



SREE CHAITANYA COLLEGE OF ENGINEERING

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

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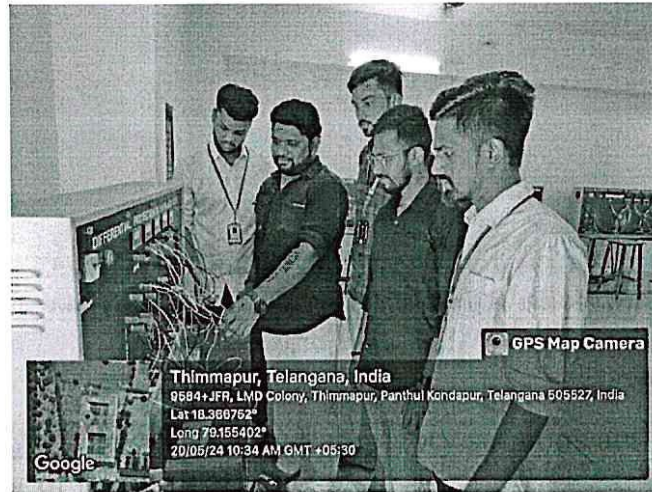
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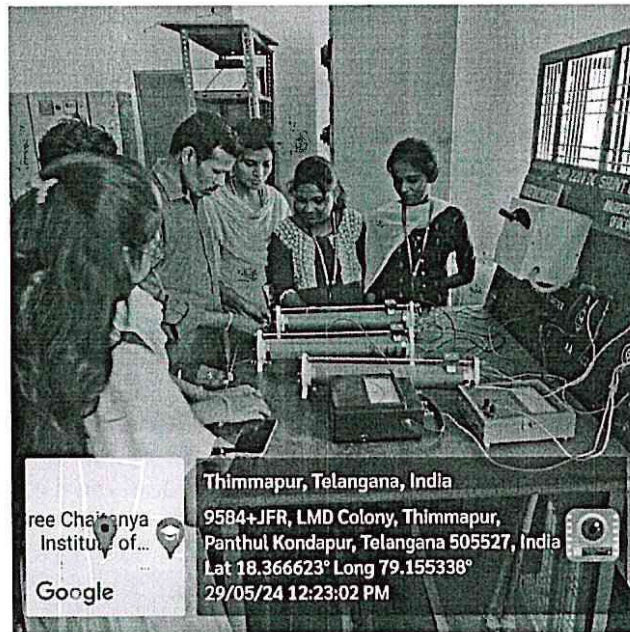
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1. LABORATORY SESSIONS: Laboratory sessions are conducted for better understanding of theoretical concepts



Students from first year doing Basic Electrical Engineering Lab



Students from Second year EEE are performing Machines lab

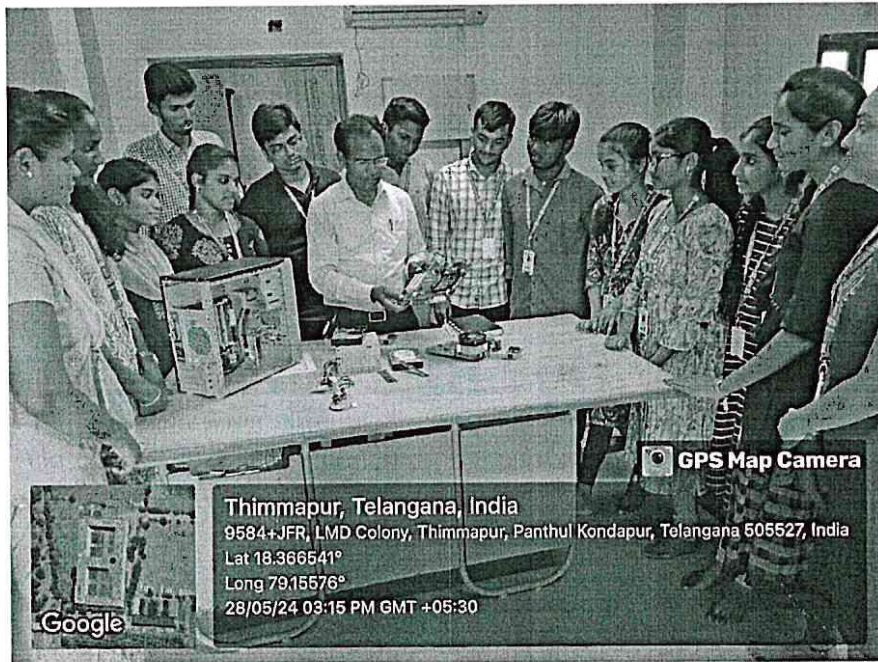
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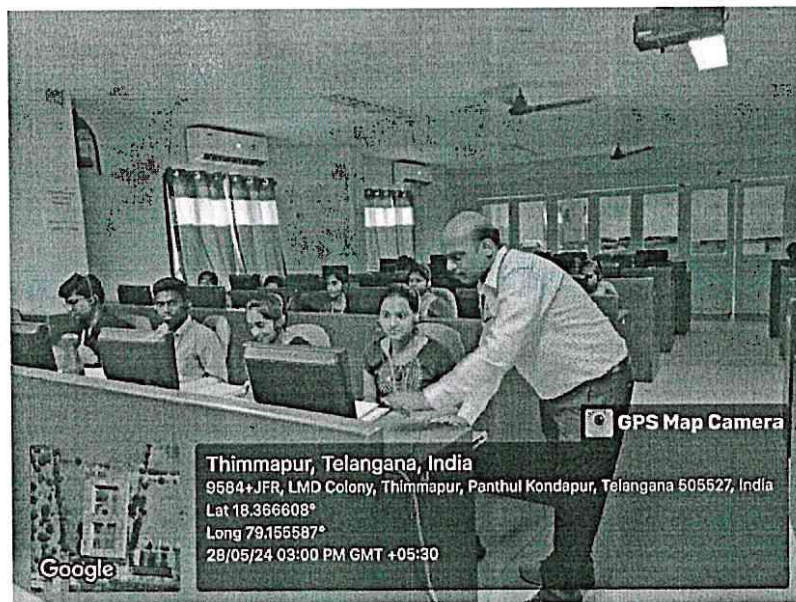


