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Dr. G. Sunil Kumar, Assistant Professor

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### CHIEF EDITORIAL MESSAGE



With great pleasure and honour I write this foreword. Indeed, this newsletter has a lot to look forward. I am happy that our department started in the year 1994 with B.Tech-EEE programme has completed 30 years and is now celebrating Silver Jubilee year. During these 30 years EEE department has crossed several milestones and contributed to society in the form of education to engineering students. Started with B.Tech-EEE in 1994 with an intake of 60 later enhanced to an intake of 120 in the year 2012 and the present intake is 60. PG programme of M.Tech-Power Electronics was started in the year 2013. B.Tech-EEE program has been accredited by NBA two times under Tier-II from 2011-14 and 2016-19. I am glad to inform that now B.Tech-EEE program has been accredited by NBA under Tier-I for three years from 1st July 2019. The Department has also witnessed the strong force of faculty. At present, the Department has a faculty strength of 30 with diversity of specialization, out of which 15 of them have Doctorates, 10 are pursuing PhD and 5 are

with M.Tech. Alumni are the main pillars of the department's growth. I would like to offer my sincere thanks to all the Alumni for their support in guiding the students through invited lectures, supporting for internships and industry visits. Suggestions from stakeholders have added value during the reforms taken time to time. This newsletter displays the contributions by faculty & students and activities conducted in the Department during July 2023 to December 2023 (Odd semester of AY 2023-24). I am happy to share that this semester department has witnessed three of the faculty have been awarded with PhD. The experience of the faculty made it possible to conduct national and international FDPs with great support from industry experts and academic intellectuals from foreign Universities, IITs and NITs. I am also proud to inform that our students have made the EEEA activities more vibrant with hands-on sessions and training programmes. I would like to offer a word of thanks to our readers, our contributors, and our editorial board for their support of the journal and its mission: to improve the quality of technical education to the students. This newsletter will provide a glimpse of faculty and student achievements in odd semester of academic year 2023-24.

-Dr. G. Rajendar  
HOD, EEED

### VISION & MISSION OF THE DEPARTMENT

**VISION:** To fulfil the needs of the industry & society through excellence in education & research in electrical engineering.

**MISSION:**

- To produce globally competent engineers in Electrical & Electronics Engineering.
- To promote scientific inclination and cultivate professional ethics.
- To serve organization and society as adaptable engineers, entrepreneurs or leaders.

## BTECH – ELECTRICAL & ELECTRONICS ENGINEERING

### Program Educational Objectives (PEOs):

Within first few years after graduation, the ELECTRICAL AND ELECTRONICS ENGINEERING graduates will be able to:

- PEO1 Technical Expertise:** Apply the knowledge of electrical and electronics engineering to develop solutions for complex problems of electrical power industry and allied engineering areas.
- PEO2 Successful Career :** Demonstrate innovation & creativity in their professional practice, work effectively as an individual and in a team in multidisciplinary areas towards sustainable development.
- PEO3 Lifelong learning:** Adapt to a constantly changing field through higher education, professional development and self-study for contributing to well-being of society.

### Program Outcomes (POs):

Engineering Graduates will be able to:

- PO1 Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2 Problem analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3 Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO4 Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of

experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

- PO5 Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- PO6 The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7 Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9 Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10 Communication:** communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- PO11 Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- PO12 Lifelong learning:** recognise the need for and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

**Program Specific Outcomes (PSOs):**

- PSO1** Apply the fundamental knowledge of electrical and electronics engineering in providing solutions for modern power industry and multi-disciplinary areas.
- PSO2** Analyse, design and simulate systems to generate, transmit, distribute, utilize and control electrical energy to meet societal and environmental needs using electrical and electronic systems.

**MTECH-POWER ELECTRONICS**

**Program Educational Objectives (PEOs):**

The Postgraduates of POWER ELECTRONICS will be able to:

- PEO1 Research and Innovation:** Engage in research, innovation and teaching in the fields related to power electronics and Drives.
- PEO2 Technical expertise and Successful career:** Excel in professional practice relevant to industry and engage in entrepreneurship with latest technologies in the areas of power converters, renewable energy, smart electric grid, industrial drives and electric vehicles.
- PEO3 Soft skills and Lifelong learning:** Exhibit professional ethics, communication skills and spirit of teamwork by carrying out research for a sustainable environment.

