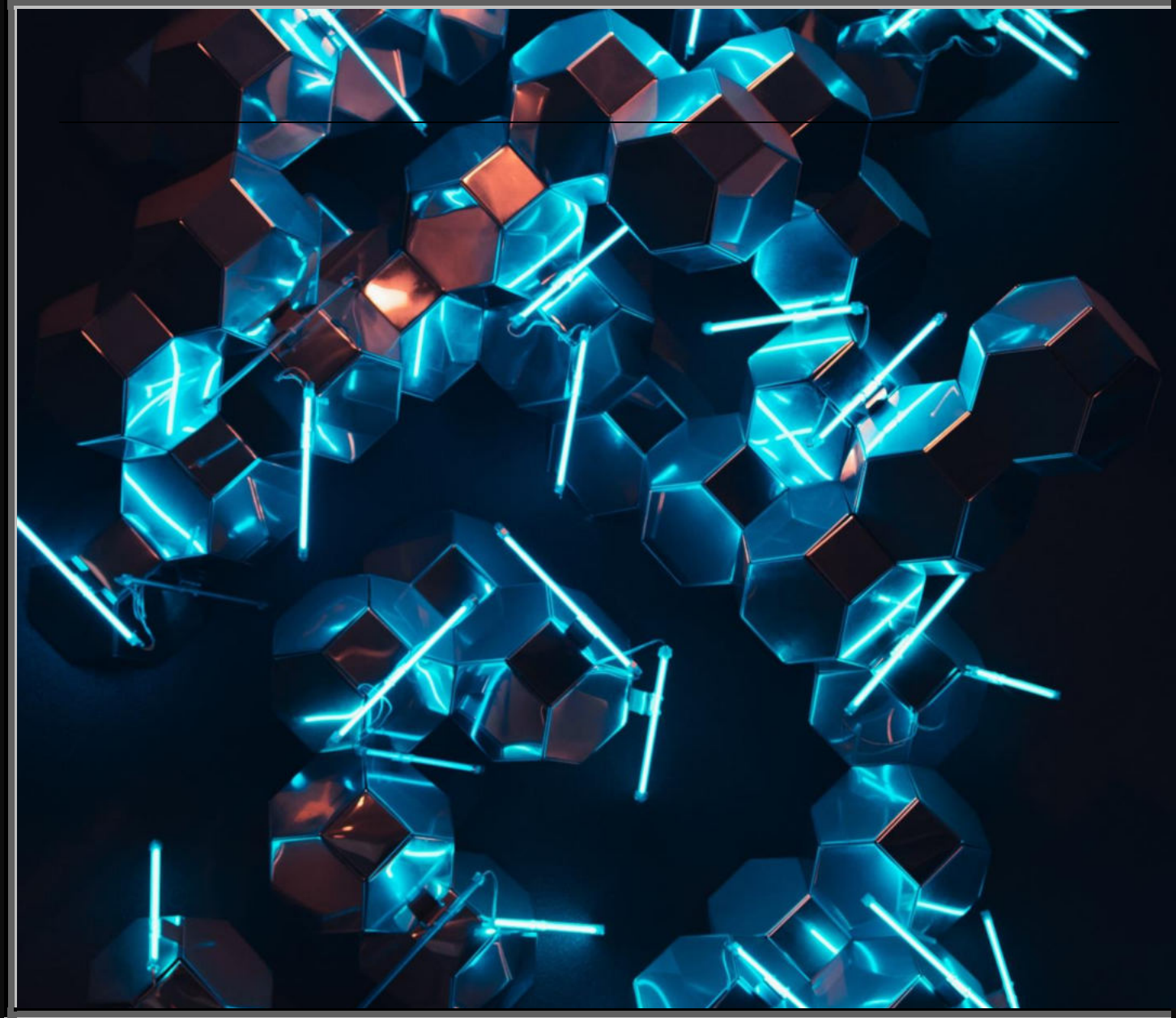


ELECTRAZINE

DEPARTMENT OF ELECTRICAL ENGINEERING, NIT AGARTALA

NOTE FROM EDITOR:

Dear Reader, Greetings to you.

It is a pleasure that the ELECTRAZINE issue of this year is being published in time. To ensure uninterrupted publications of the magazine, the editorial board has been reformed including some really talented group of students in it. The present issue is the first product of the newly formed editorial board. All new essence, reflecting the new editorial board, can be felt to be omnipresent in this issue.

In this issue of ELECTRAZINE, our students have put forward some amazing pieces of writing displaying their creative thinking and writing skills. It is indeed a lovely experience to view these enthusiastic and highly potential young minds voicing their feelings through their technical/non- technical write ups, poems, drawings and paintings. I would definitely like to convey my heartiest thanks to the entire editorial team for their hard work round the clock to make this edition come in life in time.

I am confident that this magazine would find warm appreciation and welcome for all.

Sumita Deb

CO-EDITOR&DESIGNER: ANAGHA KARI (22UEE153)

What's inside this edition?

FROM HOD's DESK :

The Department of Electrical Engineering was established at NIT Agartala (founded as Tripura Engineering College) in 1965. Over the last few decades, our graduates have been serving the society in key positions and made tremendous contributions to the development of India since its evolution from an industrial based to knowledge-based company.