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IT Workshop lab



Computer Lab

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2. INTERNSHIPS: Internships are provided to the students.

TIN No.28510131580

A.V. MOTORS

VEHICLE SALES *SERVICE *SPARES

11-4-658/2, Bazar Ghat Road, Lakdi Ka Pul, Hyderabad - 500 004.
(T) : 66367059, 23310520 (F) : 66367078 e-mail : avmotorshyd@yahoo.co.in

AUTHORIZED DEALER FOR
SOL
ISUZU
(Formerly SWARAJ MAZDA)
TRUCKS & BUSES

CERTIFICATE OF INTERNSHIP

This is to certify that Mr.Nampally Srinivas Hallticket no.21N05A0312 studying in III – B.Tech Mechanical Engineering from Sree Chaitanya College of Engineering has successfully completed a [45 days] internship program at A.V MOTORS KARIMNAGAR from 15-05-2023 to 06-07-2023.

During the internship with our company, He was actively involved in *Hybrid and Electric Vehicle Technology*. He demonstrated a strong understanding of fundamental principles and applied them effectively to real-world scenarios. He exhibited excellent problem-solving skills, creativity, and attention to detail in completing assigned responsibilities.

This internship certificate is awarded to recognize Nampally Srinivas's valuable contribution and commitment to the field of *Hybrid and Electric Vehicle Technology*. We believe that he has the potential to excel in his future endeavors and wish him the very best in his career.


Signature of Industry supervisor


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WORKSHOP - I : Dv No 279, Jeedamda Industrial Area, Phase-1,
Hyderabad - 500 065 PH : 25090233
WORKSHOP - II : Hikal Rajeshwari Complex, Plot No. CF 2/5-13 A&B,
Vijayawada Highway, Karimnagar, Hyderabad-70 PH : 23449124, 24127662
SHOWROOM & WORKSHOP - III : D No. 11-6-3452, Koppa Ramoul Road,
Karimnagar-505001 PH : 0878-2277000
SHOWROOM & WORKSHOP - IV : D No. 23-6-1112, Dv. No. 111,
Srinagar (V), Murar Road, Hanamantada, Warangal - 509001 PH : 0870-2524049



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PRATHIRAJ METAL MASTERS PVT. LTD.

CERTIFICATE OF INTERNSHIP

This certifies that Mr.Pallati Vishnu Tejaiah, Ticket No.21N05A0315 a third-year mechanical engineering student at Sree Chaitanya College of Engineering, successfully finished his 45 days injection molding internship at Prathiraj Metal Masters Pvt. Ltd. Hyderabad from May 15, 2023, to July 6, 2023.

Throughout their internship with our organization, interns will acquire a thorough understanding of the injection molding process, encompassing the materials utilized, the technology involved, and the stages from design to manufacturing..

During the above internship period we found him sincere, hardworking and result oriented. He worked well as a part of team during his tenure. We take this opportunity to wish all the best for his future endeavors.


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Signature of Industry supervisor


Mr.Pallati Vishnu III Year of ME Department has completed internship at PRATHIRAJ METAL MASTERS PVT.LTD., HYDERABAD from 15-05-2023 to 06-07-2023(A.Y 2022-23)

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MGB MOTOR AND AUTO AGENCIES PVT. LTD.

Branch Office - Karimnagar

Telangana, India

CERTIFICATE OF INTERNSHIP

This is to certify that Mr. Erumalla Pradeep, Hallticket no.20N01A0307 studying III B.Tech Mechanical Engineering from Sree Chaitanya College of Engineering has undergone internship training on *Vehicle Maintenance and Repair* from 15-05-2023 to 06-07-2023 and completed successfully. During the above period his/her conduct is satisfactory.

During the internship with our company, Students gained knowledge about the basics of vehicle maintenance and repair, including oil changes, tire rotations, brake inspections, and fluid checks.

During the period of his internship Mr. Erumalla Pradeep learned and worked on *Vehicle Maintenance and Repair* and successfully met the objectives. Mr. Erumalla Pradeep shows a lot of promise and skill in his work and was found punctual, hardworking and inquisitive.

