



# CHRISTU JYOTHI INSTITUTE OF TECHNOLOGY & SCIENCE

*A Catholic Christian Minority Institution*

Colombonagar, Yeshwanthapur(PO), JangaonDist – 506 167 T.S

*NBA Accredited Programme, Affiliated to AICTE & JNTU-Hyd*

Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experiences

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Principal  
Christu Jyothi Institute of Technology & Science  
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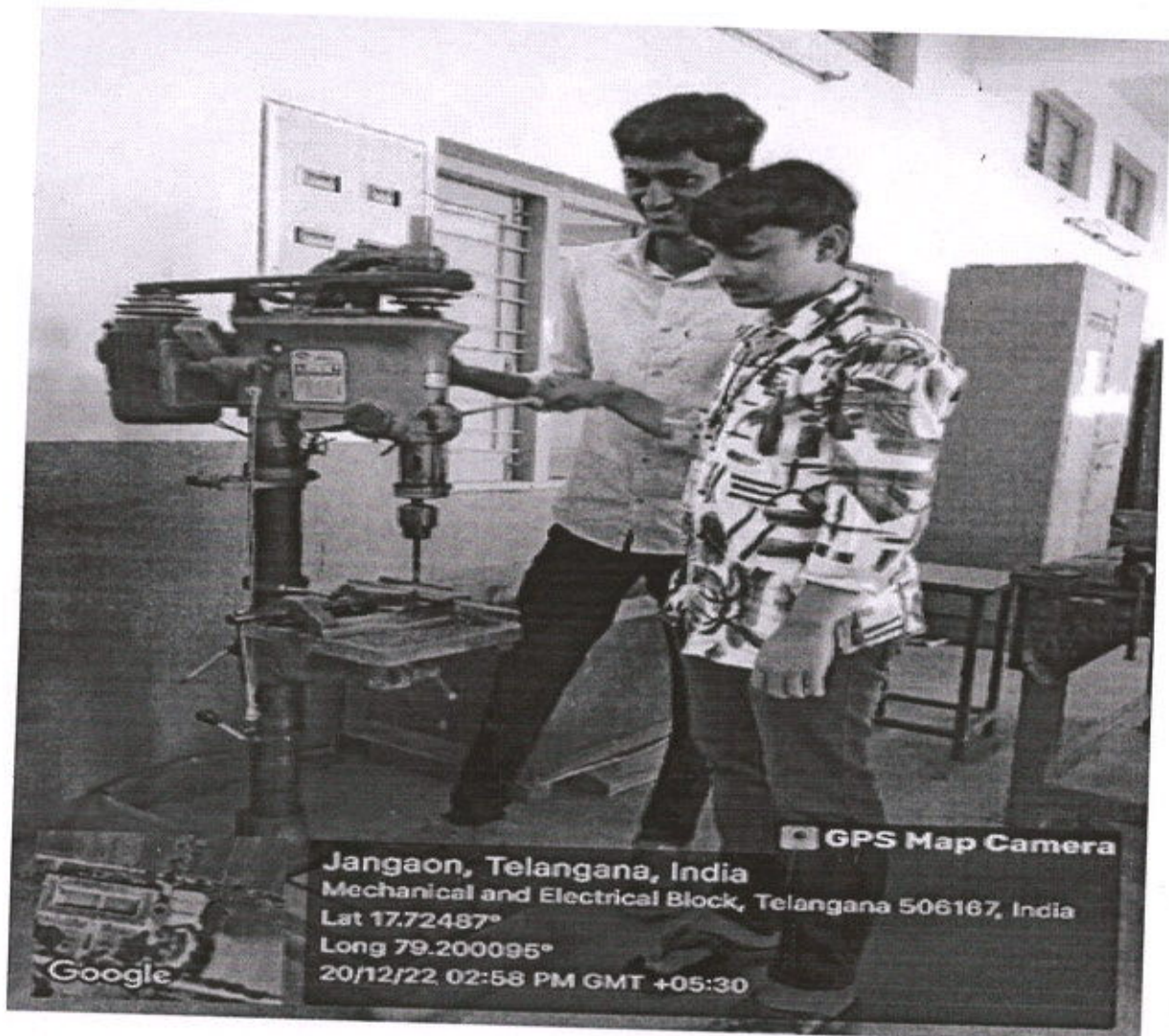
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**Experiential Learning:** The institution offers experiential learning for students with the following approaches:

1. **LABORATORY SESSIONS:** Laboratory sessions are conducted for better understanding of theoretical concepts



Students of MECHANICAL Department, II Year I Semester performing Lab Experiments in "WORKSHOPLAB"(A.Y 22-23)

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Students of ECE Department, III Year I Semester performing Lab Experiments in “DIGITAL SIGNAL PROCESSING LAB”(A.Y 22-23)







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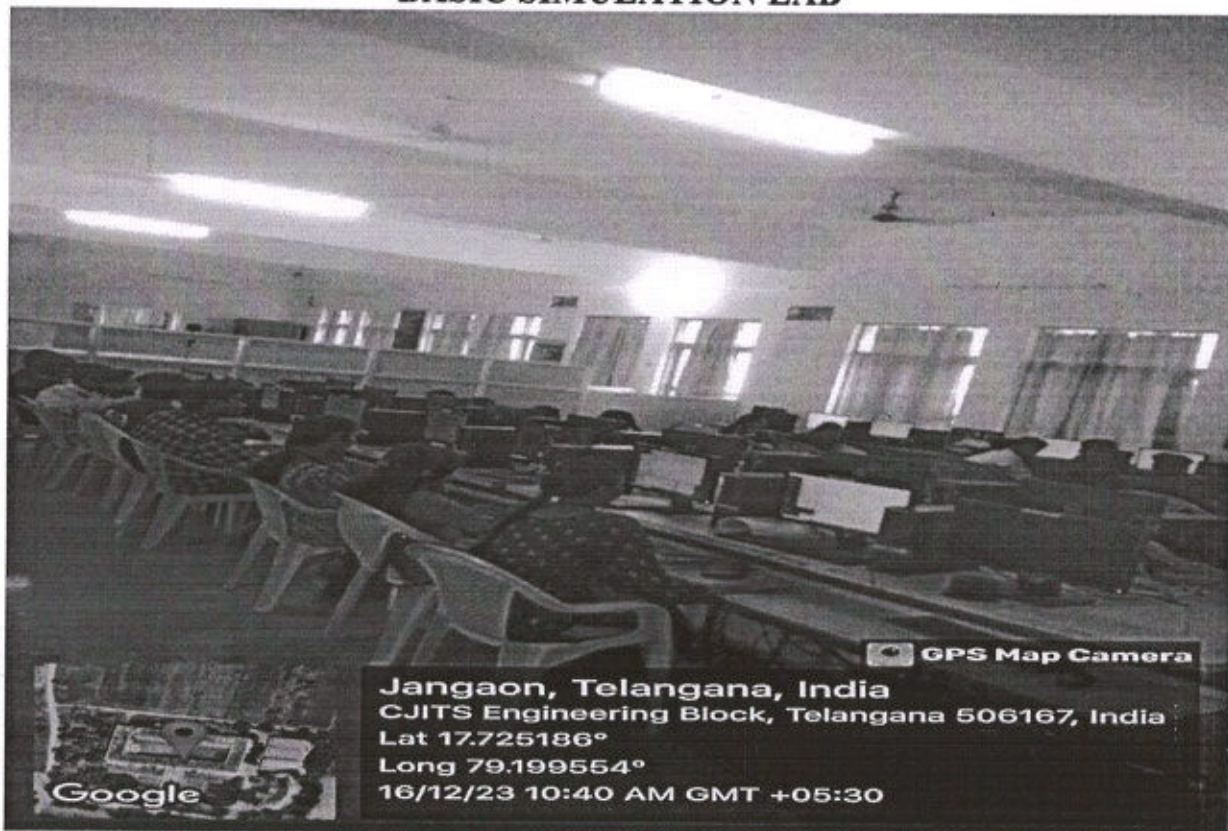
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Students of ECE Department II year I semester performing lab experiments in ANALOG AND COMMUNICATIONS LAB ”(A.Y 22-23)

**II-I SEM EDC lab** provides the information about the uncontrollable and controllable electronic switches and the flow of current through these switches in different biasing conditions.

Electronic devices are usually small and can be grouped together into packages called integrated circuits.

## BASIC SIMULATION LAB



Students of EEE Department III year I semester performing lab experiments in SIMULATION LAB ”(A.Y 22-23)

**II-I SEM Simulation** is the process of creating a model of an existing or proposed system in order to identify and understand the factors that control the existing system, or to predict the future behavior of the system.

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Simulations require the use of models; the model represents the key characteristics or behaviors of the selected system or process, whereas the simulation represents the evolution of the model over time.

**ZINTERNSHIPS:** Internships are provided to the students.

## CERTIFICATE OF COMPLETION



**THIS CERTIFCATES THAT**

**Mr. S ADITHYA**

has successfully completed her **Technical Internship** with **KATE Technologies India Pvt. Ltd** From 01-06-2022 to 08-07-2022; he had done a phenomenal job completing all the duties allotted within the given tenure and was found hardworking, sincere, and meticulous.

Founder:  
Mr. Kartheek Erumalla

MR.S.ADITHYA, student of CSE Department has completed internship on 08/07/2022 at KATE TECHNOLOGIES (A.Y 2022-23)

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## CERTIFICATE OF COMPLETION



**THIS CERTIFICATE THAT**

**Mr.T UDAY KUMAR**

has successfully completed her **Technical Internship** with **KATE Technologies India Pvt. Ltd** From 01-06-2022 to 08-07-2022; he had done a phenomenal job completing all the duties allotted within the given tenure and was found hardworking, sincere, and meticulous.

Founder:  
Mr. Kartheek Erumalla

**MR.T.UDAY KUMAR**, student of CSE Department has completed internship on **08/07/2022** at **KATE TECHNOLOGIES (A.Y 2022-23)**

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**THIS CERTIFCATES THAT**

**Mr.U KARTHIK**

has successfully completed her **Technical Internship** with **KATE Technologies India Pvt. Ltd** From 01-06-2022 to 08-07-2022; he had done a phenomenal job completing all the duties allotted within the given tenure and was found hardworking, sincere, and meticulous.

