria retired professor and head of Electrical department at LDCE, Ahmadabad	16/10/2024	Students of semester-5,7	EED, LDCE	Dr. K.A. Bhatt

EVENTS

- **Independence Day - 2024 :**



The 78th Independence Day celebration at LD College of Engineering was a grand affair, marked by patriotic zeal and cultural richness. The event commenced with Principal Dr. N.N. Bhuptani hoisting the national flag, followed by the rendition of the national anthem. The presence of NCC cadets, NSS volunteers, and GISF guards lent an air of discipline and respect to the ceremony. Our students Harsh Chauhan and Margi Thakkar delivered impassioned speeches, highlighting the sacrifices of freedom fighters and emphasizing the youth's role in nation-building. They also underscored the importance of innovation, education, and unity in forging a stronger, more prosperous India. The event featured a precision parade by NCC cadets and NSS volunteers, as well as a classical dance performance that showcased the dancers' skill and cultural heritage. Additionally, the 11th edition of the department magazine, Electri.CT, was launched, highlighting the academic and creative achievements of the department.

- **Lab Session By Prof. M.G. Patel :**

On August 13, 2024, Prof. Mitul Patel conducted a transformative lab session at the Bosch Training Center under the IIC Mentor-Mentee program. Students from four government engineering and polytechnic colleges gained hands-on experience, bridging theoretical knowledge with practical application. Prof. M.G. Patel simplified complex concepts, demonstrated industry-relevant techniques, and provided real-world insights, fostering an engaging and



EVENTS

interactive learning environment. The session allowed students to actively participate, ask questions, and deepen their understanding of engineering practices. Their positive feedback highlighted the session's impact in enhancing their academic journey and preparing them for future professional challenges.

- **GEDA Workshop :**



On September 12, 2024, the Electrical Department hosted a full-day "Theory cum Practical Energy Conservation Awareness Workshop," organized by GEDA under the IEI student chapter. Held at Chanakya Hall and led by Prof. H.N. Raval and Prof. K.A. Bhatt, the workshop aimed to raise awareness about energy conservation among students. The morning session focused on theoretical insights through expert lectures on the importance of energy conservation and innovative solutions. The afternoon practical session featured hands-on activities, allowing students to work with energy-efficient tools and technologies. The event successfully inspired participants to adopt sustainable practices and contribute to energy conservation efforts.

- **Blood Donation :**

On September 12, 2024, the NSS unit of LDCE organized a successful blood donation camp, reflecting the unity and compassion of the campus community. Students, faculty, and staff participated enthusiastically, contributing to the noble cause of saving lives through blood donation. The event witnessed



EVENTS

an exceptional turnout, surpassing expectations and showcasing the generosity of the LDCE family. It also promoted the importance of blood donation while fostering social responsibility and strengthening community bonds.

- **Elocution Competition :**



The NSS unit of LDCE, in collaboration with the Electrical Engineering Department, organized an Elocution Competition on October 1, 2024, at Chanakya Hall under the theme "Swachhata Hi Seva 2024." The event inspired students to reflect on cleanliness and balanced living through topics like "Work-Life Balance" and

"Swachhata: Duty of Every Citizen." Students showcased exceptional oratory skills and deep insights into these themes. The initiative aimed to promote responsibility towards the Swachh Bharat Abhiyan and emphasize the importance of sustainable and balanced living. The competition was a success, leaving a lasting impact on participants and the audience alike.

- **SAHYOG :**

The Electrical Engineering Department at LDCE, Ahmedabad, proudly hosted SAHYOG 2024, its flagship industry-institute interaction event, on October 19, 2024. Representatives from 16 leading industries and organizations, including ISRO, Adani Wilmar, GERMI, CIPET, IPR, and i-ACE, convened with faculty and student delegates from UG and PG programs to forge robust industry-academia collaborations. This dynamic platform witnessed in-depth discussions on leveraging mutual strengths to drive innovation and excellence.