We wish him every success in life

Signature of Industry supervisor



VE COMMERCIAL VEHICLES
A special category of motor vehicles used for transport of goods and passengers.

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Fax: 08782223110
E-mail: info@mgbaa.com

Branch & Service Dept
Sree Chaitanya College of Engineering
LMD Colony, Karimnagar, Telangana
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Mr Erumalla Pradeep , Student of ME Department III Year has completed Internship on Vehicle Maintenance and Repair from 15-05-2023 to 06-07-2023 (A.Y 2022-23)

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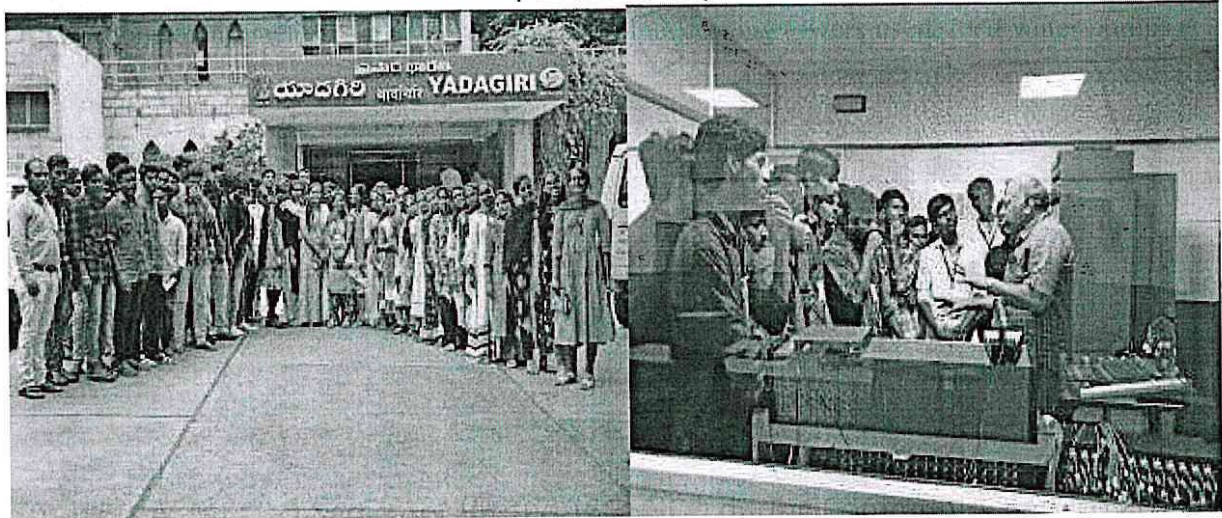
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3. INDUSTRIAL STUDY VISITS & FIELD VISITS: To provide students an opportunity to study the thermal power generation from thermal power plant, and working of various components of plant like boiler, turbine, cooling towers used, feed water pumps



Students of ME III- I Semester Visited TSGENCO during Community Service Project (A.Y.2018-19)



Students of ECE III-I Semester, visited Doordarshan Ramanthpur, Hyderabad (A.Y.2018-19)

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Students of CSDII- I Semester Visited INFOSYS - SEZ CAMPUS(A.Y.2022-23)



Students of MBA Industrial Visit at : Prathiraj Industries Pvt Ltd and Amrutha tools and crafts Pvt Ltd (A.Y.2018-19)

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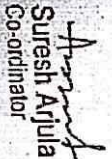



4.INDUSTRY DRIVEN COMPETITION: Students encouraged participating in competition to show their creative ideation and talent



JNTUH COLLEGE OF ENGINEERING JAGTIAL
NACHUPALLY(KONDAGATTU), JAGTIAL (DIST), T.S., 505 501
Department of Mechanical Engineering
(Accredited by NEA)

Dr. K. V. Reddy
A Three Day National level Workshop on
3D Printing & Its Applications

This is to certify that Mr./Ms. N VIDYASAGAR,
III B.Tech ME, Roll No.18N05A0339 SREE CHAITANYA COLLEGE OF
ENGINEERING Karimnagar has participated in "A Three Day National level
Workshop on 3D Printing & Its Applications" during 26-28 February 2020, organised
by Department of Mechanical Engineering, JNTUHCEJ held at JNTUH College of
Engineering Jagtial, Nachupally, Jagtial Dist.-505501, Telangana State, India.


Dr. Suresh Arjula
Co-ordinator


Dr. K. Vasanth Kumar
Convener


Dr. N. V. Ramana
Principal, JNTUHCEJ

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5. INTEGRATED TOOLS: Students are encouraged to Participate in 2020



SREE CHAITHANYA COLLEGE OF ENGINEERING is conducted Internal Hackathon 2020 Program Inauguration



SREE CHAITHANYA COLLEGE OF ENGINEERING is conducted Internal Hackathon 2020 Program.

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SREE CHAITHANYA COLLEGE OF ENGINEERING is conducted Internal Hackathon 2020 Program at Computer Science Engineering Lab



SREE CHAITHANYA COLLEGE OF ENGINEERING is conducted Internal Hackathon 2020 Program and Principal is addressing to the students.