The field of Electrical Engineering encompasses many exciting technologies such as: Microelectronics, HV Transmission, Power Generation etc. which have been the fastest growing and most challenging technologies that enables the development of the modern informational society.

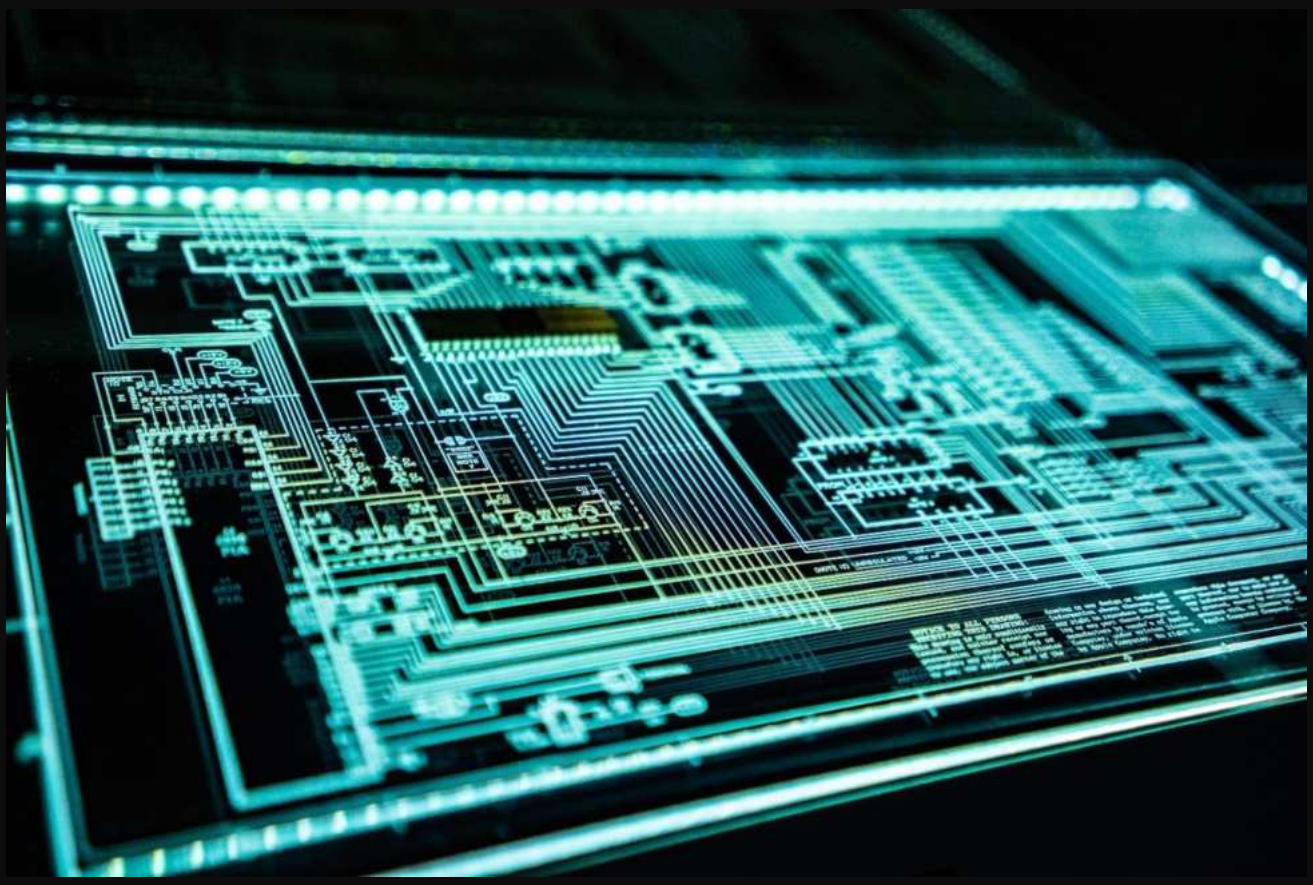
Our department provides tremendous opportunities for cross-interaction in terms of both teaching and research. It has a wide range of research activities and has been accredited by NBA since past 2 years.

Thus, I'm very glad in presenting ELECTRAZINE on the eve of X-mass and HAPPY NEW YEAR. In a subtle sense it is the celebration of joy and rejuvenates us to struggle harder in our lives. This magazine brings an opportunity to the students to present their individuality by showcasing their hidden talent and helps them to unleash their potential.

I hope this magazine brings joy to readers.

Dr.Priyanath Das,
HOD, Electrical Department

TECHNICAL SECTION



HYBRID ELECTRIC VEHICLES

“**New Delhi:** Electric vehicles (EVs) may be the buzzword in the automobile industry, but strong hybrid cars — powered by a petrol or a diesel engine and an electric motor — are also attracting buyers, as seen by the rise in sales.”

A worldwide problem today is environmental pollution, resulting in the greenhouse effect, therefore the appearance **of eco-friendly cars** is a great benefit to the environment. Technology has needed to evolve greatly to be able to power these automobiles over long distances and the process has not ended yet.