Founder:  
Mr. Kartheek Erumalla

MR.U.KARTHIK, student of CSE Department has completed internship on 08/07/2022 at KATE TECHNOLOGIES (A.Y 2022-23)



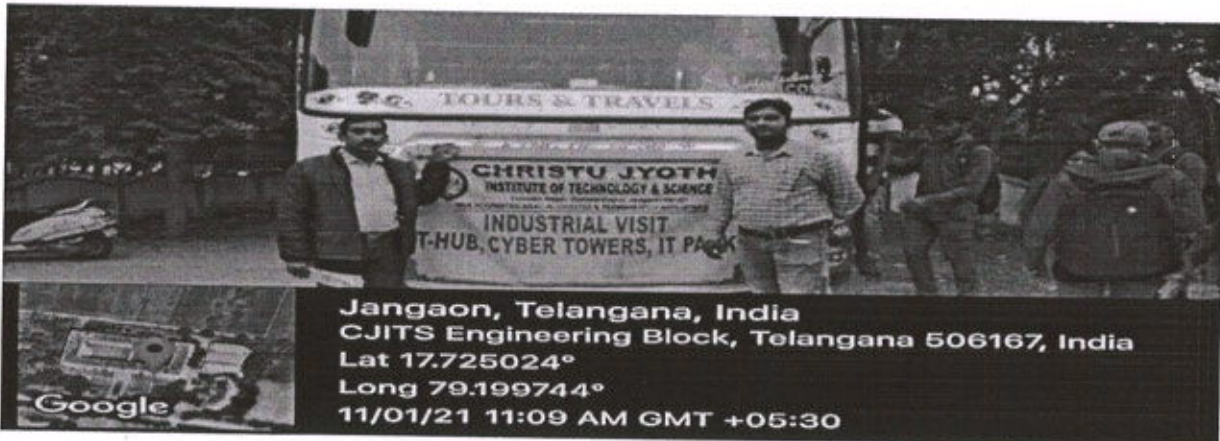
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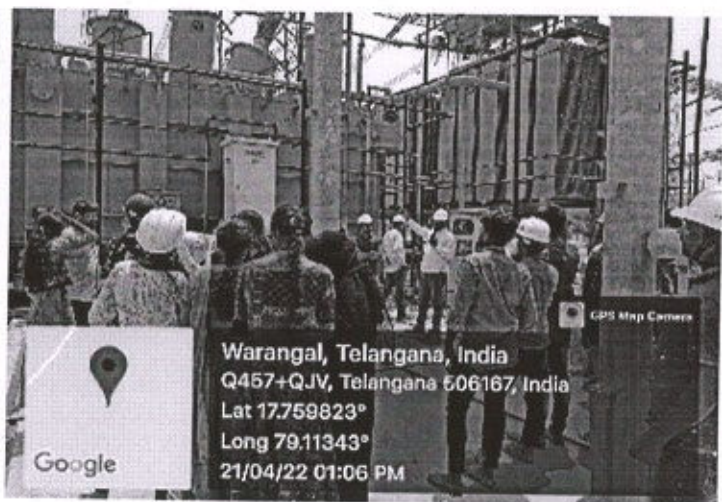
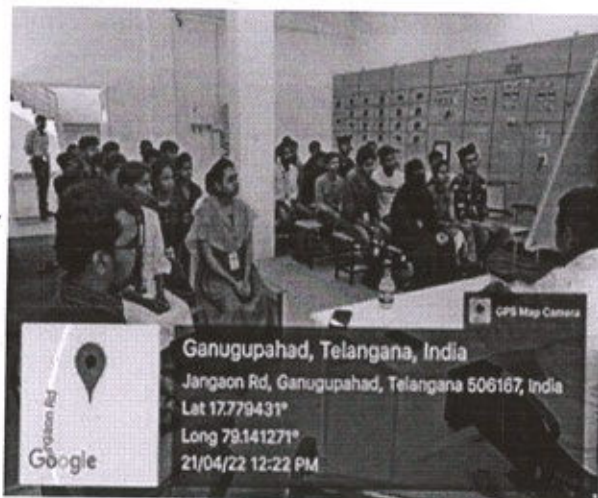
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3. **INDUSTRIAL STUDY VISITS & FIELD VISITS:** Organized to expose to current technologies and to provide an opportunity to learn practically through practically through interaction



Students of CSE Department, III Year I Semester has visited IT-HUB, CYBER TOWERS (A.Y 22-23)



EEE Students in control panel room Students of EEE III year 33/11KV substation

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## 4. INDUSTRY DRIVEN COMPETITION:

Students encouraged to participate in competition to show their creative ideation and talent



Students of CSE Department, IV Year showing their talent in the competition in CJITS

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**5. INTEGRATED TOOLS:** Students are encouraged to enrol in online courses

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**THIS CERTIFCATES THAT**

**Mr.K MANOJ ANJAJI**

has successfully completed her **Technical Internship** with **KATE Technologies India Pvt. Ltd** From 01-06-2022 to 08-07-2022; he had done a phenomenal job completing all the duties allotted within the given tenure and was found hardworking, sincere, and meticulous.

Founder:  
Mr. Kartheek Erumalla

MR.K.MANOJ, student of CSE Department has completed internship on 08/07/2022 at KATE TECHNOLOGIES (A.Y 2022-23)

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## CERTIFICATE OF COMPLETION



### THIS CERTIFCATES THAT

**Mr.A VENKATA RAMANA REDDY**

has successfully completed her **Technical Internship** with **KATE Technologies India Pvt. Ltd** From 01-06-2022 to 08-07-2022; he had done a phenomenal job completing all the duties allotted within the given tenure and was found hardworking, sincere, and meticulous.

Founder:  
Mr. Kartheek Erumalla

**MR.A.VENKATA RAMANA REDDY**, student of CSE Department has completed internship on 08/07/2022 at KATE TECHNOLOGIES (A.Y 2022-23)

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## CERTIFICATE OF COMPLETION



**THIS CERTIFCATES THAT**

**Ms.B SWATHI**

has successfully completed her **Technical Internship** with **KATE Technologies India Pvt. Ltd.** From 01-06-2022 to 08-07-2022; She had done a phenomenal job completing all the duties allotted within the given tenure and was found hardworking, sincere, and meticulous.

Founder:  
Mr. Kartheek Erumalla

**MR.B.SWATHI**, student of CSE Department has completed internship on 08/07/2022 at KATE TECHNOLOGIES (A.Y 2022-23)

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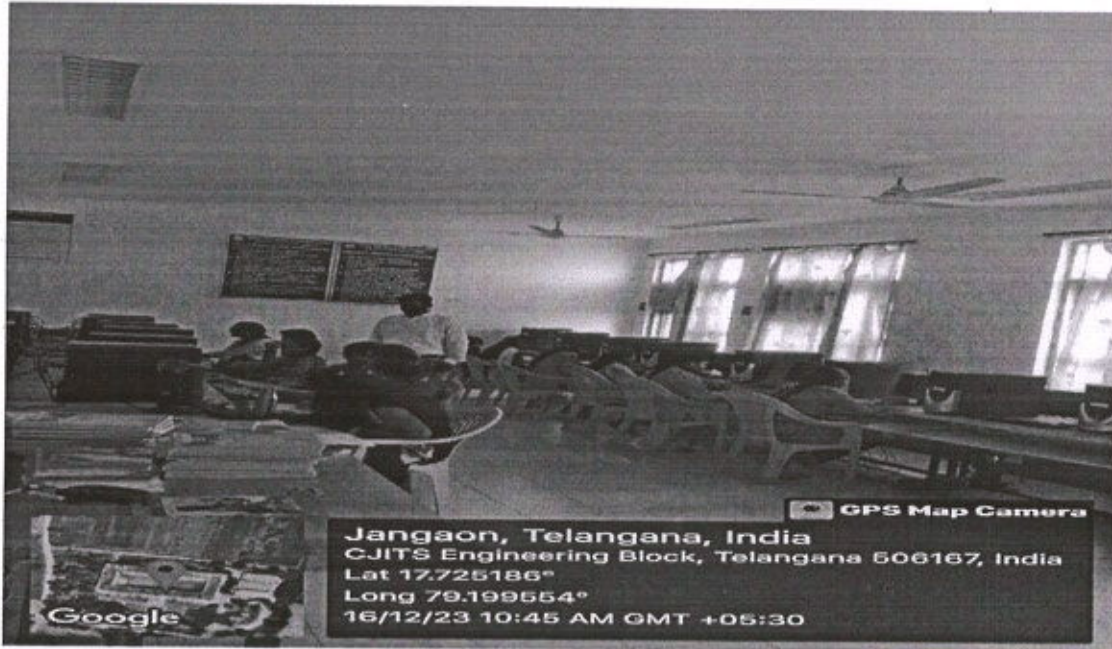
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6. **BRIDGE COURSE:** conducted bridge course for the students filling the gaps in acad



Students of EEE II Year during a guest lecture by DR.DM.VINOD KUMAR



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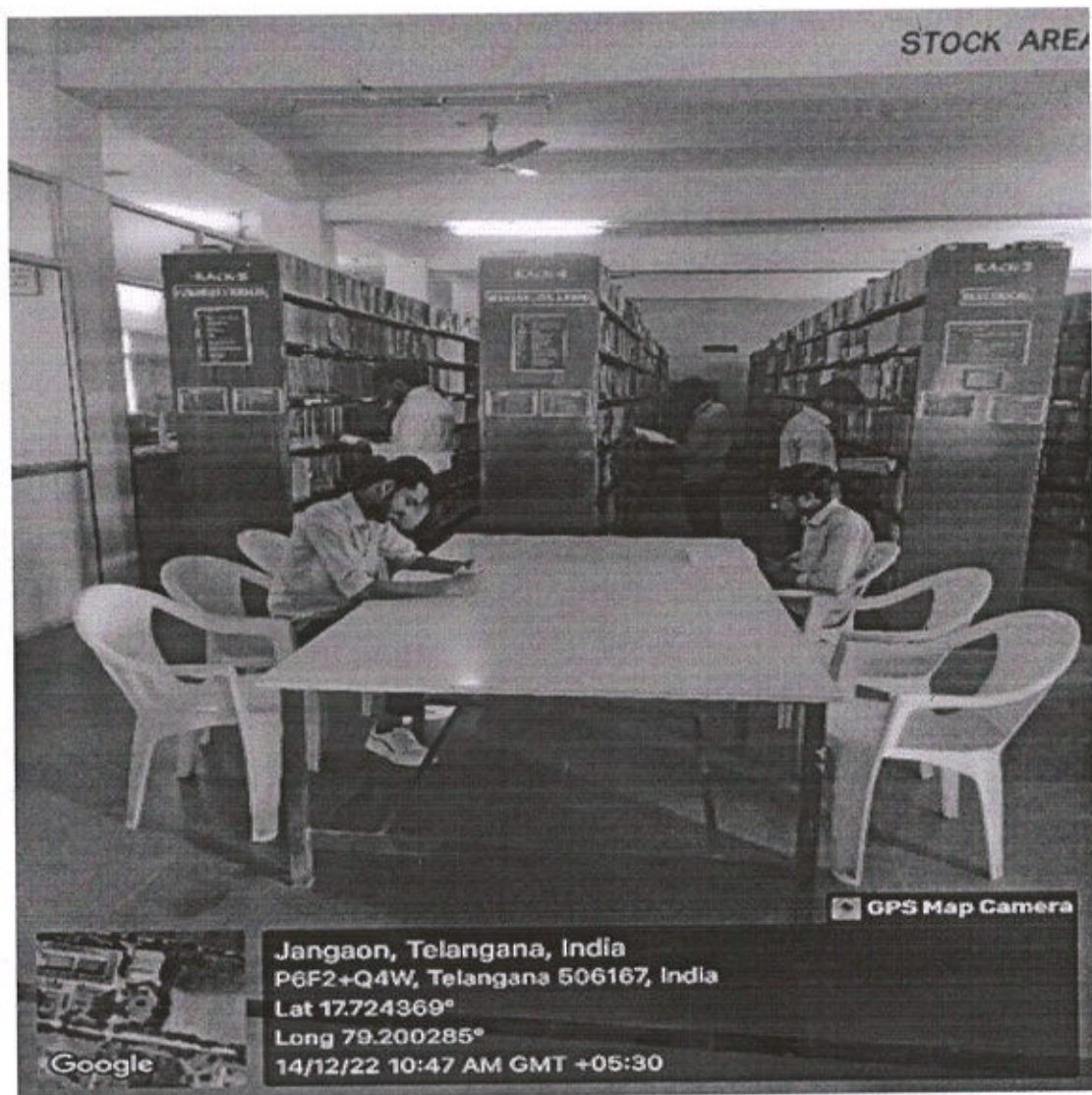
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Students of III year II Semester participated in add on program “ **LOAD FLOW ANALYSIS** ” From 9-07-2022 to 20 -07-2022 delivered by DR. Vinod Kumar, Professor of electrical department (A.Y 22-23)