EVENTS

Industry leaders applauded the initiative and expressed strong commitment to supporting the department through internships, industrial visits, and knowledge-sharing sessions. Their insights on fortifying industry-academia synergy underscored the transformative potential of such collaborations, marking a pivotal moment for LDCE's vision of excellence in engineering education.

- **Global Alumni Convention (GAC) :**



On January 4, 2025, LD College of Engineering hosted the prestigious Global Alumni Convention (GAC), graced by Gujarat's Education Minister, Shri Rushikesh Ganeshbhai Patel. The event celebrated academic excellence and professional synergy, with the minister engaging with students

recognized for their outstanding collegiate achievements. Thought-provoking alumni-student interactions followed, fostering intergenerational knowledge exchange and professional growth. The evening concluded with a grand Gala Dinner, reflecting the spirit of unity, collaboration, and scholarly distinction that defines the institution's legacy.

- **Joy Of Giving :**

The NSS unit of LDCE organized an inspiring donation drive, "The Joy of Giving" celebrated from December 30 to January 5. Donation boxes were placed at the annexe, canteen, library, and hostel gate, collecting reusable items like clothes, shoes, toys, books, and more. This initiative reflected LDCE's commitment to



EVENTS

service and compassion, as students, faculty, and staff came together to support those in need. The program aimed to create a meaningful impact by turning old belongings into a fresh start for others, spreading kindness and hope throughout the community.

- **UMMEED :**

LDCE's National Service Scheme celebrated Makar Sankranti with an inspiring event, "UMMEED 2025 - Let's Fly Happiness," on January 12, 2025, marking the birth anniversary of Swami Vivekananda. The program brought together around 150 students from an NGO, fostering joy through kite flying, games, cultural performances, and a shared meal. The event symbolized the spirit of NSS, compassion, and Swami Vivekananda's ideals, bringing immense happiness and a sense of belonging to the children. "Ummeed" created lasting memories, proving how small moments can uplift spirits and inspire unity.



- **Expert Session By BIS Club :**



On 23rd January 2025, the BIS Club, Electrical Department of LDCE, proudly hosted an enlightening expert session on IS codes: Electric Mobility and Cables. The session, led by the esteemed Scientist Trinath, Assistant Director of BIS Mumbai, offered profound insights into industrial standards and their significance. It was a remarkable platform for learning and technical growth, leaving participants enriched. E-certificates were awarded to honor their participation.

PLACEMENT DETAILS

Company Name	Package (LPA)	Number of students
MICRON	13.25	4
SUZUKI MOTOR GUJRAT PVT LTD	7	14
ADANI GROUP	6.5	11
MEDITAB	6.09	1
AMNS	6	12
WORLEY	5.8	1
DCM SHRIRAM	5.5	1
UPL	5.25	2
ATUL LTD	5	10
TORRENT POWER LTD	4.5	12
DRASHTA POWER	4	2
TCS (NINJA)	3.5	1
ACADEMOR	4.5	6

TOP SCORERS



Jesrani Sohan
SPI : 9.73
(SEM-2)



Raval Madhav
SPI : 9.65
(SEM-4)