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Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to

BILLA AKHILESH

for successfully completing the course

Advanced Machining Processes

with a consolidated score of **66** %

Online Assignments	25/25	Proctored Exam	40.5/75
--------------------	-------	----------------	---------

Total number of candidates certified in this course: 818

Aug-Oct 2021
(8 week course)

Handwritten signature
Prof. Hemant B Kaushik
Head, Center for Educational Technology
NPTEL Coordinator, IIT Guwahati



Indian Institute of Technology Guwahati



Roll No: NPTEL21ME89S33780083

To validate and check scores: <https://npTEL.ac.in/noc>

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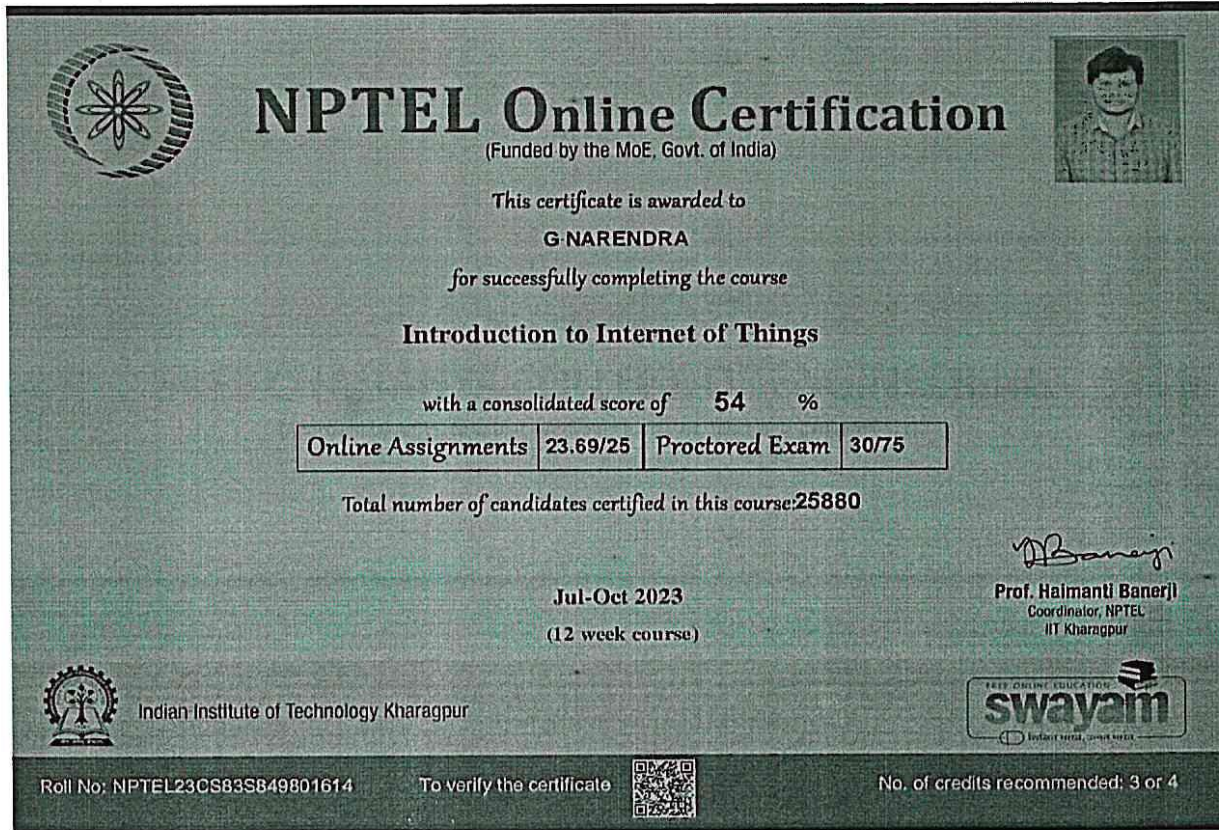


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+



NPTEL Online Certification
(Funded by the MoE, Govt. of India)

This certificate is awarded to
G NARENDRA
for successfully completing the course
Introduction to Internet of Things
with a consolidated score of **54 %**

Online Assignments	23.69/25	Proctored Exam	30/75
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Total number of candidates certified in this course: **25880**

Jul-Oct 2023
(12 week course)