**Program Outcomes (POs):**

At the time of graduation, the postgraduates of POWER ELECTRONICS will be able to:

- PO1** Independently carry out research/ investigation and development work to solve practical problems.
- PO2** Write and present effective technical report/document.
- PO3** Demonstrate competence in the area of Power Electronics.

**Program Specific Outcomes (PSOs):**

- PSO1** Apply knowledge of power electronics for the development of effective innovation solutions to problems pertaining to the renewable energy sources, smart electric grids and electric vehicles.

- PSO2** Analyse complex engineering problems related to power electronics industry related to power industry and develop solutions with the latest hardware and software tools.

**FACULTY CONTRIBUTIONS**

**Details of the faculty deputed for higher studies during 2023-24:**

Sl. No	Name of the Faculty	Details of Higher Studies	Institute/University
1.	Dr. A. Madhukar Rao	Post Doctoral Fellowship	University of Minnesota, USA

**Details of the Journal Paper Publications of the Faculty Published, during July'2023– December'2023:**

S. no.	Name of the Faculty	Title	Journal
1	V. Rajagopal & B. Subhash,	Optimal Gains for Control Voltage and Frequency in Standalone Wind Energy Conversion System	Journal of The Institution of Engineers (India) SPRINGER
2	M. Santhosh	Hybrid attention-based temporal convolutional bidirectional LSTM approach for wind speed interval prediction	Environmental Science and Pollution Research
3	M. Santhosh	Outage Preventative Model for System Enhancement	Forecast-based Scheduling Distribution Resilience IEEE Power & Energy Society General Meeting (PESGM)

**Conferences attended by the faculty for presenting research papers during July'2023– December'2023:**

S. No.	Name of the Faculty	Title	Name of the Conference	Dates	Venue
1	C. Venkatesh	5-phase Multilevel Inverter for EV Application	2023 IEEE 20th India Council International Conference (INDICON)	14 - 17, December 2023	National Institute of Technology, Warangal
3	V. Rajagopal	Control of DVR Using Multilayer Gamma Filter Under Non-Ideal Grid Conditions	IEEE 3rd International Conference on Sustainable Energy and Future Electric Transportation (SEFET-2023)	9-12 August, 2023	Siksha 'O' Anusandhan Deemed to be University (SOA), Bhubaneswar
4	M. Santhosh	Ensemble Deep Learning Model for Power System Outage Prediction for Resilience Enhancement	2023 North American Power Symposium (NAPS)	October 15, 2023	Western Carolina University, USA
5	M. Santhosh	Outage Data Analytics for Correlating Resilience and Reliability	2023 North American Power Symposium (NAPS)	October 15, 2023	Western Carolina University, USA

1	V. Rajagopal	Expectations from modern evolutionary approaches for image processing, IET Computing Series 53, Nature-inspired Optimization Algorithms and Soft Computing
2	V. Rajagopal	MPPT Algorithms for Solar PV-Drip Irrigation System" Power Quality in Microgrids: Issues, Challenges and Mitigation Techniques

**Details of NPTEL courses completion by the faculty during AY 2023-24:**

Sl. No	Name of the Faculty	Name of the Course
1	K. Ajith	Patent drafting for beginners Programming
2	K. Ajith	Data Structures and Algorithms Using Python
3	K Srinivas	EV - Vehicle Dynamics and Electric Motor Drives
4	T Praveen Kumar	EV - Vehicle Dynamics and Electric Motor Drives
5	Santhosh Madasthu	EV - Vehicle Dynamics and Electric Motor Drives
6	Sunil Kumar Gunda	EV - Vehicle Dynamics and Electric Motor Drives
7	Rajagopal Veramalla	EV - Vehicle Dynamics and Electric Motor Drives
8	Nagarjuna Reddy Poreddy	Control engineering
9	Nagarjuna Reddy Poreddy	Outcome Based Pedagogic Principles for Effective Teaching