7. **E-LEARNING:** The institute allowed in access text books & references, course materials, Projects Reports , magazines, printed journals & E-journals.



Students of MECH Department IV Year I semester in the central library

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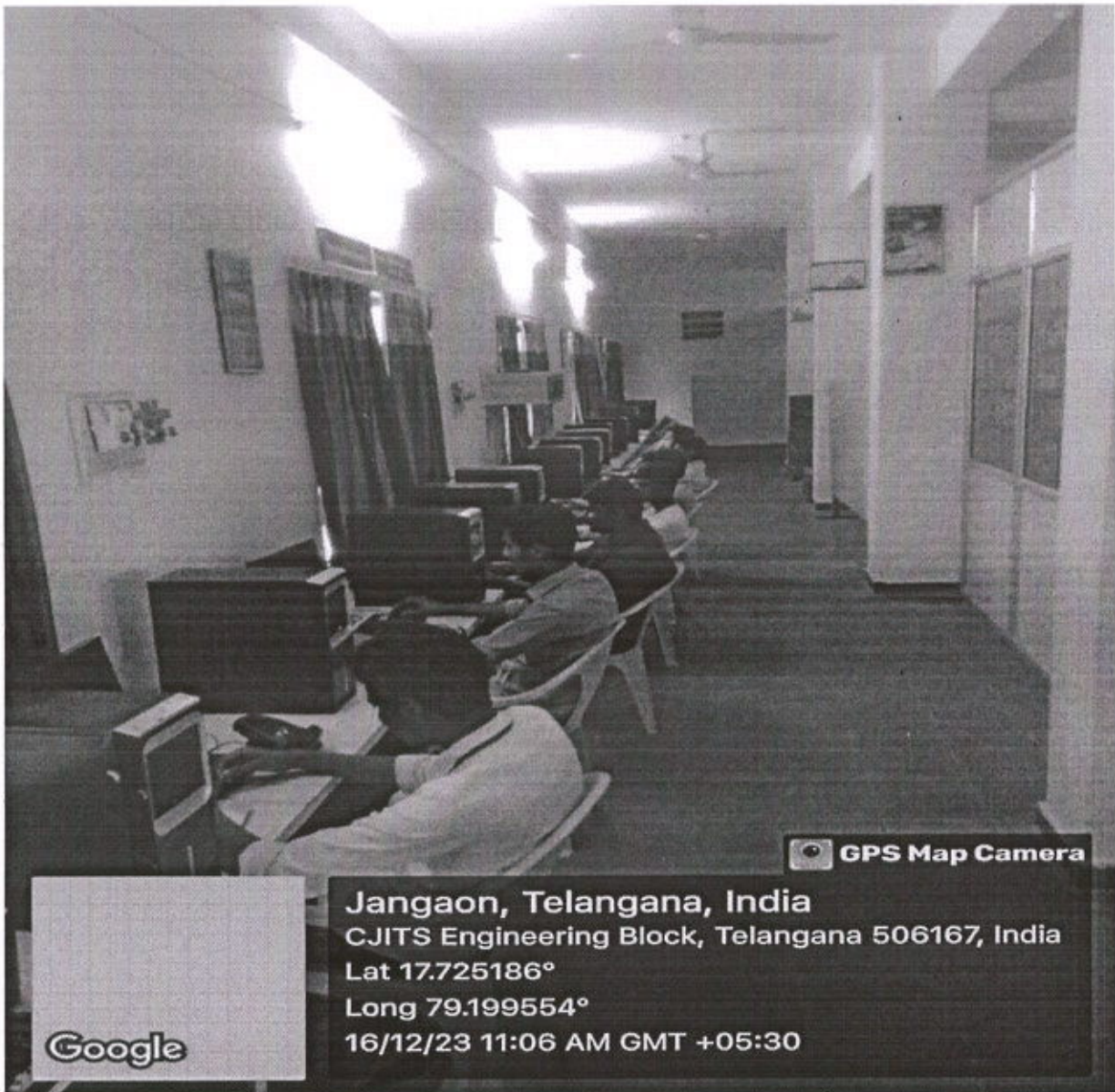


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Students of EEE Department III Year I semester in the central library

  
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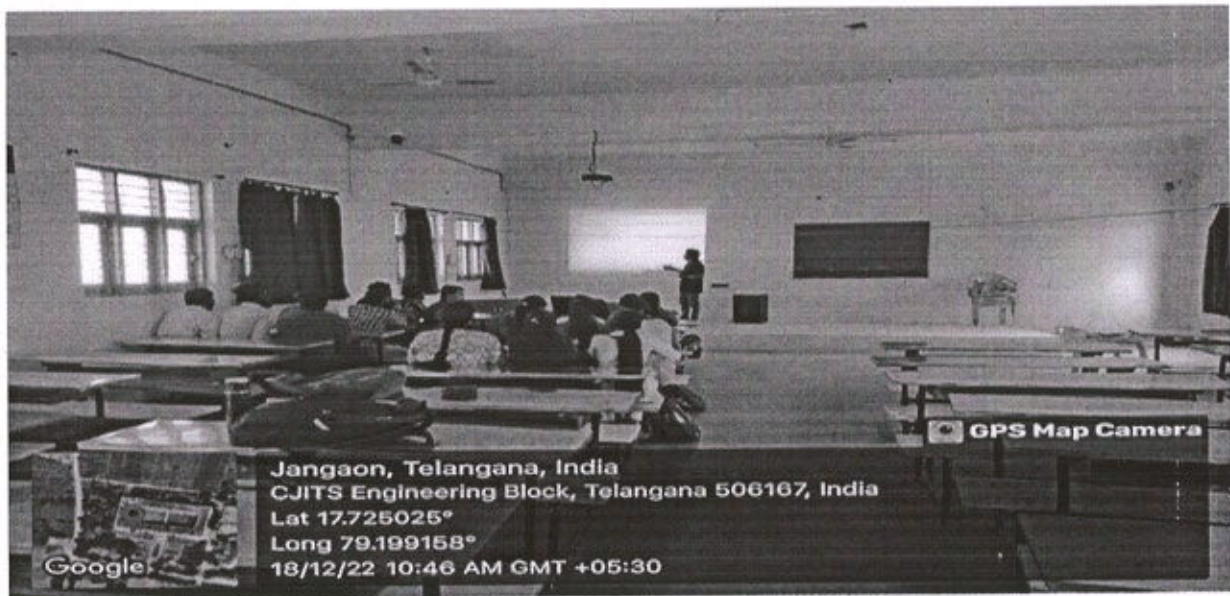
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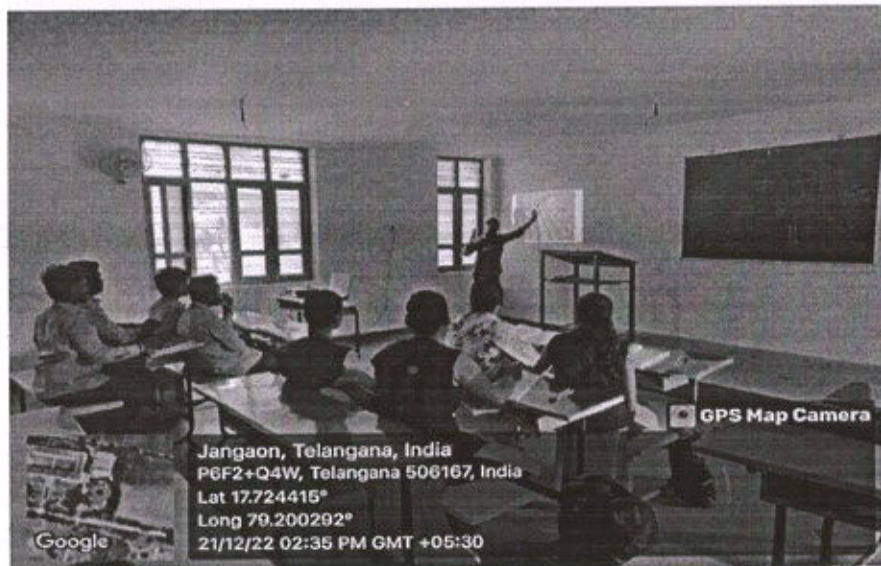
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**8. WORKSHOPS, GUEST LECTURES AND SEMINARS:** Students are encouraged to train on latest trends and innovative technologies by organizing workshops, guest lecturers and seminars



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CJITS Engineering Block, Telangana 506167, India  
Lat 17.725025°  
Long 79.199158°  
18/12/22 10:46 AM GMT +05:30

Guest lecture by K.Mruthyunjay ADE/TSGENCO for the students of EEE II Year



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Working Model demonstration by MR.M.Ram Mohan, Students participation in workshop