Prof. Haimanti Banerji
Coordinator, NPTEL
IIT Kharagpur

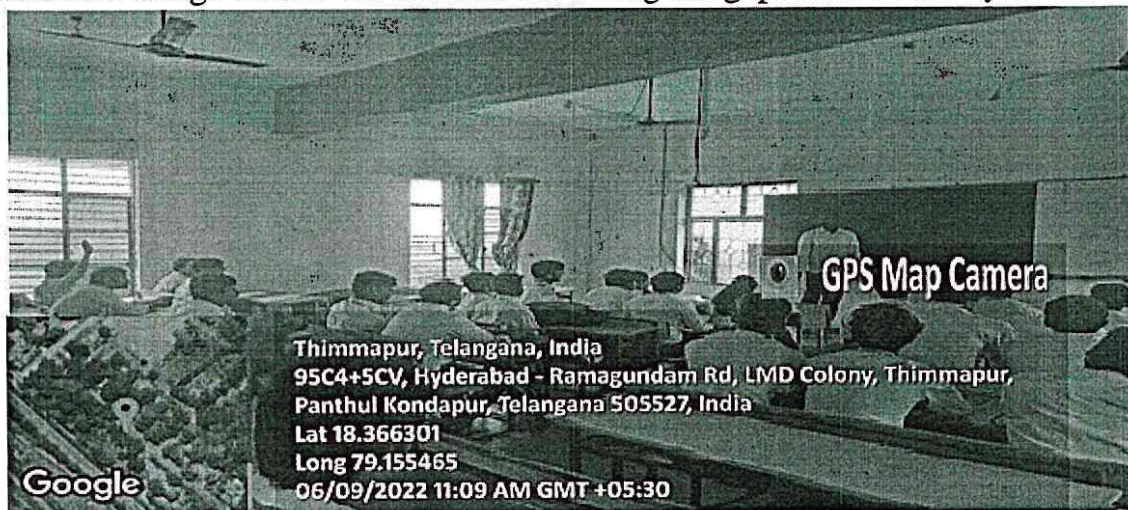
Indian Institute of Technology Kharagpur

swayam

Roll No: NPTEL23CS83S849801614 To verify the certificate  No. of credits recommended: 3 or 4


6. BRIDGE COURSE:

conducted bridge course for the students filling the gaps in academic year courses



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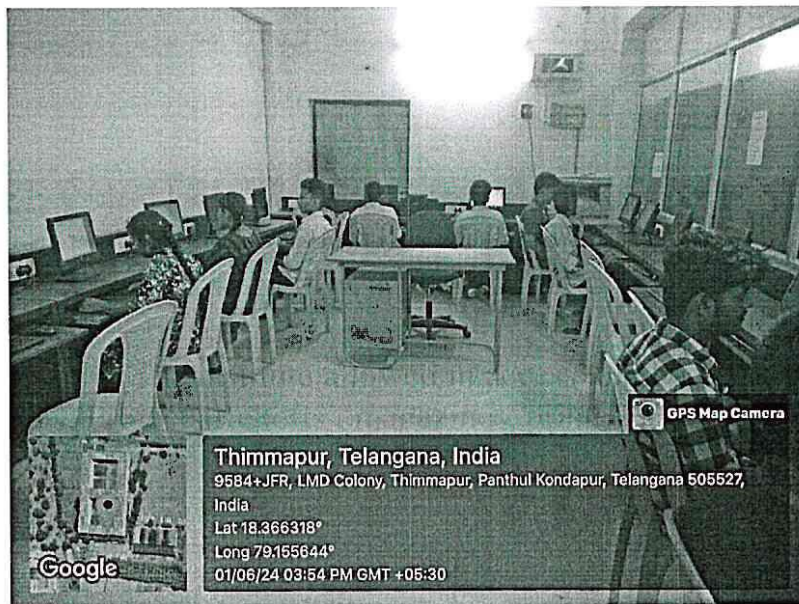


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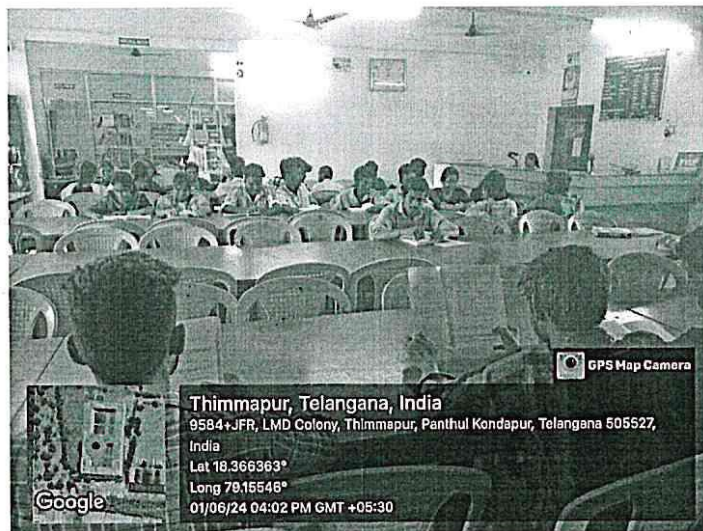
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7. **E-LEARNING:** The institute allowed in access text books & references, course materials, Projects Reports , magazines, printed journals & E-journals.