In this run for evolution and efficiency, there are a lot of questions that still remain open and one of them is what happens at the end of the lifecycle of a battery and an electric motor. As the number of sold electric

cars will increase, the number of electric motors and battery waste will increase too thus leading to a greater impact on the environment. *So, Hybrid Electric Vehicle is a great idea to decrease the usage and disposal of batteries in the vehicle.*

Any vehicle with two sources of power can be called a **hybrid vehicle**. Hybrid cars get their power from two sources, a gasoline engine and an electric motor. Hybrid cars are designed that in some cases both power sources are used simultaneously and in others the sources are used alternatively.

For example, when a hybrid car runs at speeds below 5-10 km/h, e.g., when approaching or leaving a traffic junction, it runs only on the electric motor, which reduces the fuel consumption.

“Consumers are seeing hybrids as a better option. The sales of strong hybrid and electric vehicles are almost similar… and this is when there are only 3-4 strong hybrid models in the market today. As more models come in, the consumption will also go up,” Shashank Srivastava, senior executive director (marketing and sales), Maruti Suzuki,

Maruti Suzuki, which is the biggest car maker in the country, currently offers the Grand Vitara in a strong hybrid variant.

India currently has three automobile manufacturers — Maruti Suzuki, Toyota Kirloskar Motor (TKM) and Honda Cars India — that have launched cars in the hybrid category and are expected to launch more models.

Car buyers like hybrids because they can save on gas and cut their carbon footprint without having to deal with range anxiety or the need to charge at home.

CONCLUSION:

Concerns about the environment and rising costs of fossil fuels are driving automakers to design and build cleaner, more energy efficient vehicles, represented especially by hybrid and electric vehicles. This reduces the CO_2 emissions and other harmful emissions thus having a lower impact on the environment. The main drawback is the energy source: the batteries. Rare earth elements are available in limited quantities and expensive, therefore researchers are developing solutions for extracting as much as possible from discarded batteries. Unfortunately, none of the proposed solutions is used at an extensive level. Based on their potential, though, the time until they reach industry scale is not far away.

BIPASHA CHAKRABORTY
ELECTRICAL ENGINEERING
3RD YEAR

Title: Powering the Future: Innovations in Electrical Engineering

In a world increasingly reliant on technology, electrical engineering stands as a driving force behind innovation, shaping our lives in ways we often take for granted. From the ubiquitous smartphones in our pockets to the vast power grids that light up our cities, electrical engineering continues to redefine possibilities. In this article, we delve into a few cutting-edge advancements that are shaping the future of this dynamic field.

1. Renewable Energy Integration: The global shift towards sustainability has thrust renewable energy sources into the spotlight. Electrical engineers are at the forefront of designing and optimizing systems that harness solar, wind, and hydroelectric power. Smart grids, capable of seamlessly integrating various energy sources, are reducing our carbon footprint and ensuring a reliable power supply.

2. Smart Homes and IoT: The Internet of Things (IoT) has revolutionized how we interact with our surroundings. Electrical engineers play a crucial role in developing smart home systems that allow us to control appliances, lighting, security, and more, remotely or through voice commands. These systems enhance convenience, energy efficiency, and even home security.

3. Wireless Power Transfer: Imagine a world where devices charge without needing to be plugged in. Wireless power transfer is a burgeoning field within electrical engineering that aims to achieve just that. From charging pads for smartphones to developing systems for electric vehicle charging without cables, engineers are paving the way for a cordless future.

4. Electrification of Transportation: With a growing focus on reducing emissions, electrical engineers are driving the transition from internal combustion engines to electric vehicles (EVs). From designing battery technology to optimizing charging infrastructure, they are instrumental in making EVs a viable and sustainable mode of transportation.

5. Nanotechnology and Microelectronics: The relentless pursuit of miniaturization has led to breakthroughs in nanotechnology and microelectronics. Electrical engineers are creating smaller, faster, and more efficient electronic components, enabling the development of wearable devices, implantable medical sensors, and more.

6. Power Electronics: Power electronics is a field that focuses on converting and controlling electrical power efficiently. This is crucial for devices like solar inverters, motor drives, and high-speed data communication systems. Engineers in this domain ensure that energy conversion is as efficient as possible, minimizing losses and maximizing output.

7. Artificial Intelligence and Machine Learning: The synergy between electrical engineering and AI/ML is driving automation and optimization across industries. Engineers are developing algorithms to predict equipment failures, optimize power distribution, and enhance energy efficiency, thereby revolutionizing how we manage complex systems.

8. Space Exploration and Satellite Technology: Electrical engineers are pivotal in space exploration, designing systems for communication, navigation, data collection, and propulsion. As space travel becomes more ambitious, engineers are pushing the boundaries of what' s possible in terms of efficiency and reliability.

In a world where progress is often defined by technological advancements, electrical engineering serves as a cornerstone of innovation. As these trends highlight, the field is not only evolving but also deeply interconnected with other disciplines. From sustainable energy solutions to smart living spaces, electrical engineers are shaping the way we live, work, and interact with our environment. The future of electrical engineering is undoubtedly electrifying, with limitless possibilities waiting to be explored and harnessed for the benefit of society.