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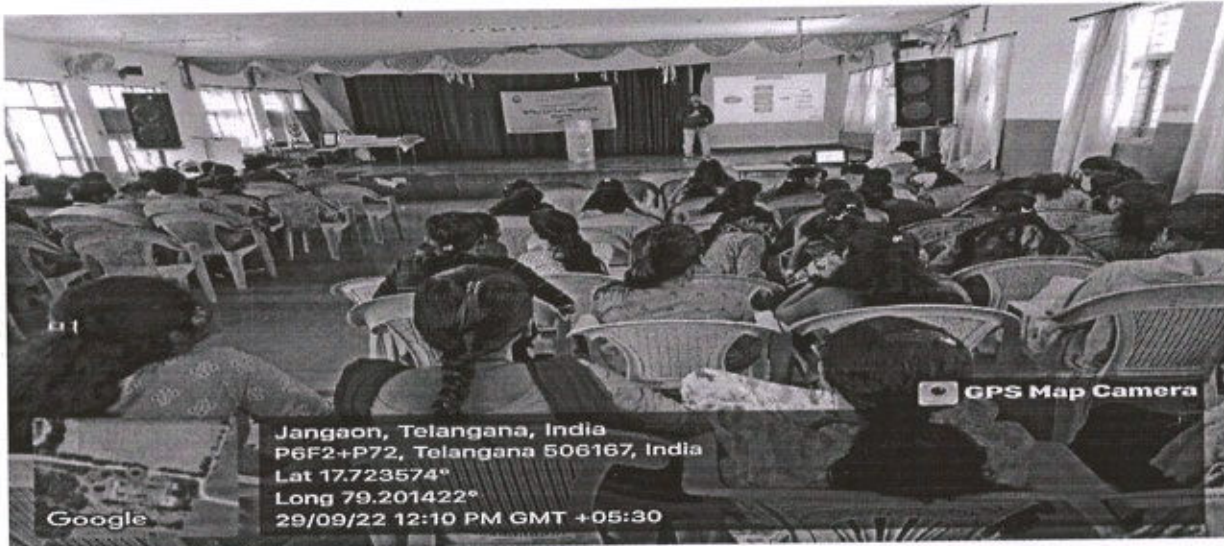


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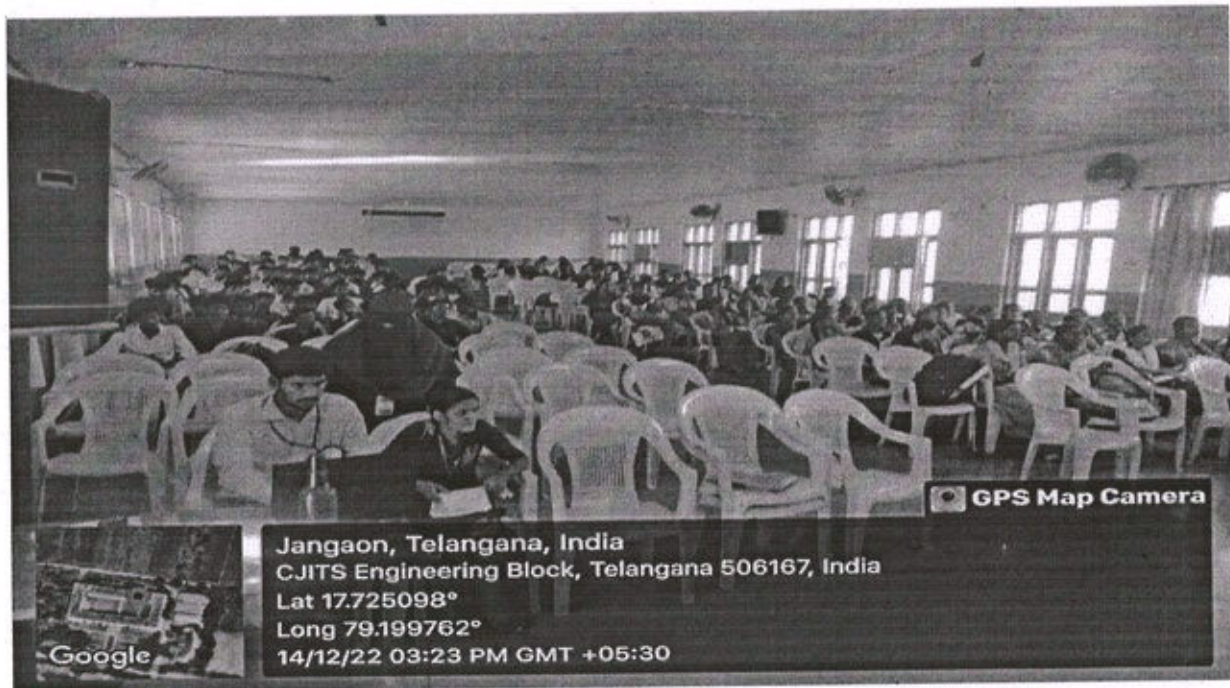
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Jangaon, Telangana, India  
CJITS Engineering Block, Telangana 506167, India  
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Long 79.199762°  
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Internet of Things by M.Srinivas on 17-11-2022 for I Year students

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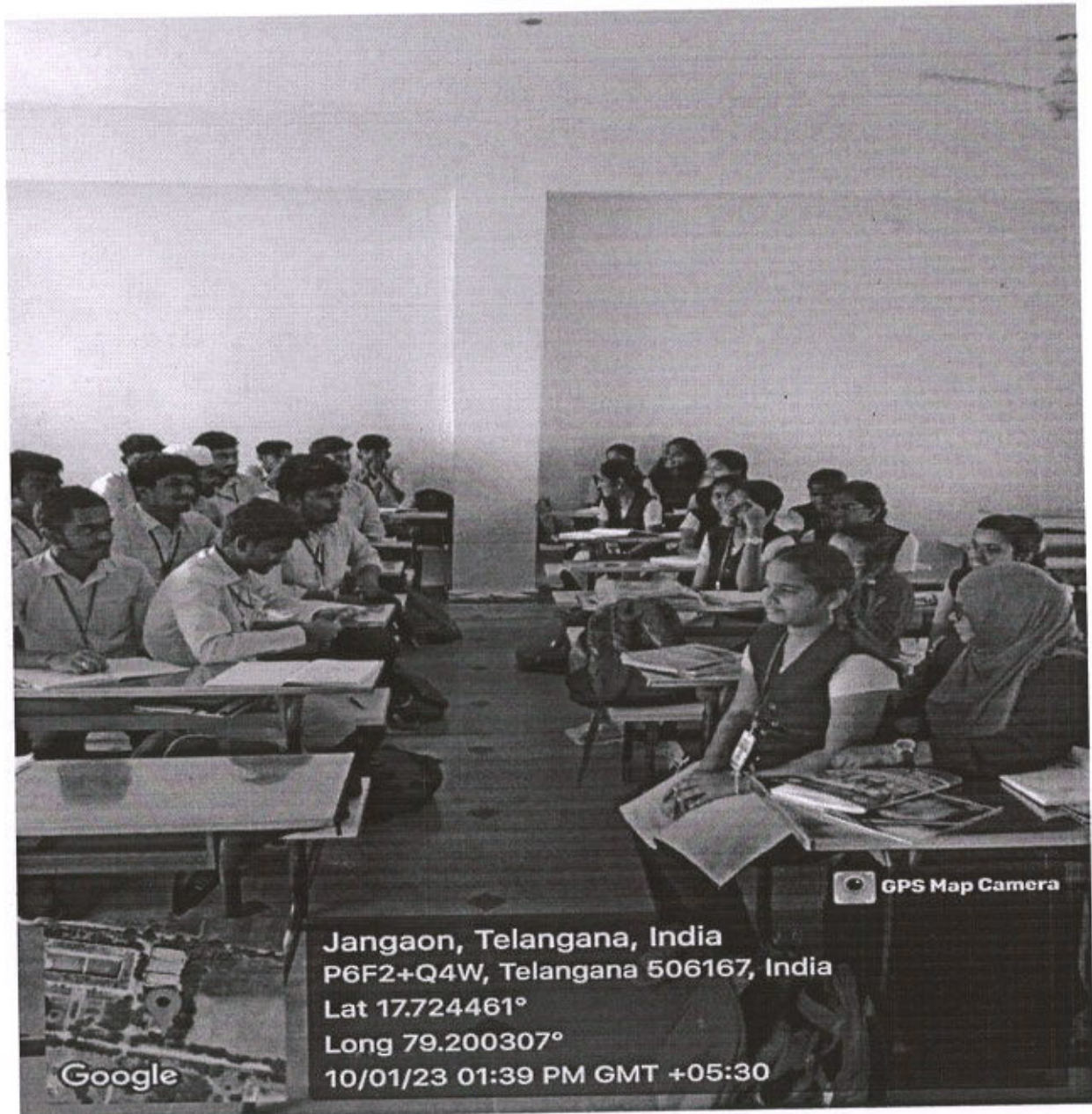
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9. **GROUP DISCUSSION & DEBATES:** Encouraging students to participate in debates and discussions