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India
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Long 79.155644°
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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



One Week Workshop conducted for ECE students on Mentor Graphics and Viyado Tool from 08-06-2022 to 12-06-2022

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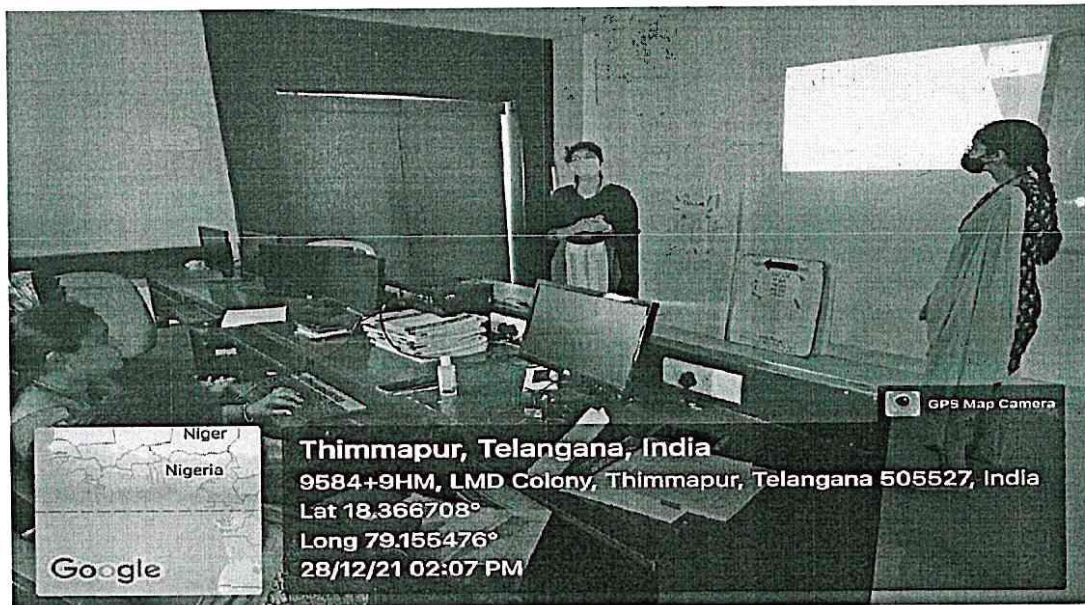
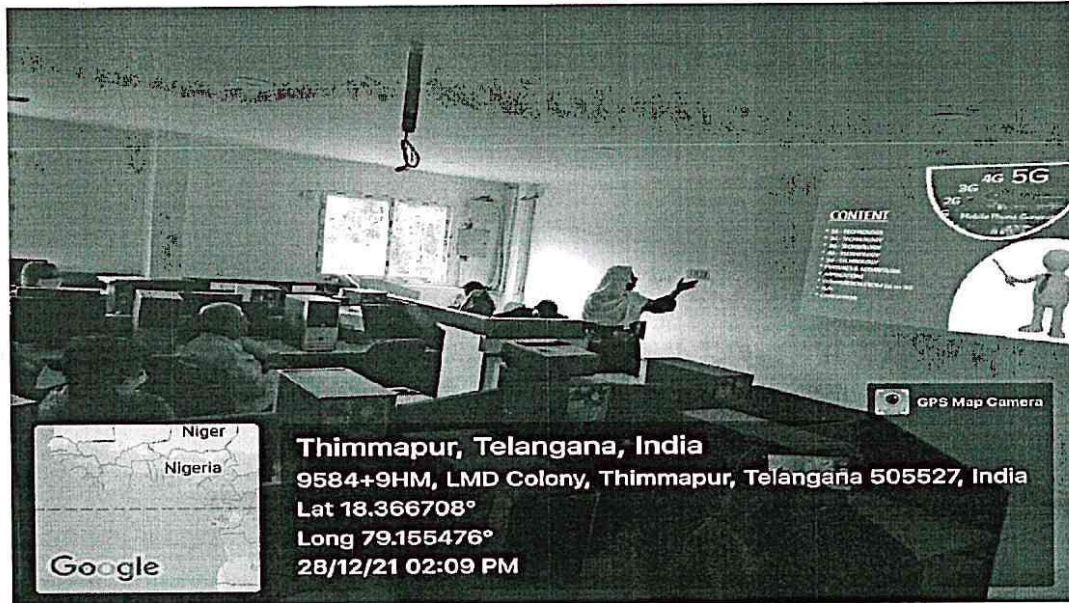


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Students Paper Presentations (A.Y.2021-22)