**Books/Monographs authored by the faculty during 2023-24:**

S.No	Name of the faculty	Title of the book
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### EEE ASSOCIATION DETAILS

#### **PRESIDENT**

Veligeti Rajashekar Reddy (IV/IV, B.Tech)

#### **SUMSHODHINI'23 STUDENT COORDINATOR**

Shivani Donthula (IV/IV, B.Tech)

#### **VICE-PRESIDENTS**

Shivani Donthula (IV/IV, B.Tech)

Kanikaram Rakesh (IV/IV, B.Tech)

#### **GENERAL SECRETARIES**

Mood Sathwik Raj Chowhan (IV/IV, B.Tech)

R. Koushik (IV/IV, B.Tech)

#### **JOINT SECRETARIES**

Gaddam Nikhil Reddy (III/IV, B.Tech)

Shivaram Kommuka (III/IV, B.Tech)

#### **SPOKESPERSONS**

Sunkari Poojitha (IV/IV, B.Tech)

Merugu Sushanth Kumar (IV/IV, B.Tech)

Sunkoju Srinath (III/IV, B.Tech)

#### **TREASURER**

D. Nikhil (IV/IV, B.Tech)

#### **REPORTER**

Syed Nawaz (IV/IV, B.Tech)

#### **EVENT MANAGERS**

Gujjunuri Manohar (III/IV, B.Tech)

Palnati Pranavi (III/IV, B.Tech)

#### **EXECUTIVE MEMBERS**

P. Mani Chandana (IV/IV, B.Tech)

T. Laxmi Nayana (IV/IV, B.Tech)

B. Harshitha (IV/IV, B.Tech)

Amma Sarayu (III/IV, B.Tech)

Mukka Sai Charan (III/IV, B.Tech)

Mohammed Saif (III/IV, B.Tech)

Gummadi Vishnu Vardhan (III/IV, B.Tech)

Thallapally Nelson (III/IV, B.Tech)

Yuvaraj Chowhan (III/IV, B.Tech)

### STUDENT ACTIVITIES

S. no.	Activity	Date
1	Inauguration of EEE Association for the AY: 2023-2024	16.08.2023
2	The advantages and disadvantages of social media and mobile phones	23.08.2023
3	Mock Group Discussion	30.08.2023
4	Electronics For You	06.09.2023
5	Quiz Competition	27.09.2023
6	Awareness on Internship	04.10.2023
7	Career opportunities to study abroad	01.11.2023

**Inauguration of EEE Association for the AY: 2023-2024 on 16.08.2023:**



The EEE Department Association (EEEE) is inaugurated on 16.08.2023. The EEEA student and faculty coordinators are introduced to the students of EEE Branch.



Faculty Coordinators during the Inauguration



EEEA Body poster launch during the Inauguration  
The advantages and disadvantages of social media and mobile phones on 23.08.2023:

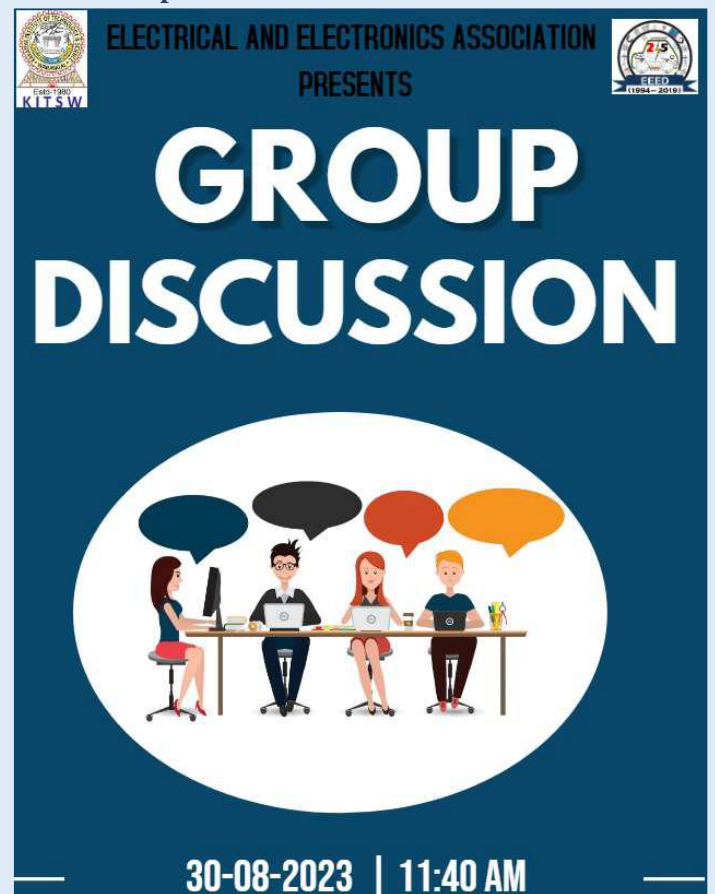


Electrical and Electronics Engineering Association organized a thought-provoking debate event on “The advantages and disadvantages of social media and mobile phones” on 23-08-2023 in Block-IV room no: 329.

The event began with opening statements from participants who highlighted the transformative role of social media and mobile phones in connecting individuals globally. The advantages included enhanced communication, real-time information sharing, and the democratization of voice. However, concerns were raised about privacy breaches, addictive behaviours, and the spread of misinformation.



Mock Group Discussion on 30.08.2023:



Electrical and Electronics Engineering Association organized a thought-provoking event on “MOCK GROUP DISCUSSION” on 30-08-2023 in Block-IV Civil Seminar Hall. This event helps the student to showcase their speaking skills.

The topic of this event is “Who Gets the heart”. In this event all the participants are divided into 6 groups and each group defend their character for getting the heart. This event provided an opportunity for individuals from diverse backgrounds to come together and discuss a specific topic of interest. The main objective of the group discussion event was to encourage participants to share their

perspectives, engage in meaningful conversations, and collectively explore potential solutions or insights.



Electronics For You on 06.09.2023:



**ELECTRICAL AND ELECTRONICS ENGINEERING**

**ELECTRONICS FOR YOU CONTEST**

**FIRST PRIZE: RS 2000/-**  
**SECOND PRIZE: RS 1000/-**

**SEP 6-2023**

The topic of this event is “Electronics for You” where different groups participated, maximum of 2 members are present in the group. The theme tells each group should present a project where they should bring their respective project components and should assemble in the lab. After assembling they should present and explain their project to the Hod and respective faculty. Total 6 Teams participated in this event.

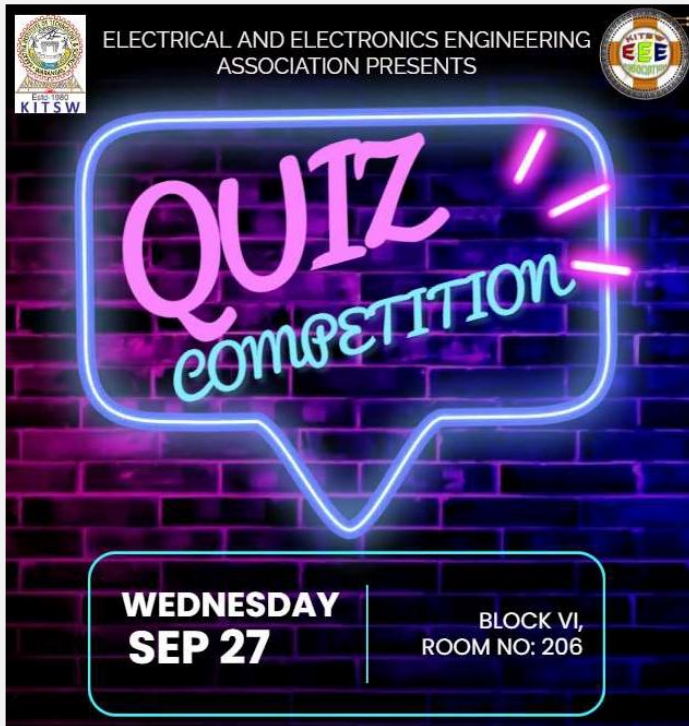


Quiz Competition on 27.09.2023:

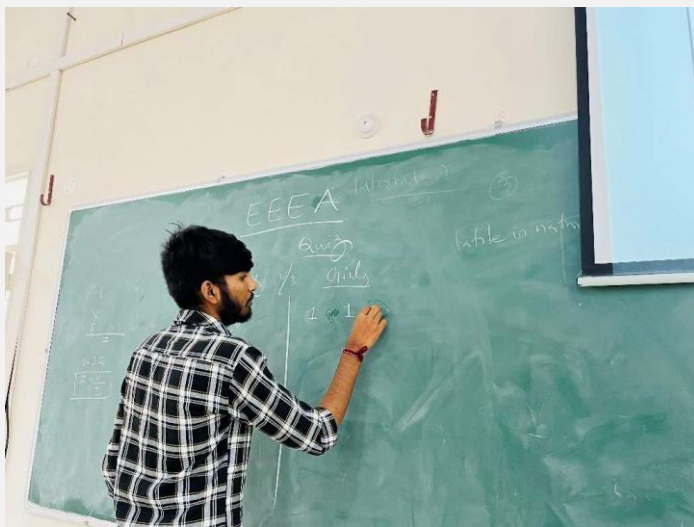
Electrical and Electronics Engineering Association organized a Quiz Competition on 27-09-2023 in Block-VI, Room No: 216. This event helps students to test their knowledge.

The event is the Quiz Competition conducted regarding Pictures and Electrical quiz. This session is initiated by Nikhil Reddy from 3rd year. In this event Images are shown on projector and the participants should guess it. After completion of this activity, it is further continued by guessing the answers for the electrical questions. The electrical quiz consisted of a series of multiple-choice questions. These questions covered

a wide range of topics in electrical engineering, including basic electrical principles, circuit analysis, electrical measurements, and electrical safety. Participants had to select the correct answer from the given options. By presenting multiple-choice questions, the quiz encouraged participants to think quickly and make informed decisions within a limited timeframe, simulating real-life situations where electrical engineers often have to make prompt and accurate judgments.



The speaker said that an internship is about gaining practical and theoretical knowledge regarding a particular industry or an organization about their working and solving the real-world problems. He further added the courses which they are studying can be practically experienced by students in the internships where they can put their knowledge in it and can have practical insights from the expert who is in-charge of internship.



Exploring the Questions during the Event



Delivering a session on "Awareness on Internship" by Dr. G. Sunil Kumar, Asst. Professor, EEE Dept., KITSW

#### Awareness of Internship on 04.10.2023:

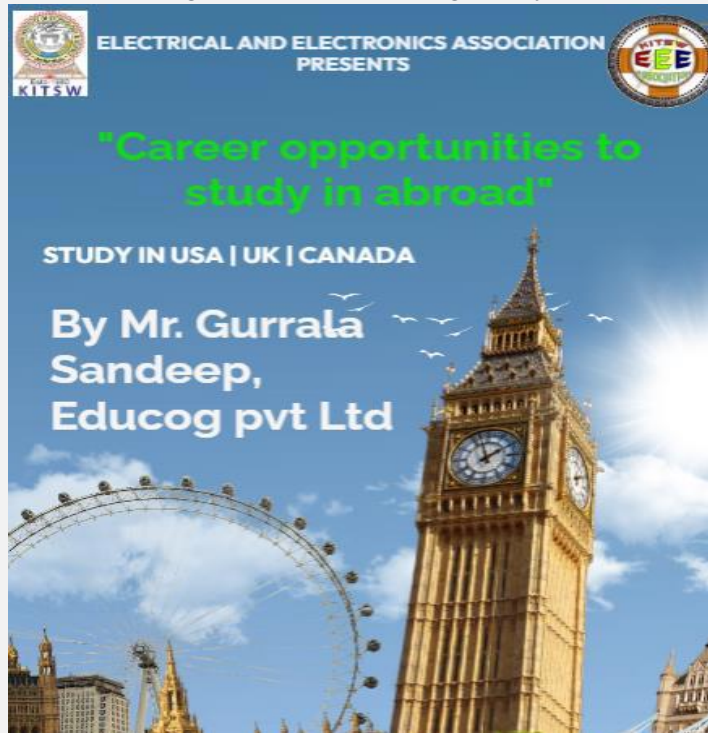
Electrical and Electronics Engineering Association organized a session about "Internship Awareness" by Dr. G. Sunil Kumar, Assistant Professor, EEED on 04-10-2023 in Block-VI, Civil Seminar Hall. This session helps students to know about internships.