Nabajyoti Deb

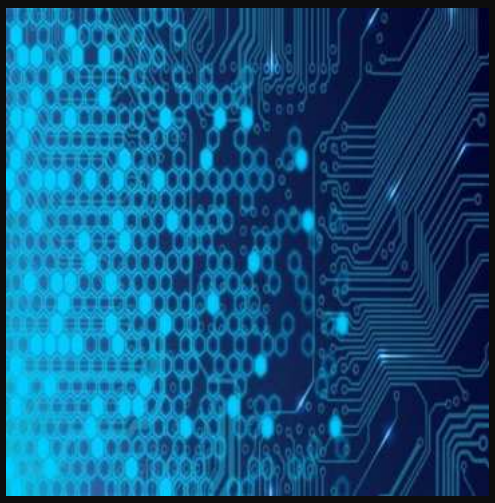
20UEE074

Small Great Ideas!

Human minds are one of the simplest nature-made subject to observe and in the same time, complex to understand. Experiences and thinking process makes it so unique. Reaction and stimuli are two terms associated with experience….it is like learning from past. As simple as first time we learn to walk (balanced ourselves against earth's pulling force) or realized that ice melts into water and it makes clothes wet and simply enough we walked or carried umbrella. Ideas that evolve and grow big were just stupid and simple observations…. call it gravity, call it discovery of fire in the stone age, or a wheel rolling down a slope. The capability to think and synthesis thoughts to produce ideas and to express them separate us from other species. Ideas…. a thriving power, an unpopular artform, a trade material. In a world of infinite subjects and materials to work with and to access infinite ideas to scroll through our human mind often denies to think something new, discover something wild or experiment. That's where we start questioning our value and purpose of our existence. A day when everything would be AI dependent IDEAS would be the only tool to distinguish us from robots. It needs a mind to think and a courageous heart to express. Dearest thinkers of the new world, there they wait for your ideas.

Ananya Ray

22UEE125



Nanotechnology: The Tiny Revolution Shaping Electronics

Nanotechnology: It's a big word that points to something incredibly small yet incredibly powerful. In the world of electronics, this tiny powerhouse is causing quite a buzz.

Let's take a journey into the realm of nanotechnology and its remarkable influence on the field of electrical engineering.

The Power of Small: Miniaturization Redefined

Electronics has always been about making things smaller and faster. Nanotechnology takes this mantra to the extreme. By manipulating materials on an atomic scale, scientists are crafting components that were once deemed impossible. Transistors, the building blocks of digital devices, have shrunk so tiny that thousands can fit on a single chip. This not only boosts processing power but also slashes energy consumption – a win for both performance and the environment.

Tiny Yet Mighty: Enhancing Performance

So, how does this tiny tech impact electronics?

One word: efficiency. Think about your smartphone. It's become your pocket-sized life manager, but it wouldn't be half as efficient without nanotechnology.

Engineers are using nanomaterials to create faster and more energy-efficient processors, allowing your phone to handle tasks at lightning speed while sipping on battery power.

But the magic doesn't stop there. Nanotechnology is also playing a pivotal role in improving the lifespan of electronics. You know that sinking feeling when your laptop battery gives up on you? Nanomaterials are helping to design batteries with extended lifetimes, making those frustrating moments less frequent.

Now, let's talk about something that's music to every engineer's ear: miniaturization.

Remember those clunky computers from a decade ago?

Today, we've got sleek and slender devices that fit snugly into our bags. Nanotechnology enables the creation of smaller and more efficient components, pushing the boundaries of what we thought was possible. Nanotechnology doesn't stop at size and materials – it's about enhancing performance. In electronics, heat is the enemy. Nanoscale thermal materials efficiently dissipate heat, preventing devices from turning into miniature ovens. Moreover, nanoelectromechanical systems (NEMS) are enabling sensors with unprecedented sensitivity. These advancements not only refine current devices but also pave the way for entirely new technologies. Sensors and transistors at the nanoscale are enhancing the sensitivity and accuracy of devices, allowing them to gather and process data with unprecedented precision. Imagine

medical devices that can detect diseases at an early stage or environmental sensors that monitor pollution levels down to the tiniest particle.

The Road Ahead: Challenges and Possibilities

Of course, with every leap forward, there are challenges to overcome. Nanotechnology isn't without its hurdles. Engineers need to grapple with issues like heat dissipation in these ultra-small devices and ensuring their reliability over time. Moreover, the potential environmental and ethical implications of using nanomaterials need careful consideration. Manipulating matter at the nanoscale requires precision beyond imagination. Ensuring safety and ethical considerations are vital as we navigate this uncharted territory.

However, the potential rewards are immense. Imagine wearable gadgets that seamlessly integrate with our lives, or solar panels that are as thin as paper yet incredibly efficient.

In conclusion:

Nanotechnology is no longer confined to the realm of science fiction; it's shaping the present and future of electronics. From enhancing efficiency and lifespan to enabling miniaturization and boosting intelligence, its impact is profound. As electrical engineering enthusiasts, we're witnessing a new era unfold, where the tiniest building blocks create the grandest innovations. So, let's embrace the nanoscale revolution and keep our eyes peeled for the exciting breakthroughs it's sure to bring.

Sanjukta Banik

20UEE082

Home Automation: The Future of Electrical Engineering

Home automation is the use of interconnected devices and software to control aspects of a home, such as lighting, thermostats, and security systems. It is a rapidly growing field that is transforming the way we live and work.