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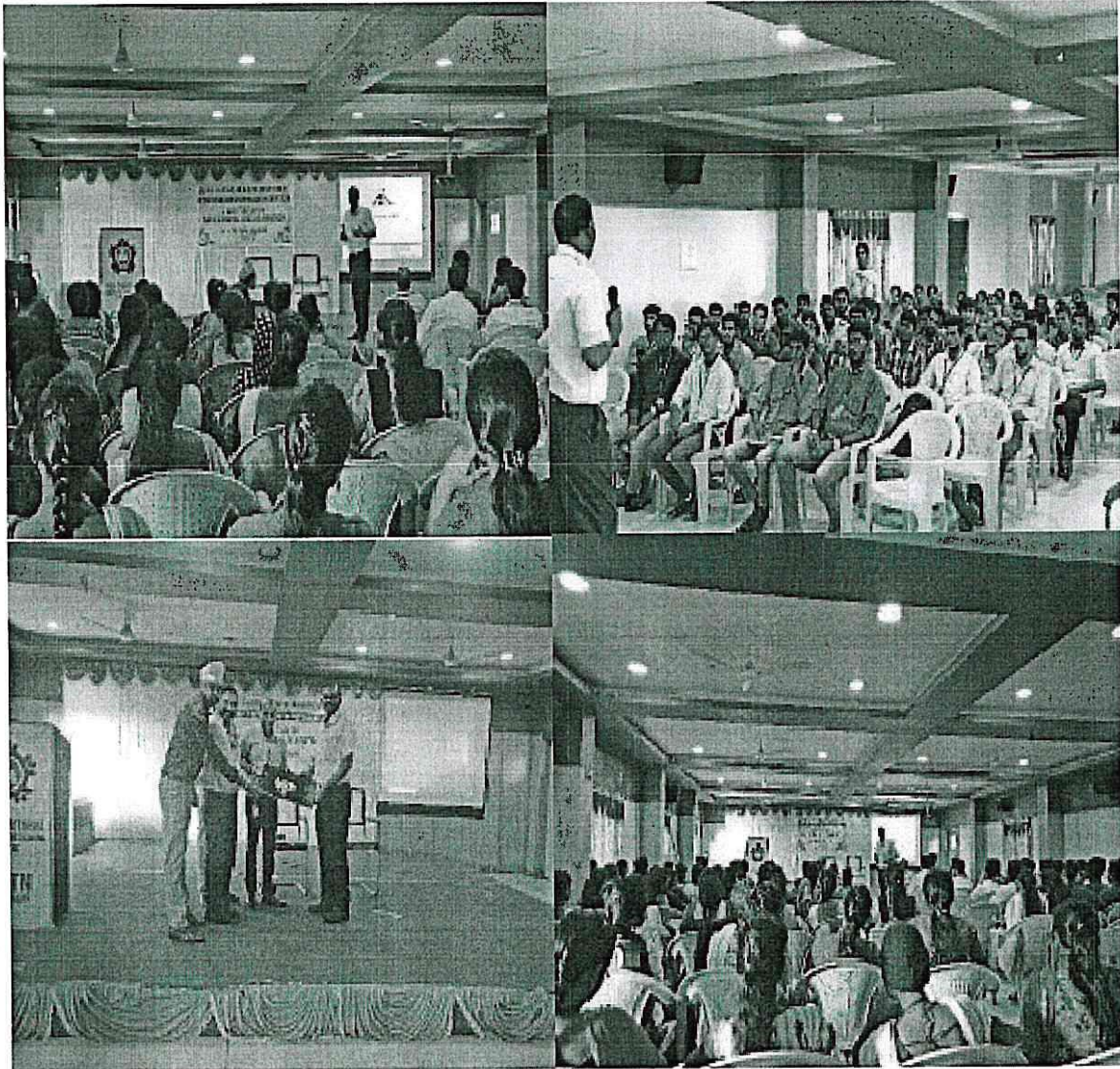


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Department of Electronics & Communication Engineering conducted a guest lecture on
Navigational Aids in Aviation on 20-01-2020.

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



Students engage in discussion and idea sharing on significant issues

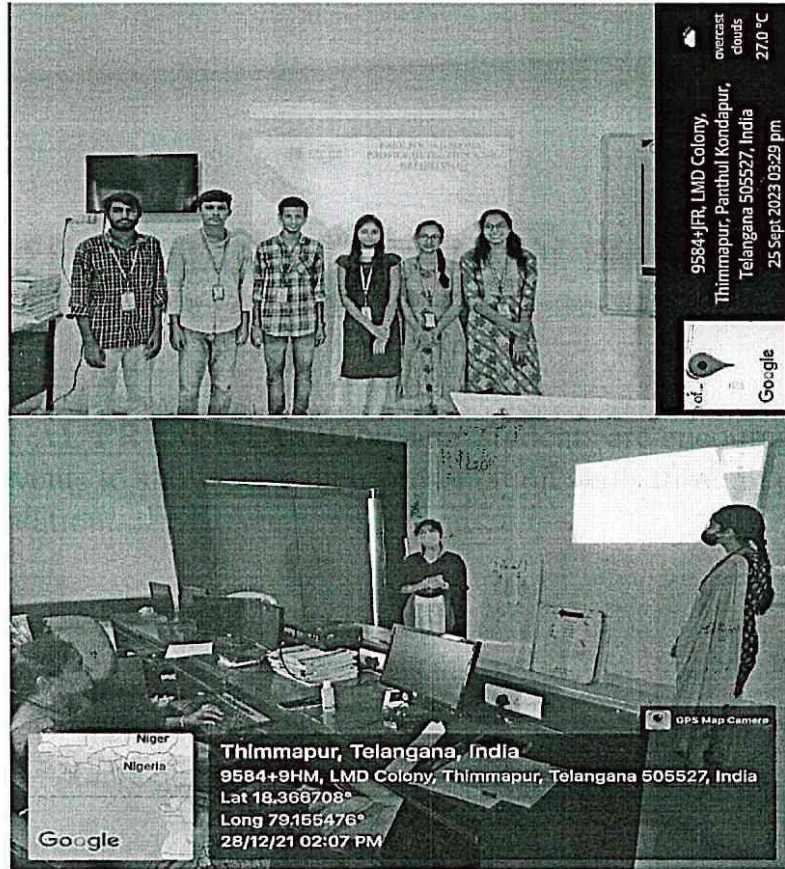
Academic year: 2019-20

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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..



