PRAGATI ENGINEERING COLLEGE

(Autonomous)

1-378,ADB Road, Surampalem – 533 437, Near Peddapuram, Kakinada District., A.P.
(Approved by AICTE, Permanently Affiliated to JNTUK Kakinada & Accredited by NBA)
(Recognized by UGC Under Sections 2(f) and 12 (b) of UGC act, 1956)
Ph: 08852 – 252233, 252234, 252235 Fax: 08852 – 252232, website:www.pragati.ac.in

Learning is Supreme Deity

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Date: 20-10-2024

CIRCULAR

It is to inform to all the students of B.Tech II, III & IV Year that the Student Chapter Institution of Engineers (India) Department of Electrical & Electronics Engineering is Conducting "**TECHNICAL TALK ON ADVANCEMENTS IN ELECTRICAL TECHNOLOGIES**" on 22-10-2024. In this regard All the interested students participate actively.

Faculty coordinator: Mr.S.Nani Babu, Asst Professor

Student Coordinators: K.Anjani-23A31A0220
R.Sravani-23A31A0219
N. Sai Teja Vignesh-23A31A0245

Venue: MS-12(Mechanical Block)

HOD-EEE

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Copy to:

1) Circulate among students and staff
2) Department Notice Board
3) Department File
4) Principal for Information

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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Date:23-10-2024

REPORT ON
TECHNICAL TALK ON ADVANCEMENTS IN ELECTRICAL TECHNOLOGIES

The electrical technology landscape is rapidly evolving, driven by innovations in materials, designs, and applications. This report highlights key advancements in electrical technologies, focusing on power systems, renewable energy, electrical machines, power electronics, energy efficiency, and emerging trends.

Power Systems:

1. Smart Grids: Integration of renewable energy sources, energy storage, and advanced monitoring systems.

2. High-Voltage Direct Current (HVDC) Transmission: Efficient long-distance power transmission.

3. Flexible AC Transmission Systems (FACTS): Dynamic power flow control.

Renewable Energy:

1. Solar Energy: Bifacial panels, perovskite cells, and concentrated photovoltaic (CPV) systems.

2. Wind Energy: Larger turbines, floating wind farms, and advanced blade designs.

3. Energy Storage: Lithium-ion batteries, flow batteries, and other emerging technologies.

Electrical Machines:

1. High-Efficiency Motors: IE5 and IE6 classes, using advanced materials and designs.

2. Electric Vehicle (EV) Drives: High-power density, high-efficiency, and compact designs.

3. Permanent Magnet Synchronous Machines (PMSM): Improved efficiency and reliability.

Power Electronics:

1. Wide-Bandgap Semiconductors (SiC, GaN): Faster switching, lower losses.

2. Modular Multilevel Converters (MMC): High-voltage, high-power applications.

3. Resonant Converters: High-frequency, high-efficiency designs.

Energy Efficiency:

1. LED Lighting: Improved efficiency, lifespan, and color quality.

2. Smart Buildings: Energy management systems, IoT integration.

3. Energy Harvesting: Piezoelectric, thermoelectric, and vibration-based systems.

Emerging Trends:

1. Electric Vehicles (EVs): Charging infrastructure, battery technology.

2. IoT and Industrial Automation: Smart sensors, actuators, and control systems.

3. Quantum Computing: Electromagnetic applications, cryogenic systems.

Research and Development:

1. Advanced Materials: Graphene, superconductors, and nanomaterials.

2. 3D Printing: Electrical components, magnetic devices.

3. Artificial Intelligence (AI) in Electrical Systems: Predictive maintenance, optimization.

In this need of the hour, Local Chapter IE (India) of EEE Department took a step to make II nd EEE students familiar with the introduction to his Achievements through this lecture.

Students were participated curiously during the event. Participations will be made at MS-12.The picture of the event and glimpses of slides presented were mentioned in the report stated.

Date & Time of Event :22.10.2024 @ 11:00 AM

Venue : MS-12(Mechanical Block)

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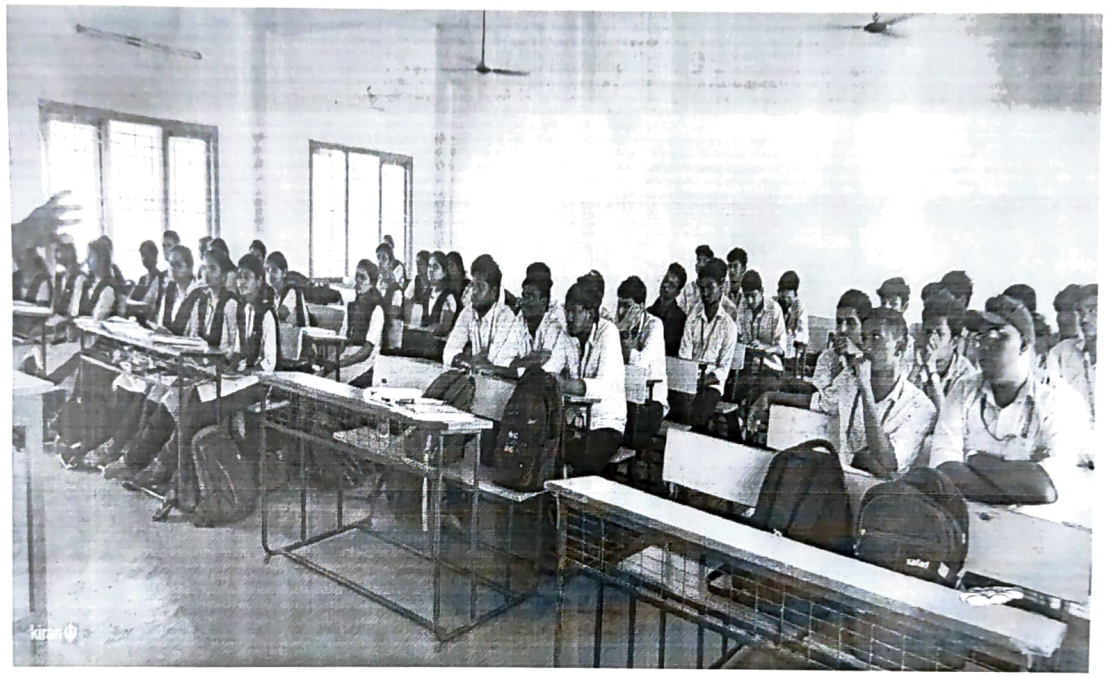