Students of CSE Department I Year participating in debate



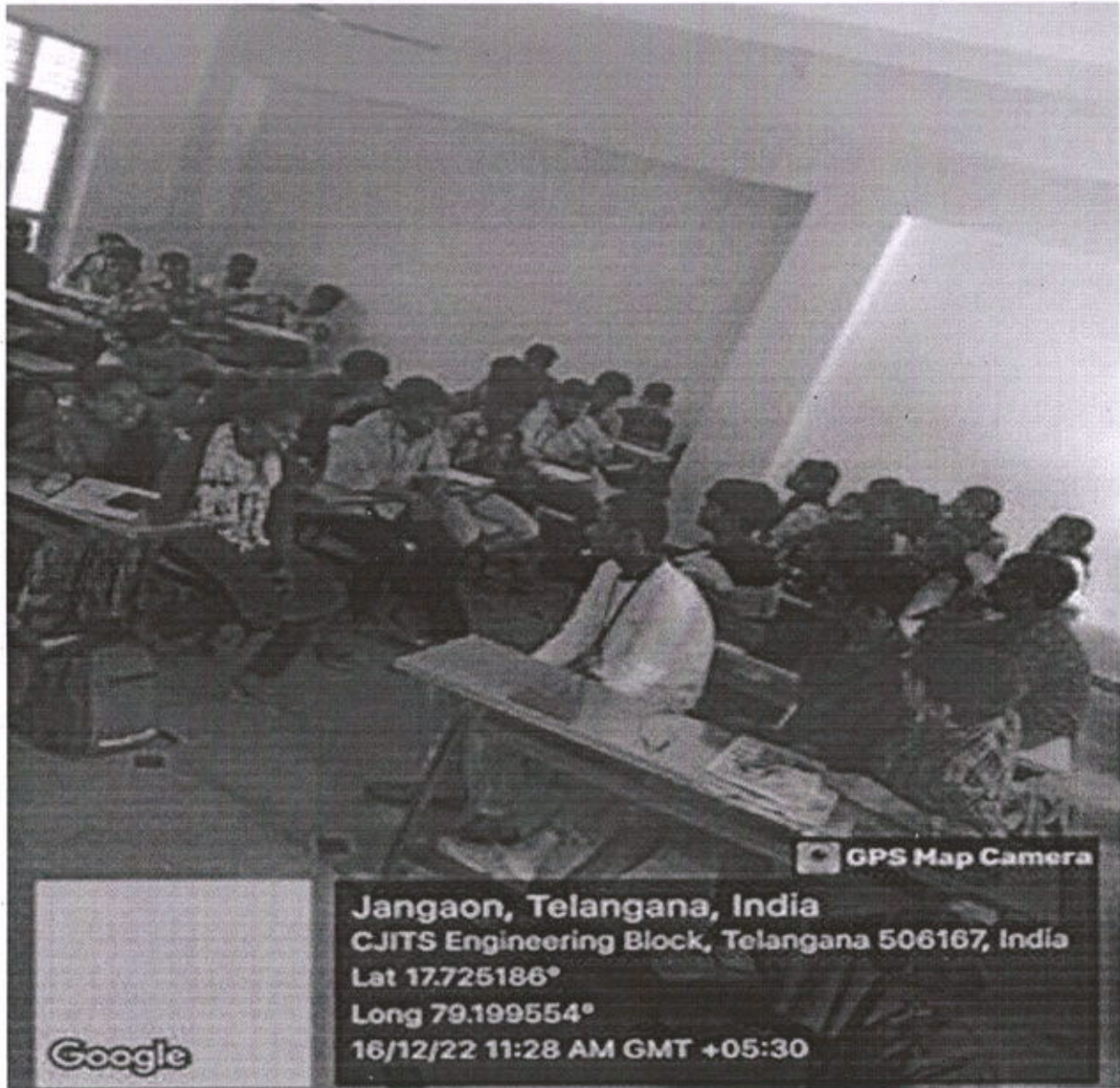


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Students of AIML Department I Year participating in the group discussion

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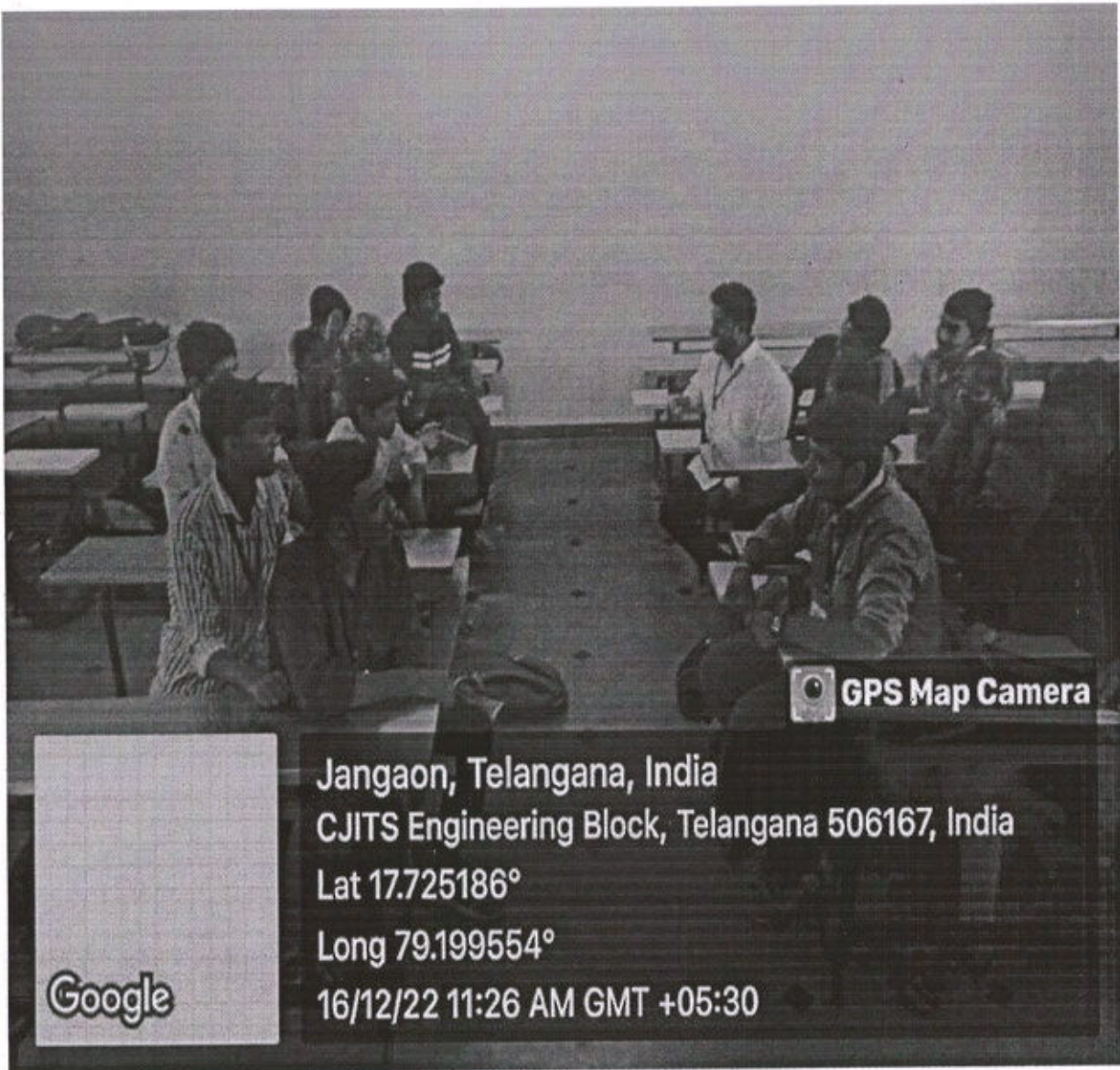


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Group Discussion by the I year students





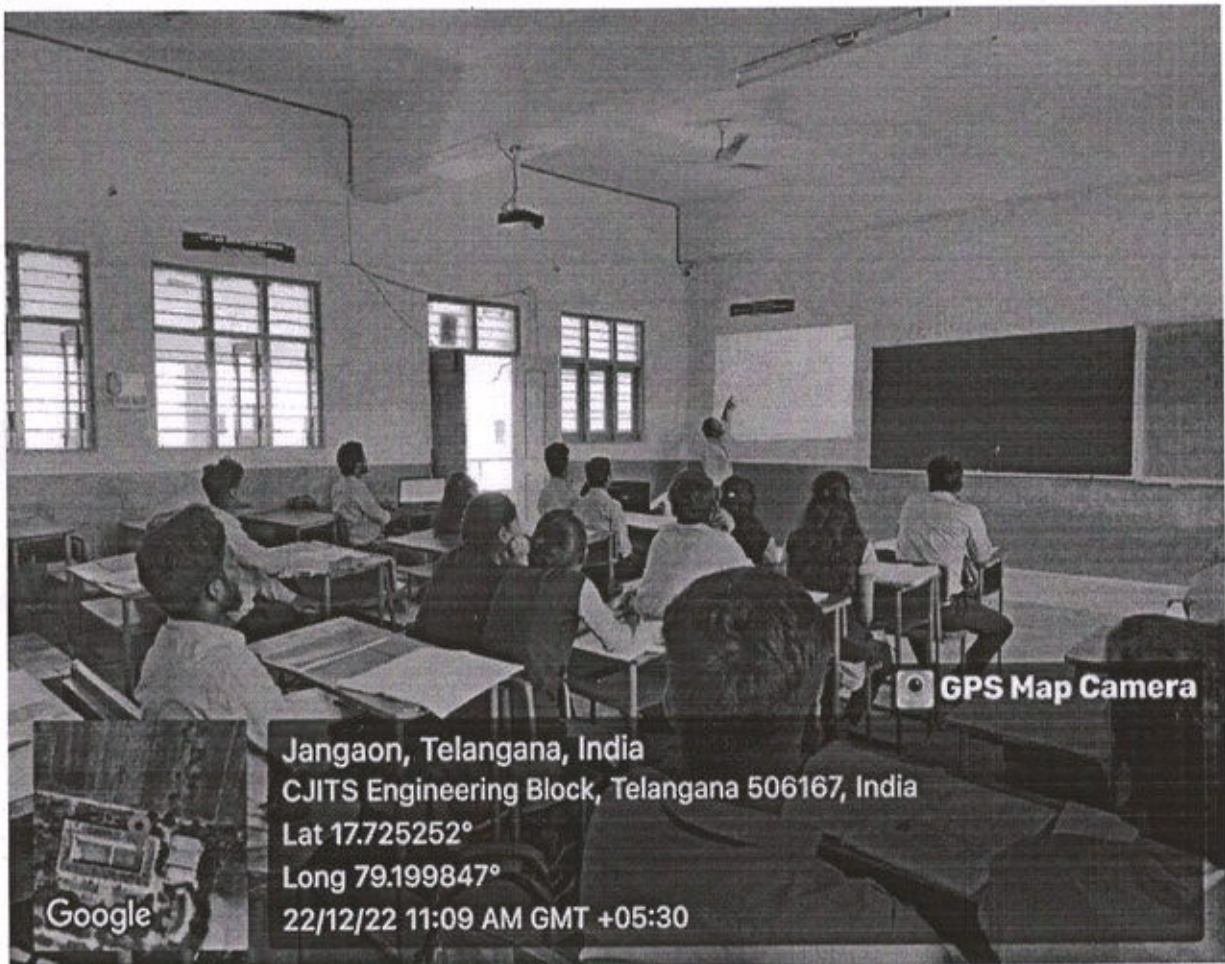
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**10. TECHNICAL PRESENTATION:** The students are encourage to participate in technical events to show case their presentation skills through poster, paper and model presentation and to contribute articles to the college magazines.