In the field of electrical engineering, home automation is being used to develop new and innovative solutions for a wide range of applications ,including:

- **Comfort**: Home automation can be used to create a more comfortable and convenient living environment. For example, you can use home automation to turn on the lights when you come home, adjust the thermostat to your desired temperature, or lock the doors when you leave.
- **Security**: Home automation can be used to improve the security of your home.

For example, you can use home automation to arm your security system when you leave the house, or to receive alerts if someone enters your home when you are not there.

- **Energy efficiency**: Home automation can be used to save energy in your home. For example, you can use home automation to turn off lights when you leave a room, or to adjust the thermostat when you are asleep.
- **Accessibility**: Home automation can be used to make homes more accessible for people with disabilities. For example, you can use home automation to control lights, thermostats, and door locks with your voice or a button press.

Home automation is a complex and challenging field, but it is also a very rewarding one. Electrical engineers who are interested in home automation will need to have a strong understanding of electrical, computer, and networking principles. They will also need to be creative and innovative in their approach to problem solving.

The future of home automation is very bright. As the technology continues to develop, we can expect to see even more innovative applications in the years to come. Electrical engineers who are involved in home automation will be at the forefront of this transformation, and they will have the opportunity to make a real difference in the lives of people around the world.

Here are some of the benefits of home automation:

- Convenience: Home automation can make your life more convenient by

automating tasks that you would normally do manually. For example, you can

use home automation to turn on the lights when you come home, adjust the thermostat to your desired temperature, or lock the doors when you leave.

- Security: Home automation can improve the security of your home by monitoring and controlling access to your home. For example, you can use home automation to arm your security system when you leave the house, or to receive alerts if someone enters your home when you are not there.
- Energy efficiency: Home automation can help you save energy by automatically turning off lights and appliances when they are not in use. For example, you can use home automation to turn off lights when you leave a room, or to adjust the thermostat when you are asleep.

 Accessibility: Home automation can make your home more accessible for people with disabilities by providing them with ways to control lights, thermostats, and other devices with their voice or a button press.

If you are interested in home automation, there are a few things you can do to get started:

 Learn about the basics of home automation. There are many resources available online and in libraries that can teach you about the basics of home automation.

 Choose a home automation platform. There is many different home automation platforms available, each with its own strengths and weaknesses.

Do some research to choose a platform that is right for you.

 Install home automation devices. Once you have chosen a home automation platform, you can start installing home automation devices. There are many different types of home automation devices available, such as smart lights, smart thermostats, and smart locks.

 Configure your home automation system. Once you have installed your home automation devices, you will need to configure your home automation system. This involves creating rules that tell your home automation system how to operate.

Home automation is a complex and challenging field, but it is also a very rewarding one. Electrical engineers who are interested in home automation will need to have a strong understanding of electrical, computer, and networking principles. They will also need to be creative and innovative in their approach to problem solving.

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Soham Sengupta

20UEE077

Wireless Power Transfer: The Next Frontier in Charging Technology

In an era where technology is becoming increasingly integrated into our daily lives, the demand for more efficient and convenient charging solutions has grown exponentially. Enter wireless power transfer – a cutting-edge technology that promises to reshape the way we charge our devices and vehicles. Traditional charging methods require physical connections, whether plugging in a cord to charge a smartphone or connecting an electric vehicle to a charging station. While these methods have served us well, they come with limitations such as wear and tear on cables, the need for compatible ports, and the inconvenience of having to carry multiple chargers. Wireless power transfer, also known as wireless charging or inductive charging, seeks to eliminate these limitations by enabling the transmission of electrical energy without the need for direct physical contact. The technology relies on electromagnetic fields to transfer power from a transmitter to a receiver device. This concept is not entirely new; wireless charging has been around for decades ,but recent advancements have propelled it into the spotlight as the next frontier in charging technology.

One of the primary advantages of wireless power transfer is convenience. Imagine being able to charge your smartphone by simply placing it on a charging pad, or topping up your electric vehicle's battery while parked over a charging pad embedded in the ground. This seamless experience could revolutionize the way we interact with our devices and vehicles, making charging a hassle-free and integrated part of our routines.

Efficiency is another key aspect of wireless power transfer. While some energy is lost during the wireless transmission process ,modern technologies are striving to minimize these losses and optimize charging efficiency. This could lead to faster and more energy-efficient charging compared to traditional wired methods.

Wireless power transfer has already started making its way into the consumer market. Many smartphone manufacturers now offer wireless charging capabilities, and electric vehicle manufacturers are incorporating wireless charging options for their models.

Additionally, various industries are exploring wireless power transfer for applications beyond consumer electronics, such as medical devices and industrial machinery.

However, there are challenges that need to be addressed before wireless power transfer becomes ubiquitous. Standardization of the technology, interoperability between different devices and systems ,and safety concerns related to electromagnetic fields are some of the issues that researchers and engineers are actively working to resolve.

As we look to the future, the potential of wireless power transfer is vast. Imagine smart cities with charging infrastructure seamlessly embedded into roads and public spaces, enabling electric vehicles to charge as they drive. Consider the possibilities for remote and hard-to-reach locations,

where wireless power transfer could provide a lifeline for essential devices. The integration of renewable energy sources, such as solar panels, with wireless power transfer could also lead to more sustainable and eco-friendly charging solutions.