#### Career opportunities to study abroad on 01.11.2023:

Electrical and Electronics Engineering Association conducted an awareness program on "Career opportunities to study abroad" by Mr. Gurrula Sandeep, Head of Business Development, Educog pvt Ltd. on 01-11-2023 from 11:40



PM in Block II, New Seminar Hall. This session is to help the students to get awareness on foreign study.



The speaker Sri. Sandeep, started the session by explaining about his work i.e., he is the **Head of business development**, he said that he has trained more than thousands of students. He addressed the attendees on the following points:

1. GRE, GMAT exam preparation.
2. ToFEL, IELTS preparation
3. How to apply for universities.
4. Course Recommendation
5. SOP/LOR
6. University Search
7. Job Search
8. Visa Process
9. Immigration Help
10. Services offered by their organization.



No. of Guest / Expert lectures arranged during 2023-24:

Sl.No.	Date	Topic	Delivered by
1.	06.09.2023	Electronics For You	Dr. G. Rajendar, Assoc. Professor & Head, EEED, KITSW
2.	04.10.2023	Awareness on Internship	Dr. G. Sunil Kumar, Assistant Professor, EEED
3.	01.11.2023	Career opportunities to study in abroad	Mr. Gurrala Sandeep, Head of business development, Educog pvt Ltd., Hyderabad
4.	02.11.2023	Vigilance Awareness Week-2023	Sri. D. Sammaiah, Deputy General Manager, PGCIL, Warangal, PGCIL, Warangal

### STUDENT ACHIEVEMENTS

Students placement details:

Sl.No	Name of the student	Roll No.	Name the company
1.	R Koushik	B20EE007	GENPACT
2.	K Siddu	B20EE021	AGI GLASSPAC
3.	Lavudya Sunil	B20EE025	MEDHA SERVO DRIVE
4.	V Rajshekar Reddy	B20EE029	QSPIDER
5.	K Meghana	B20EE030	QSPIDER
6.	V Shiva Ganesh	B20EE032	GENPACT
7.	P.Harshapriya	B20EE051	JK PAPER MILLS
8.	K Rakesh	B20EE077	AGI GLASSPAC
9.	B Suprathika	B20EE088	GENPACT

10	D. Shivani	B20EE093	FOXCONN INTERNATIONAL
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**Details of Swayam NPTEL courses completed by the students:**

S. No	Name of Students	Roll No.	Swayam NPTEL course completed
1	Mumjadi Bharath Chandra	B21EE156L	Power Quality Improvement Technique
2	Syed Dastagir Ahmed	B21EE008	CMOS Digital VLSI Design
3	Syed Dastagir Ahmed	B21EE008	Control engineering
4	Syed Dastagir Ahmed	B21EE008	Signals and Systems
5	Syed Dastagir Ahmed	B21EE008	Network Analysis
6	Syed Dastagir Ahmed	B21EE008	Power Quality
7	Syed Dastagir Ahmed	B21EE008	Sensors and Actuators
8	Nerella Venkatasai	B22EE152L	The Joy of Computing using Python

**Details of Students/Faculty participation in I2RE activity in AY 2023-24:**

S.No	Event/Activity	Date(s)	Type of Activity	Organized by
1.	IIC Regional Meet	11.12.2023	Regional Meet organized by MoE's Innovation Cell (MIC), Govt. of India	Institute of Aeronautical Engineering, Hyderabad