Paper presentation on topic “SMART GRID” by IV EEE Students from  
**CHRISTU JYOTHI INSTITUTE OF TECHNOLOGY & SCIENCE**  
**COLLEGE (A.Y 22-23)**



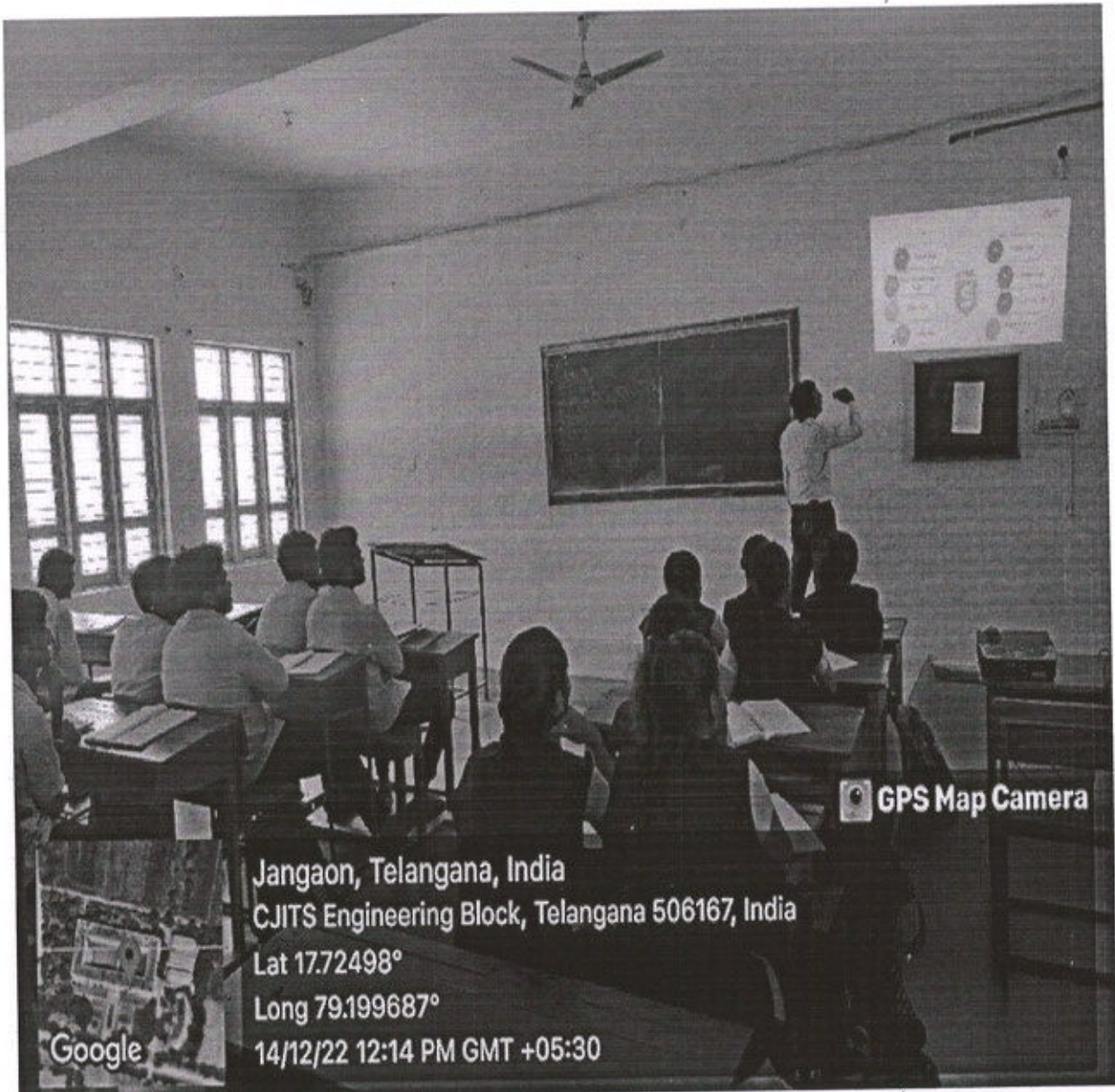


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CJITS Engineering Block, Telangana 506167, India  
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Paper presentation on topic “BATEERY CELL ” by IV EEE Students from  
**CHRISTU JYOTHI INSTITUTE OF TECHNOLOGY & SCIENCE**  
**COLLEGE (A.Y 22-23)**

  
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## 11. ALUMNI INTERACTIONS:

Alumnimeetsareorganizedeveryyeartobuildthestrongrelationshipbetwee nstudentsand alumni to share their experience and knowledge towards careerbuilding.



**ALUMNI meet for the passed out students on 2022**

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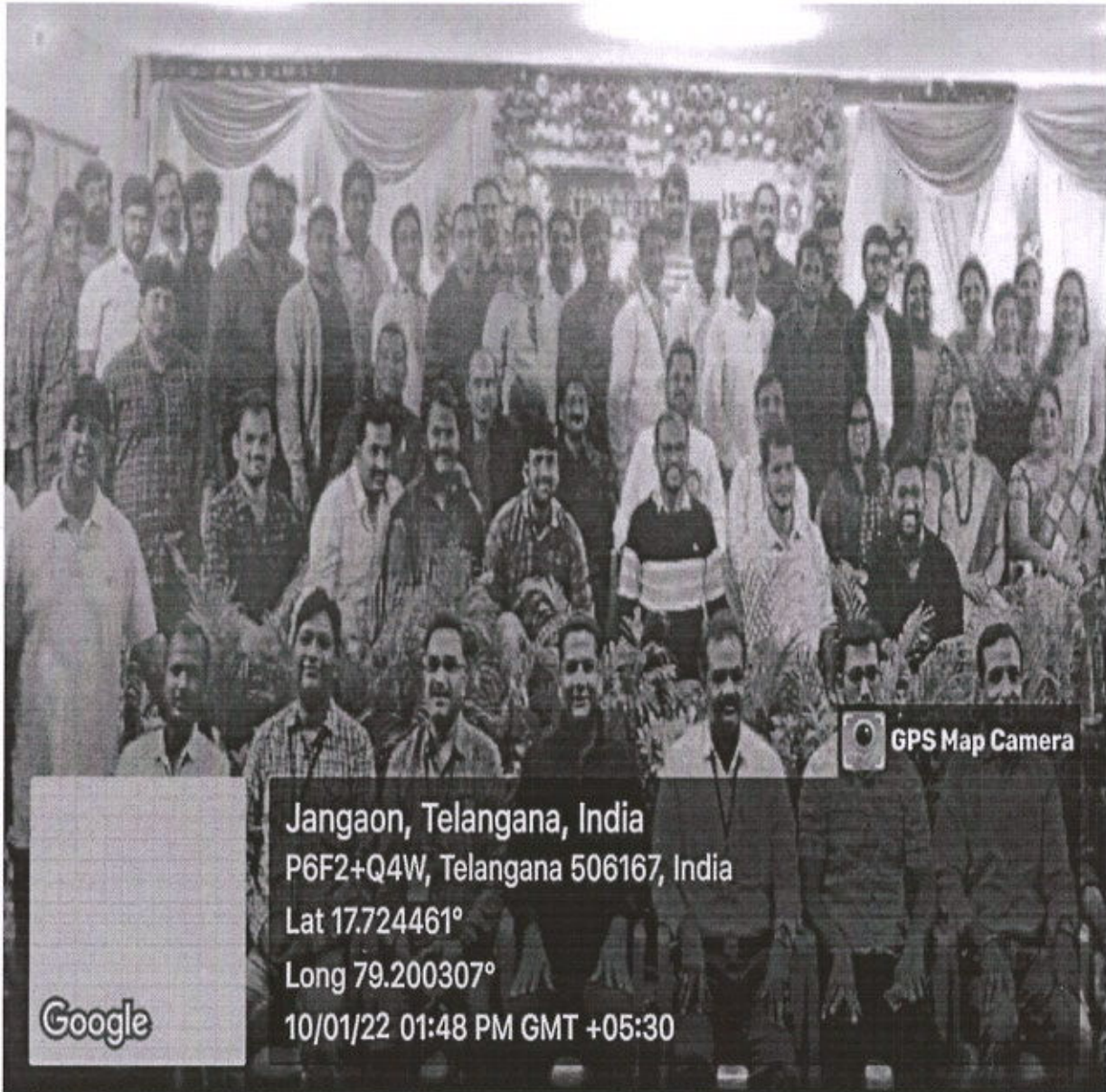


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**ALUMNI meet for the passed out students on 2022**

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12. **THINK-PAIR & SHARE:** This module has been implemented to help students come out with their innovative or unique ideas where students work together to solve a problem or answer a question about an assigned reading.



Students of IV year II semester CSE discussing a technical topic in a class room (2022-2023)

  
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**13. TECHNICAL CLUB ACTIVITIES:** The institution has various professional societies like I EEE, IETE, IEI, CSI, SAE, ISI E, ISO, where the students actively participate in activities.



Students of EEE Department has participated in various club activities

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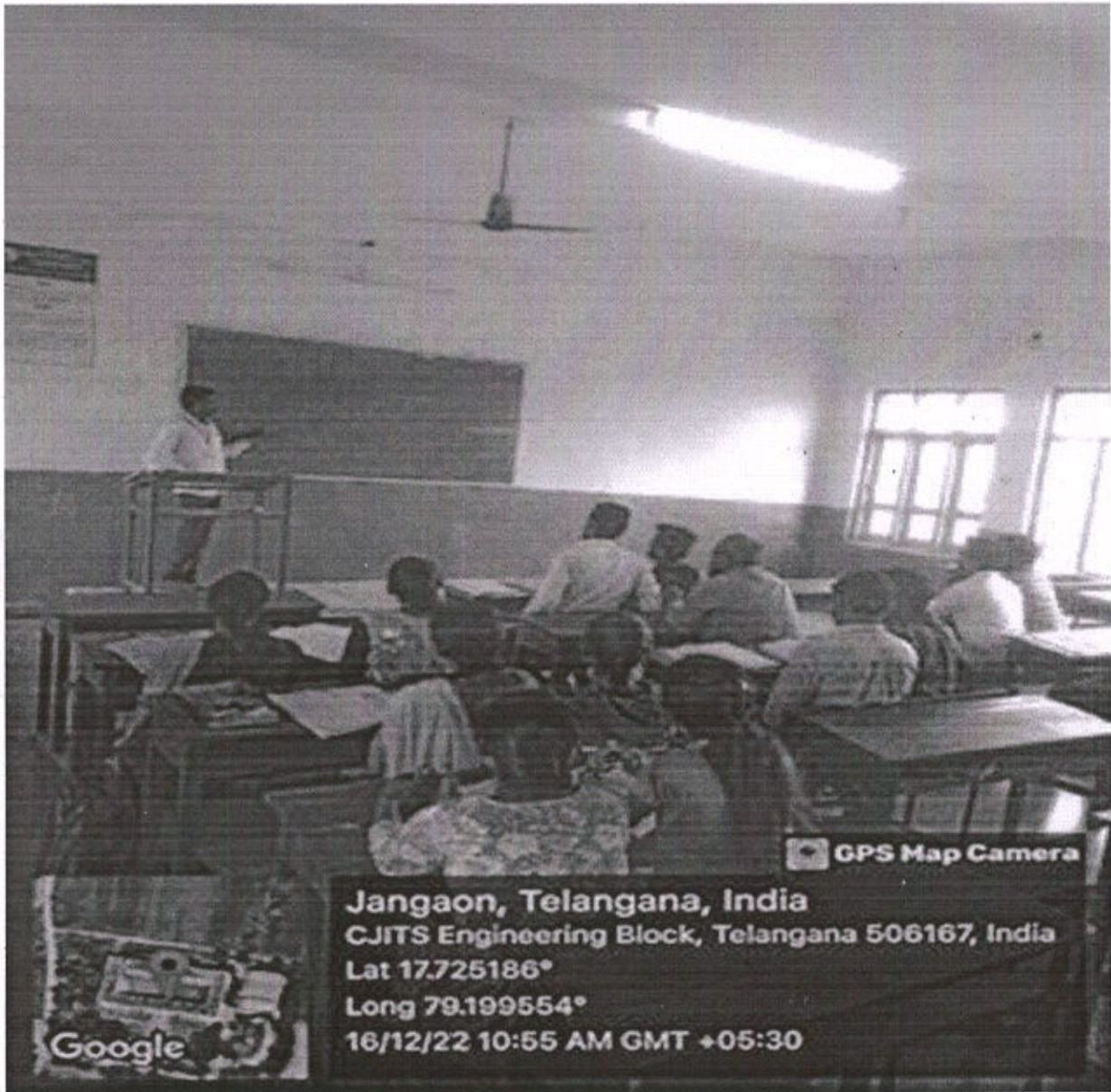


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Students and Faculty participated in various professional societies like IEEE, IETE, IEI, CSI, SAE, ISI E, ISO activities.