In conclusion, wireless power transfer is poised to be the next frontier in charging technology, offering unparalleled convenience and efficiency. While challenges remain, the strides being made in research and development indicate a promising future where we can bid farewell to tangled cords and embrace a world where charging is as effortless as placing a device down. As this technology continues to evolve, we can anticipate a new era of connectivity and power delivery that transforms the way we live and interact with technology.

Nikita Das

20UEE036

Internet of Things (IoT) in Electrical Engineering

The Internet of Things (IoT) is a rapidly growing technology that is transforming the way we live and work. In the field of electrical engineering, IoT is being used to develop new and innovative solutions for a wide range of applications, including:

- Smart grids: IoT-enabled smart grids can collect data from sensors on power lines and other equipment to monitor and optimize the power grid. This can help to improve efficiency, reliability, and security.
- Smart metering: IoT-enabled smart meters can collect data on energy consumption in real time. This data can be used by consumers to track their energy usage and make informed decisions about how to conserve energy.
- Home automation: IoT-enabled devices can be used to automate tasks in the home, such as turning on lights, adjusting thermostats, and locking doors. This can make homes more comfortable, secure, and energy efficient.
- Industry 4.0: IoT is being used in Industry 4.0 to connect machines, sensors, and other devices in factories. This data can be used to improve efficiency, productivity, and quality control.

 Transportation: IoT is being used to develop connected cars, intelligent transportation systems, and autonomous vehicles. This technology can help to improve traffic flow, reduce accidents, and make transportation more efficient.

These are just a few of the many ways that IoT is being used in electrical engineering.

As the technology continues to develop, we can expect to see even more innovative applications in the years to come.

Why is IoT important for electrical engineering students?

IoT is a rapidly growing field with a wide range of applications. Electrical engineering students who have knowledge of IoT will be well-positioned for careers in a variety of industries, including:

 Power utilities

 Energy efficiency

 Home automation

 Industry 4.0

 Transportation

 Healthcare

 Retail

 Manufacturing

In addition to the technical skills required for electrical engineering, IoT also requires skills in data science, cloud computing, and cybersecurity. Electrical engineering students who have a strong foundation in these skills will be even more valuable to employers.

Conclusion:

The Internet of Things is a transformative technology that is having a major impact on the field of electrical engineering. Electrical engineering students who have knowledge of IoT will be well-positioned for careers in a variety of industries. If you are interested in a career in electrical engineering, I encourage you to learn more about IoT. It is a technology that is sure to have a bright future.

Soham Sengupta

20UEE077

CARBON TAXATION ANS IT'S IMPACT ON ECONOMIC SECTOR

The post world war is regarded as the Golden period of Economic development due to its rise in prosperity, economic value etc while it is true that USA and North America were the major benefiters in this era it is no secret that the rest of the nation had received their fair share of financial growth. The main source of income was due to oil and automobile production. Maybe that's why the interval from 1901 to 1973 was also coined as the Age of machinery, at least that's what it was until the **oil crisis in 1973.** The mass production of newly booming automobiles, functioned with the help of fossil fuels such as coal, gas and oil. These fuels which were priorly used for domestic and household purposes had found their way to global market. They became a medium between the nations to mutually trade the resources and form a pact. While this nexus between resources and technology evidently powered up financial sector. **Is that the only thing this amazing technology offered?** What came next was the catastrophe that no one had imagined. It was just the calm before the storm.

These fossil fuels give carbon dioxide gas on burning, imprudent usage of these non-renewable resources hiked up the concentration of Co2 and other greenhouse gases in atmosphere leading to deleterious after effects such as warming up of earth, depletion of ozone layer etc. You might ponder that the only blowback is the noxious impact on biological living beings and eco-system. Well, you know what? There is more to beneath the walls of nature destruction.

Have you heard of the Oil Crisis in 1973? The 1973 oil crisis was a major energy shortage triggered by the Arab members of OPEC (Organization of Petroleum Exporting Countries) imposing an oil embargo on Western countries, including the United States in response to their support for Israel during the Yom Kippur War. This led to a sharp increase in oil prices, long lines at gas stations etc going down in history as the biggest economic shock. **The deeper we dive into this, the more we realise that the bottom line of all this issue concerns with the very fact that we are heavily dependent on other nations.**

To be a self-sufficient nation is almost impractical in current day's scenario but to be **minimize dependency on others is one factor to become an empowered nation**. Since fossil fuels are not evenly distributed its only obvious that one nation would have upper hand the over other as an exporter, while it is true that this exchange in commodities may pave path for under developed or developing nation to build connections across the world. We must not forget that a sudden cut in supply can affect the whole chain.

To cope up with this we have come up with the idea of renewable energy sources such as sunlight, wind, geothermal, hydropower energy etc. which are continuously replenished and create far low emissions. Additionally implementing geological survey throughout the country's landmass and allocating technologies

based on potential renewable resources available addresses the key concern of climate crisis and self-sustainability.

Then what is the first step to achieve a self-sufficiency?

It is to eliminate all the primary and auxiliary industries related to fossil fuels and power generation to ensure that no fossil fuel is used.

The **Carbon Taxation Policy** now enters the picture.

A carbon tax is a policy that would set a fixed price per ton of carbon or carbon dioxide emitted, with a goal of incentivizing lower carbon emissions.

The tax to be paid is directly proportional to the carbon content in the goods, making both consumers and firm liable for less carbon emissions. Mainly based on **polluter will pay principle** this could be a better approach to search for more efficient and pollution less routes.