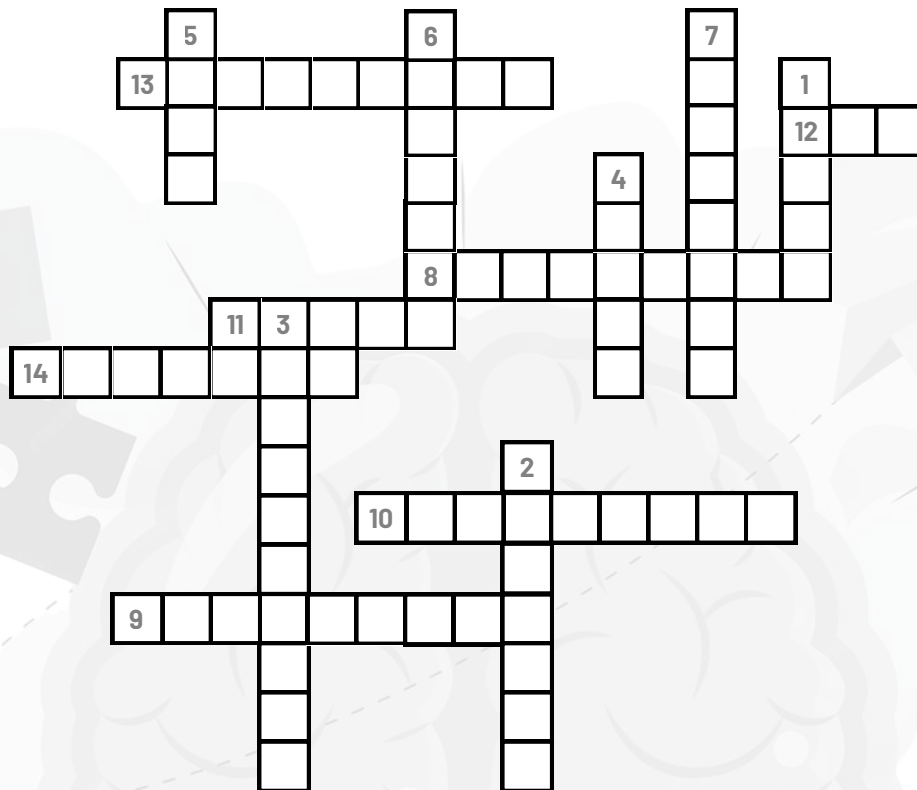


Prajapati Chandresh
SPI : 9.48
(SEM-6)



Rayrikar Shashwat
CPI : 9.21
(SEM-8)

GAMES



Down:

1. The rate at which electrical energy is transferred by an electric circuit.
2. The flow of electric charge.
3. The opposition to the flow of alternating current, measured in ohms.
4. The SI unit of capacitance.
5. A type of alternating current waveform, often used in power systems.
6. The difference in electric potential between two points.
7. A component that induces electromotive force in a circuit.

Across:

8. A device that converts mechanical energy to electrical energy.
9. A circuit element used to store electrical energy in an electric field.
10. A material with low electrical conductivity but high resistivity.
11. A semiconductor device that allows current to flow in one direction.
12. The SI unit of electrical resistance.
13. The law stating that the total current entering a junction equals the total current leaving.
14. The basic unit of charge.



Scan This QR For Solution

CREATIVE CORNER



Kesar Kaliya
Semester-4



Anjali Mistry
Semester-4



Jay Odedra
Semester-4



Meet Chaudhary
Semester-4



Jay Odedra
Semester-4



Hemisha Chaudhari
Semester-4

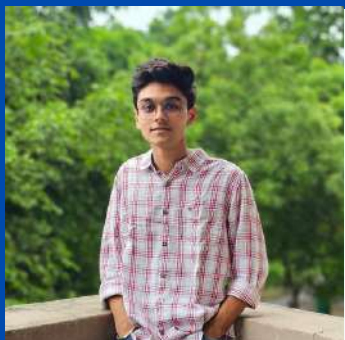


Bhumi Jindal
Semester-2



Anshu Patel
Semester-4

BUILDERS OF ELECRI.CT



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Creative Head



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Assistant Writer



Krisha Vadsak
Fact Checker

FUN CORNER

1. Why did the electrical engineer break up with the capacitor?

- Because it just couldn't Charge Up the relationship!

2. What did the voltage say to the resistor?

- "I'm Positive you're making things more difficult!"

3. Why was the electrical engineer always calm?

- Because they knew how to stay Grounded.

4. Neutron walked into bar and asked "How much for a drink?"

- The bartender said "For you, No Charge!"

5. What did the inductor say to the capacitor after the party?

- "You've got some Charge left in you, don't you?"

6. Why don't transformers ever get stressed?

- They know how to step up or step down when needed.

7. What did the AC say to the DC ?

- "Stop being so Direct, it's awkward."



WE ARE THE POWER OF THE WORLD
- Electrical Engineers



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