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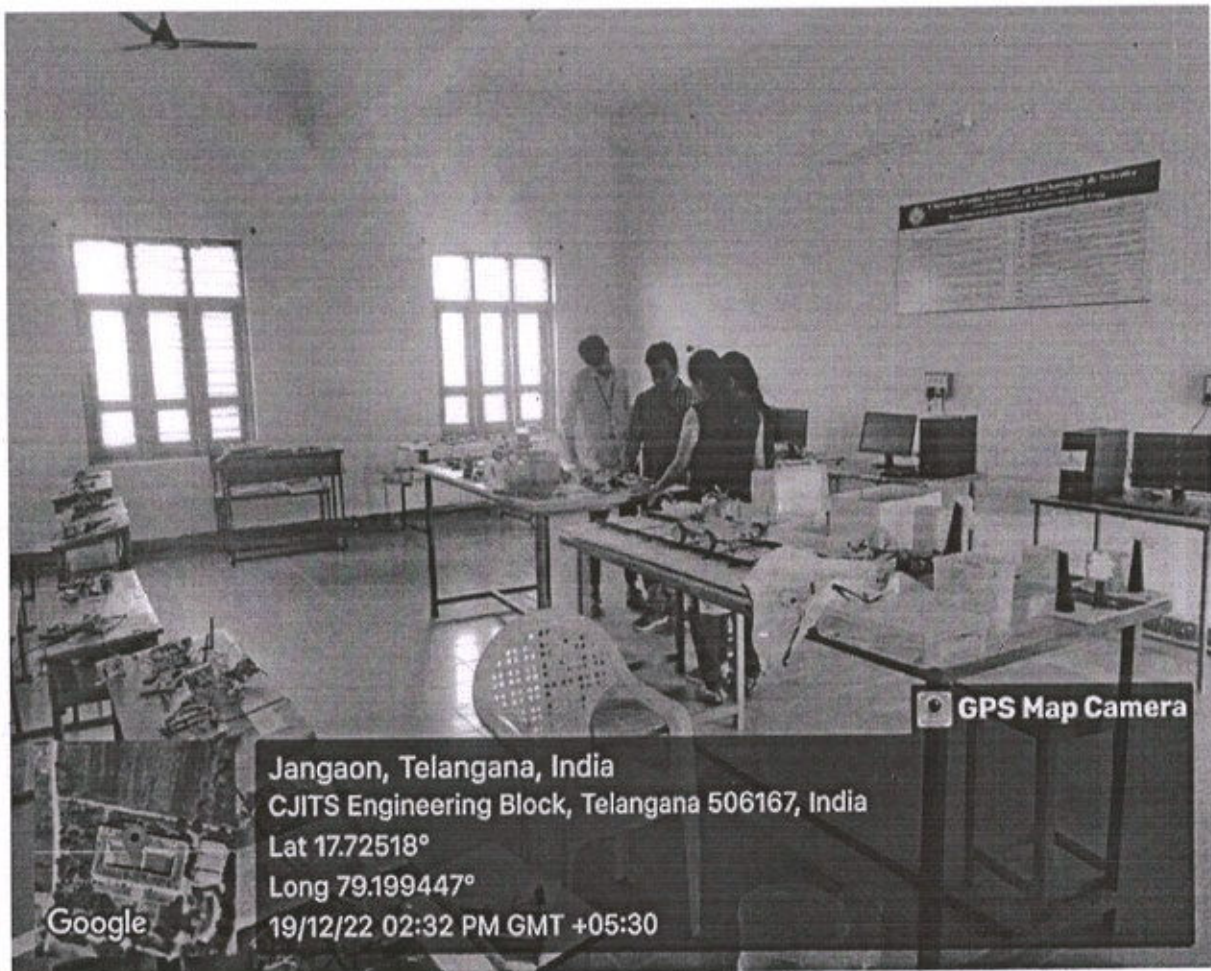
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**14. HANDS-ON TRAINING PROGRAMMES:** in every year students undergo the training activities to explore in industry and advanced technologies



Students of ECE Department are much interested in showing their major projects in CJIT (A.Y 2022-23)





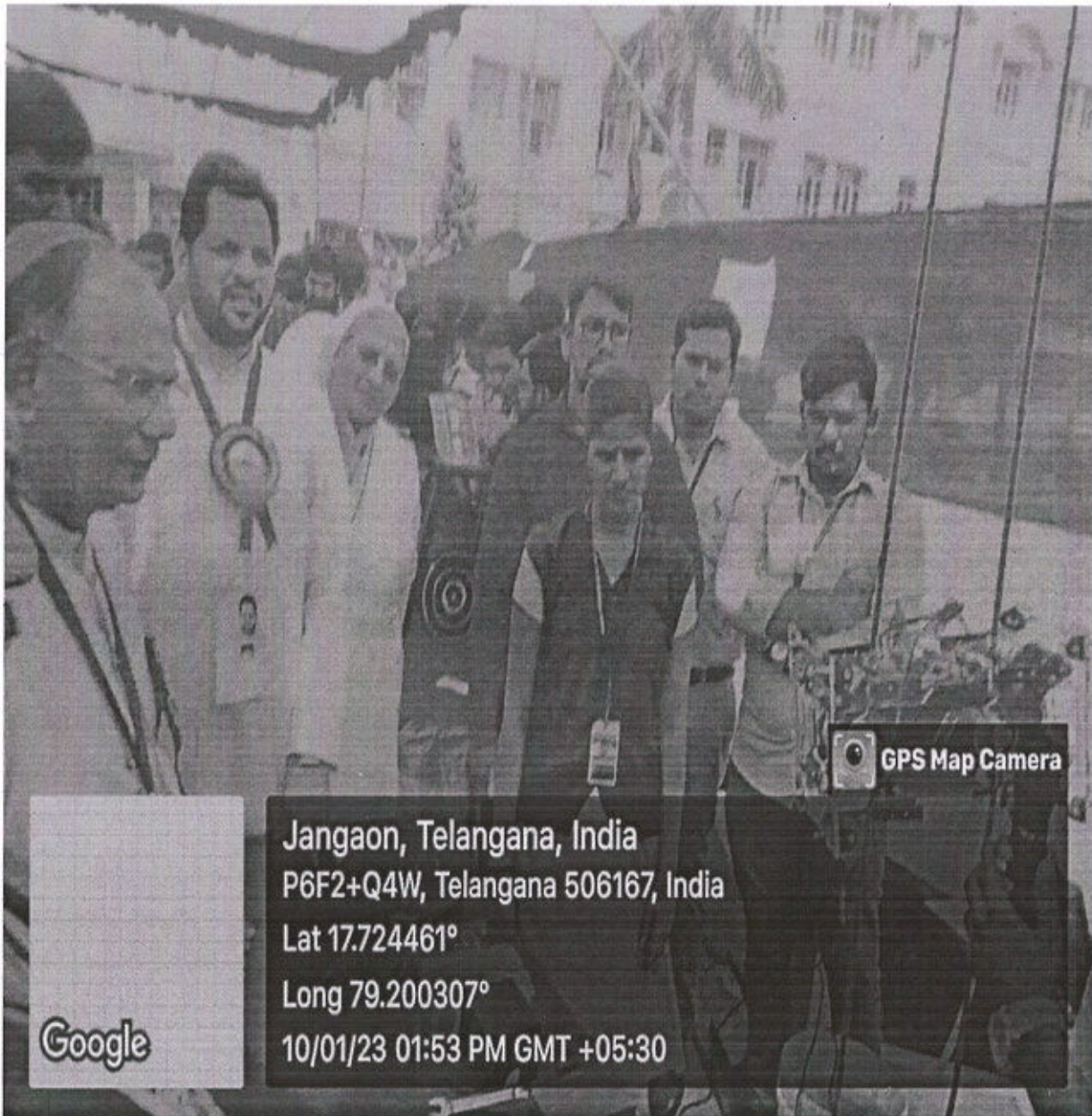
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## 15. INNOVATIVE MODEL DEVELOPMENT:



Students of CIVILIII year II Semester students, exhibiting sewage water treatment plant in CJIT (A.Y 2022-23)