Successful Implementation of the policy: Here are some of the successful examples of the policy.

UK – coal use fell sharply after introduction of a carbon tax of around $25 per ton in 2013. In the UK greenhouse gas emissions have fallen to lowest level since 1890

British Colombia (a province of Canada) introduced a scheme in 2008 to charge a levy on carbon from 2008 and 2012 the fossil fuel consumption decreased by more than 17%.

This seems like a perfect solution for both climate crisis and economy, right?

But, like every coin has two sides, even carbo taxation has both positive and negative effects. Let's explore these dual impacts in more detail:

How Carbon Taxation creates positive impact on Corporate Sector:

- **Consumer and Investor Expectations**: Companies that proactively reduce their carbon footprint may be seen as more morally responsible in society.
- **Global Competition**: The impact of carbon taxation can vary among businesses within the same industry. Companies that are more efficient and less carbon-intensive may gain a competitive advantage
- **Government Incentives**: Governments may provide incentives and subsidies for companies that invest in clean technologies or adopt more sustainable practices.

Negative Role of Carbon Taxation in Economy

- **Reducing Efficacy**: The administration process of these taxes is quite expensive making it only viable to only developed countries and few areas of developing countries and reducing its efficacy.
- **Resource Re-allocation**: While the motto for firms was to come up with a better solution, it has been seen that the Production may shift to countries with no or lower carbon taxes giving

developing countries an incentive to encourage production processes causing pollution i.e., Outsourcing of pollution.

- **Possibility of tax evasion**: Higher taxes may encourage firms to hide carbon emissions prevailing to corrupted society.
- **Hindering Development**: A global carbon tax may curtail economic activity in the poor developing world because they can't afford the small increase in energy costs.
- **Job Displacement**: In industries heavily reliant on carbon-intensive processes, efforts to reduce emissions may lead to job displacement, as certain jobs become obsolete due to the transition to cleaner technologies.

If we consider the overall economic model, we find out that in various instances this taxation gives simultaneous gains and losses such as introducing carbon taxation includes cut **in** other taxes such as corporate income taxes, personal income taxes and labour income increasing the incentive to save and invest, thus promoting capital accumulation and human capital. In either case, the result is an increase in the productive capacity of the economy. However, shifting the taxes onto carbon reduces the overall efficiency of the tax system a bit (ignoring environmental benefits) and thus slightly reduces the economic activity.

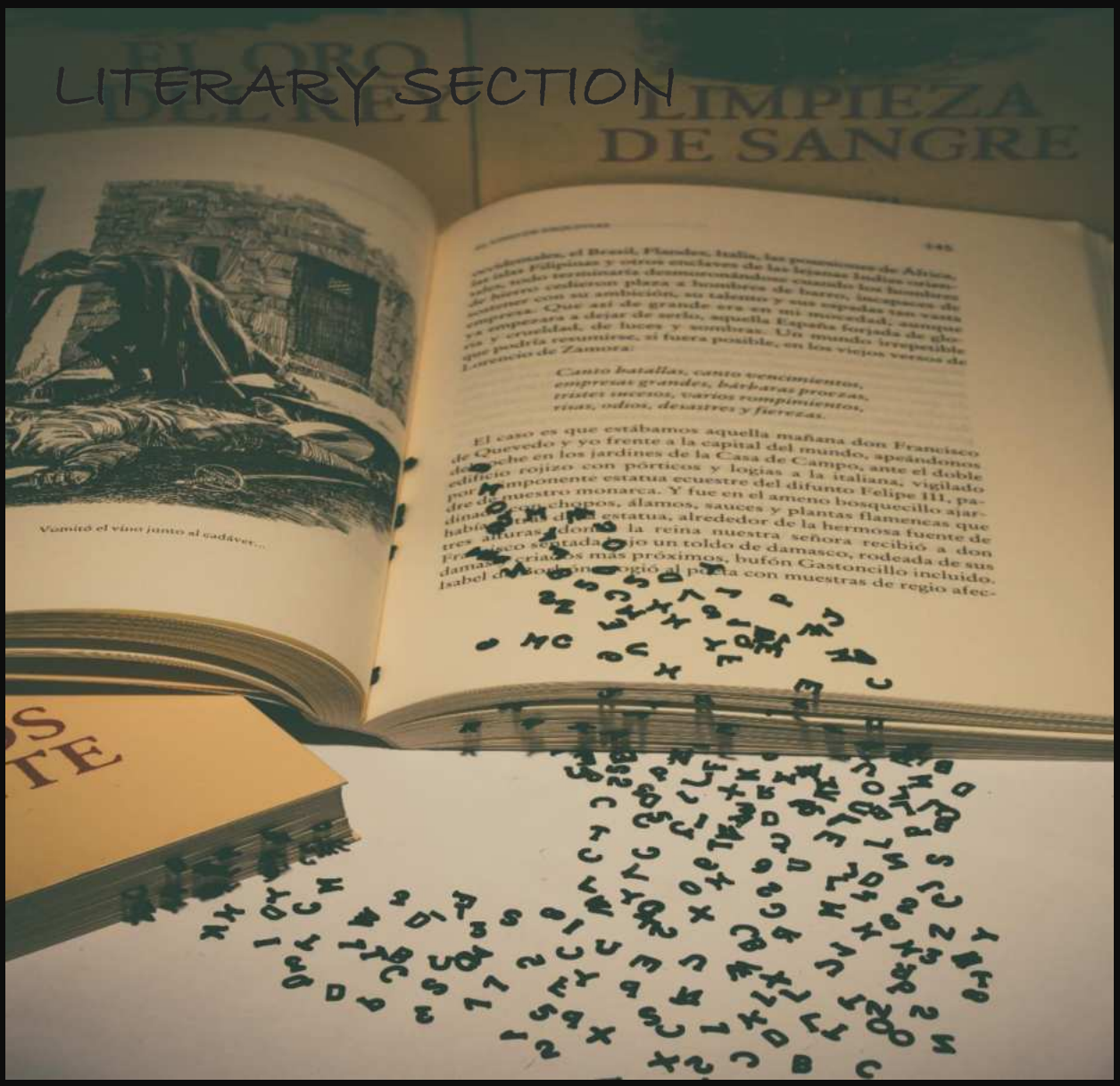
From a pure revenue-based point of view carbon taxes are broader in respect to taxpayers opposite to the traditional taxes.