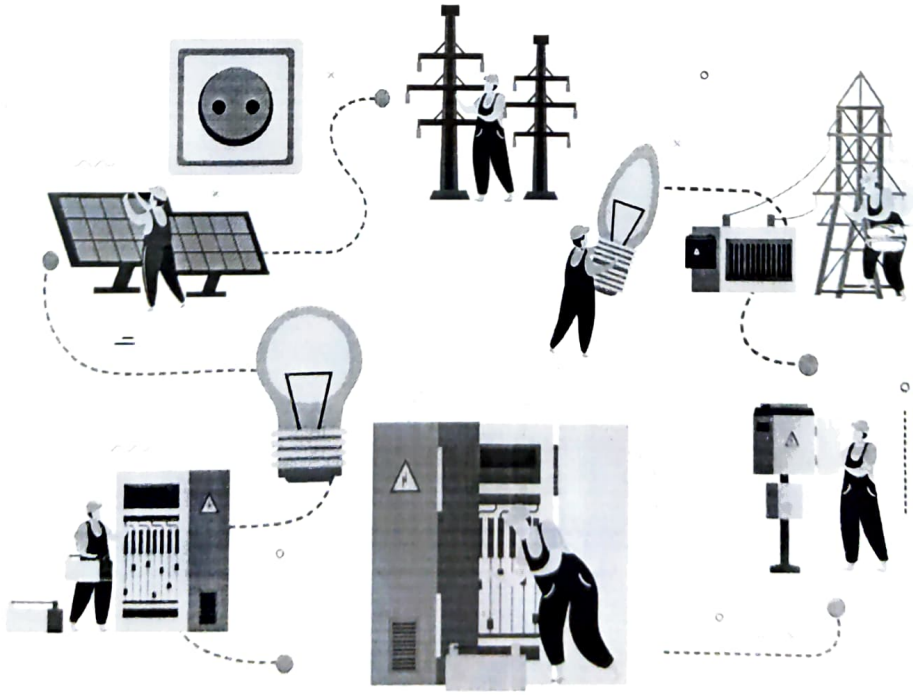

S. Nani Babu
Coordinator

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ofUGCact,1956)Ph: 08852 – 252233, 34. Website:www.pragati.ac.in

Title of the event: Technical talk on Advancements in Electrical Technologies

Speaker of the event: S. NANI BABU

Event No.

Date : 22/10/2024 **Time:** 11:00 AM

List of students attended:

S.NO	ROLL NUMBER	NAME	BRANCH	YEAR	SIGNATURE
1	23A31A0222	Vyshnavika. B	EEE	II	
2	23A31A0224	Sridivya. B	EEE	II	
3	23A31A0203	G. Anusha	EEE	II	G Anu
4	23A31A0214	P. sowmya	EEE	II	P. Sowmya
5	23A31A0204	G. Varshitha	EEE	II	G. Varshitha
6	23A31A0206	K. Aswini	EEE	II	K. Aswini
7	23A31A0223	Y. Trishasha	EEE	II	Y. Trishasha
8	23A31A0201	A. Navya Satya Sri	EEE	II	A Navya
9	23A31A0205	K. malliswari	EEE	II	K malli
10	23A31A0207	K. Sumathi	EEE	II	K Sumathi
11	24A35A0201	M. Devi Iswarya Ambika	EEE	II	M. D. I. Ambika
12	24A35A0202	SK. Shamsha. d	EEE	II	Shamsha
13	23A31A0218	R. chandana sahithi	EEE	II	R. ch. sahithi
14	23A31A0211	M. B. Sividya	EEE	II	M. B. Sividya
15	23A31A0219	R. Sravani	EEE	II	R. Sravani
16	23A31A0290	K. Anjani	EEE	II	K. Anji
17	23A31A0202	B. Chaitanya jyothika	EEE	II	B Chaitanya
18	23A31A0245	N. Satya sriram	EEE	II	N. Satya
19	23A31A0233	Ketan Jain	EEE	II	Ketan Jain
20	23A31A0229	E. Hima Varsha	EEE	II	E Hima Varsha
21	23A31A0260	A. Ganesh	EEE	II	Ganesh
22	23A31A0238	M. RAM	EEE	II	RAM
23	23A31A0256	V. vikas vardhan	EEE	II	V. vikas
24	24A31A0208	E. S. S. kiran	EEE	II	E. S. S. kiran
25	24A35A0209	K. Gnanasikaran	EEE	II	K. Gnanasikaran
26	24A35A0206	D. Dharma Teja	EEE	II	Dharma Teja
27	23A31A0227	B. Hema Sundari	EEE	II	B. Hema Sundari
28	23A31A0259	Y. H. H. Satyanarayana	EEE	II	Y. H. H. Satya
29	23A31A0254	P. Surya Manikanta	EEE	II	
30	23A31A0210	P. Sekhar	EEE	II	
31	23A31A0228	D. Phani	EEE	II	
32	23A31A0230	G. Balakrishna	EEE	II	G Balakrishna

S. Nani Babu
FACULTYCOORDINATOR

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