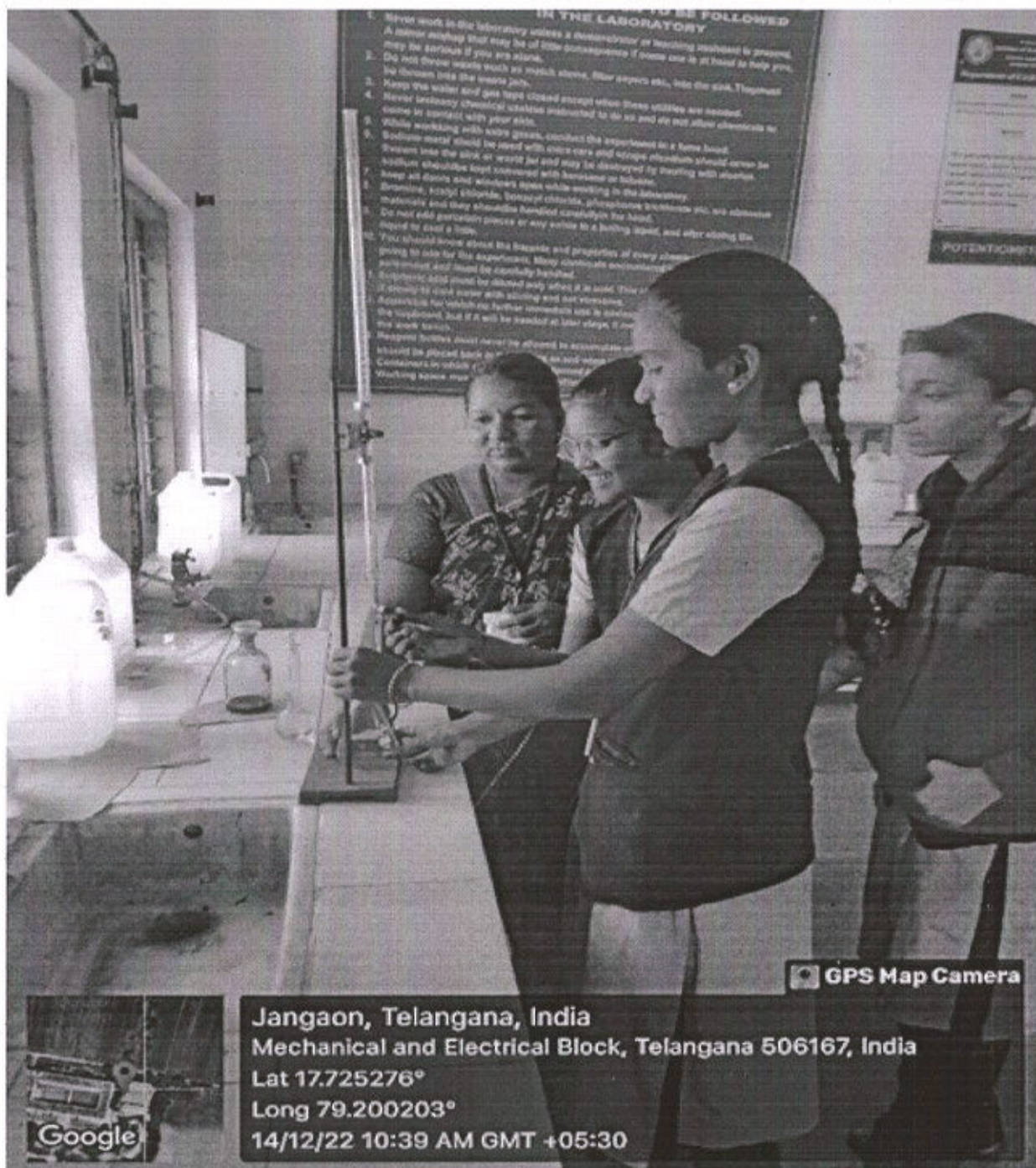


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Faculty support towards students project in CJITS

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16. ASSIGNMENTS & QUIZZES: Used to analyse the performance and the understanding capability of each student at the end of the concept.

Christu Jyothi Institute of Technology and Science  
Name:- Mohammed Majid Mohiuddin  
Roll No:- 20681A0204  
Subject:- E & HV  
Assignment-1  
verified

Q. Explain the social and environmental importance of Hybrid and electric Vehicles.

A:- Hybrid and Electric vehicles (EVs) play a significance role in addressing both social and environmental challenges.

Social Importance:-

1. Reduced Air Pollution: Traditional Vehicles emit harmful pollutants like Carbon monoxide, nitrogen oxides, and Particulate matter. Hybrids and EVs produce zero tailpipe emissions, improving air quality and public health. This is especially vital in Urban areas where air pollution is a major concern.
2. Public Health Benefits:- By reducing air pollution, these vehicles contribute to a decrease in respiratory diseases, asthma, and other health issues associated with poor air quality. This leads to a healthier population and lowers healthcare costs.
3. Technical Advancements:- The development and adoption of hybrid and electric vehicles drive technological innovation. This can lead to the growth of high-tech industries, creating jobs and stimulating economic development.

Environmental Importance:-

1. Reduced Greenhouse Gas Emissions:- One of the primary reasons for the promotion of electric vehicles is their lower greenhouse gas emissions. EVs, especially when charged with renewable energy sources like solar or wind power, significantly reduce the overall carbon footprint of the transportation sector.

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The EM can be used as generator to charge the battery by regenerative braking or absorbing power from the ICE when its output is greater than that required to drive the wheels.

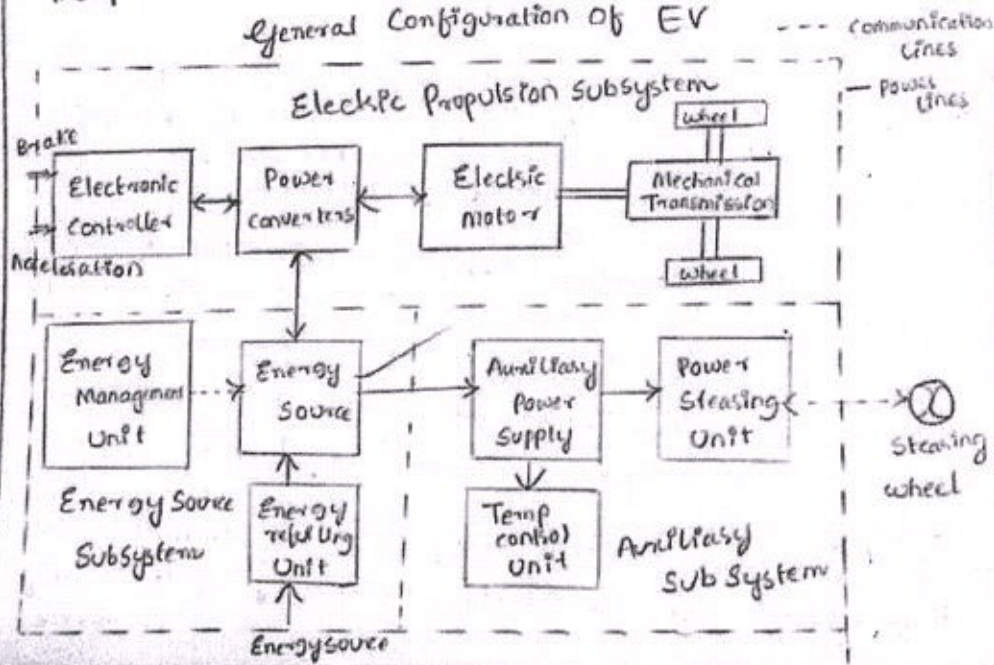
Q. Explain with neat block diagram the general configuration of an Electric Vehicle.

A:- Electric Vehicle Configuration:-

The configuration of Electric Vehicle is flexible because of the following reasons:-

- 1) Energy flow in EV is mainly via flexible electric wires rather than bolted flanges, and rigid shafts. Hence distributed sub systems in EV are achievable.
- 2) The EV's allow different propulsion arrangements such as independent four wheel & in wheel configuration, drive.

## General Configuration of EV



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→ The EV has three major Subsystems

- \* Electric Propulsion.
- \* Energy source
- \* Auxiliary System.

Electric Propulsion Subsystem:-

- \* Electronic controller.
- \* Power converter.
- \* Electric motor (EM)
- \* Mechanical Transmission.
- \* Driving wheels.

Energy Source Subsystem:-

- \* The Energy Source (battery, fuel cell).
- \* Energy management Unit.
- \* Energy refuelling unit.

Auxiliary Subsystem:-

- \* Power Steering Unit.
- \* Temperature control Unit.
- \* Auxiliary Power Supply.

→ Based on the control unit from the brake and acceleration Peddals the electronic controller provides proper control signals to switch ON/OFF the power converter which in turn regulates the power flow between the electric motor and the energy source.

→ The backward overflow is due to regenerative braking of the EV and this regenerative energy can be stored provided by the energy source is receptive.

→ The energy management unit co-operates with electronic controller to control the regenerative braking and its energy recovery.

→ It also works with energy refuelling unit to control refuelling and to monitor usability of the energy source.

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The auxiliary power supply provides the necessary power with different voltage levels for all EV auxiliaries, especially the temperature control and power steering unit.

Q. Based on Drive Train configuration, explain the Electric Vehicle drive Train alternatives.

A:- Electric Vehicle (EV) Drivetrain Alternatives Based on Drive train Configuration:-

There are many possible EV configurations due to the variations in electric propulsion and energy sources. Based on these variations, six alternatives are possible as shown in fig. These six alternatives are.

→ In fig a a single EM configuration with gear box (GB) and a clutch is shown. It consists of an EM, a clutch (C), a gearbox, and a differential (D).

→ The clutch enables the connection or disconnection of power flow from EM to the wheels. The gear box consists of a set of gears with different gear ratios.

→ With the use of clutch and gearbox, the driver can shift the gear ratios and hence the torque going to the wheels can be changed. The wheels have high torque low speed in the lower gears and high speed low torque in the higher gears.

→ In fig b a single EM configuration without the gearbox and the clutch is shown. The advantage of this configuration is that the weight of the transmission is reduced. However, this configuration demands a more complex control of the EM to provide the necessary torque to the wheels.

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9/2

III-B.Tech-II- SEM R18- I - Mid Examination -

Date of Exam :	11-05-2023	Session of Exam :	AN	SET - 2
Subject Name :	Microprocessors and Micro controllers		Branch: EEE	

Objective:

Time: 30 Min

20x1/2=10Marks

S.No	OBJECTIVE QUESTIONS	
1	In 8086 example for non maskable interrupts are..... A) TRAP B) RST6.5 C) INTR D) RST6.6	A
2	Access time is faster for..... A) ROM B) SRAM C) DRAM D) ERAM	B
3	The work of EU is..... A) Encoding B) Decoding C) Processing D) calculations	B
4	The 16bit flag of 8086 microprocessor is responsible to indicate..... A) the condition of result of ALU operation	A

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	B)The condition of memory C)The result of addition D)the result to subtraction	
5	The OF is called as..... A)overflow flag B)Overdue flag C)One flag D)Over flag	A
6	The BIU contains FIFO register of size.....bytes A)8 B)6 C)4 D)12	C
7	The 1MB byte of memory can be divided into.....segments A)1kbyte B)64k bytes C)32kbytes D)34kbytes	B
8	The .....is used to connect more microprocessor A) peripheral device B) Cascade C) I/O devices D) Control unit	B
9	Memory is an integral part of a.....system A) Supercomputer B) Microcomputer C) Minicomputer D) Mainframe computer	B

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10	The address bits are sent out on lines through..... A) A16-19 B) A0-17 C) D0-D17 D) C0-C17	A
11	What is DEN..... <i>Data enable</i>	/
12	If MN/MX is low the 8086 operates in... <i>MAX</i> ... mode	/
13	The microprocessor places <i>data</i> address on the address bus	/
14	To perform any operation the Micro processor should identify the... <i>LOCK</i> ...	/
15	An SF is called as... <i>Serial function</i>	/
16	CS connect the output of... <i>Arithmetic &amp; Signet</i>	X
17	ALE stands for... <i>Address latch enable</i>	/
18	The first microprocessor was... <i>Intellium 8080</i>	/
19	In 8086 overflow flag is set when... <i>carry flag</i> ..	/
20	A microprocessor is a... <i>Micro</i> chip integrating all the functions of a CPU of a computer	/

\*\*\*\*\*All the Best\*\*\*\*\*

*Principal*





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17. **VIRTUAL LABS:** Used to provide remote-access to Labs in various disciplines can avail the various tools for learning, including additional web-resources, video-lectures, an imated demonstrations and self-evaluation.



Students spending their free time in learning various things by using the provided resources

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