Let us break this down.

Carbon taxation is easier to avoid by shifting to cleaner fuels, driving less etc. serving the purpose of climate crisis but failing to raise the revenue. **On calculating both the pro and con's it is observed that the net reduction in GDP is tiny.** Moreover, the revenue from the carbon tax can be used to promote economic activity and mitigate future economic damages from climate change.

Conclusion: Carbon taxation is a practical and effective policy tool that can address environmental challenges and promote economic welfare. However, its implementation requires thorough consideration of circumstances and goals of each country. By designing and executing properly, it can play a pivotal role in the transition to a sustainable and low-carbon economy.

By Anagha Kari
22UEE153


LITERARY SECTION
EL ORO DEL REY
LIMPIEZA DE SANGRE
Vomitó el vino junto al cadáver...

Like The Changing Winds

Every evening, the boy would come to see me.

The god of biscuits and the bringer of sunshine and warmth,

He'd spend the next 10 minutes with me and then disappear past the brown bungalows only to return the next day.

That was 2 summers ago, the boy now a man, no longer the carrier of sunshine but the reminder of a dear friend lost to the whims of time.

Like the clouds that abandon the desert, I still see him past the bungalows, but there is no warmth anymore, my sunshine has turned into a lonely, forgotten winter.

- **Chaitanya Raj**
21UEE071

My Father, A Super Hero

My little childish hands you hold,
Right path of I you told,
You are the best person of this World!
Your all advices worked brave and bold.

When I am nervous, Your advices are there,
When I am weak, you removed my fear,
when I was childish you took my care,
When I was sad, You cleaned my tears.

Finally my I you praised,
My wonderful future you raised,
For making me happy, you took pain,
Thank you my world, my dream I gain.

Humanity

Pain in this world is so deep,

Truth & Humanity are going cleve,

Little truth is left in this world,

But promises, not the sordid keep.

The most endangered species of this world is a True man,

And continuously going down the number they stand,

Save the true ones because its job which only you can,

Be still a humanity lover and I am their prominent fan.

-Upendra Kant Singh

20UEE011

STUDENTS ACHEIVEMENTS CORNER

Not only have our students excelled in their academic pursuits, but they have also excelled in other areas such IT Sector, Management, and government sectors. Their future chances in this vital and dynamic profession have improved as a result of their hard work and dedication. With their drive and fervour, they not only succeeded in landing prestigious jobs like those at Google, but also managed to gain admission to renowned universities in both India and abroad.

Here are some of our significant mentions for students who have been accepted to a variety of programs, including master's, diploma, and other courses, at reputable institutions and international universities.

S.no	Name of the student	Course	Institute
1	Labani Das	PGDIM	NITIE
2	Debadipta Das	PGM	IIM Indore

3	Punit	PGDIE	NITIE
4	Debatirtha Das	Master	IOWA state University
5	Sowmyadeep Das	Physics M.Sc	King's College London
6	Dipayan Karamakar	Masters	University of South California
7	Sahaj	Masters	Cal State East bay
8	Sobiya Maninaram	Graduate	Purdue University
9	Tharun Sai Erukulla	PG	ISB
10	Nayak Harshit	Masters	Polit

BARC Training : BARC, or the Bhabha Atomic Research Centre, is a premier research institution in India primarily focused on nuclear science and technology. These training programs are designed to educate and develop professionals and scientists for the nuclear industry. Students selected for training at BARC (Bhabha Atomic Research Centre) undergo a rigorous and competitive selection process. These candidates are typically among the best and brightest in the country, We are very happy to announce that our students have bagged their admission in BARC Training school making us proud.

We are thrilled to report that our pupils have been accepted into the BARC Training School, making us proud.

S.no	**Application number**	**Candidates full name**
1	21EE200611	Arkabrata Dattaroy
2	21UEE200509	Satyam Jha
3	21UEE201890	Anurendra Singh
4	21UEE201480	Kurre Jai Sai Kiran Reddy
5	21UEE200612	Obaid Siddiqui
6	21UEE200710	Sudipta Pany

Cheers to all the students who are pursuing their passions and giving society a promising future !