Paper presentation on topic “Computer Networks” by III ECE Students from Sree Chaitanya College of Engineering, karimnagar

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11. ALUMNI INTERACTIONS:

Alumni meet are organized every year to build the strong relationship between students and alumni to share their experience and knowledge towards career building.

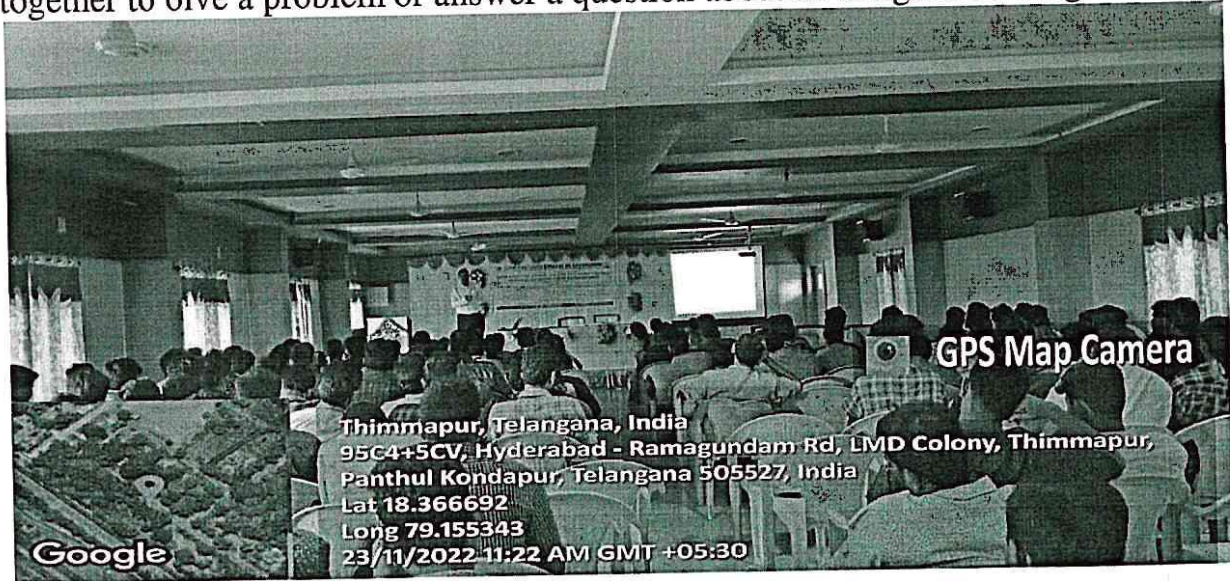


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12. **THINK-PAIR & SHARE:** This module has been implemented to help students come out with their innovative or unique ideas where students work together to solve a problem or answer a question about an assigned reading.



Students of IV year ECE discussing a technical topic in a class room



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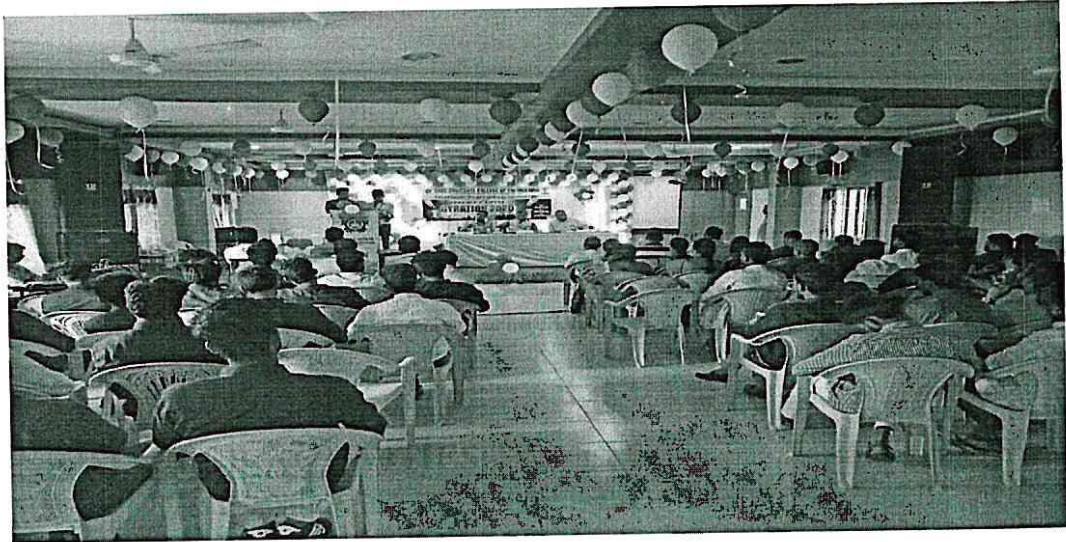


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13. TECHNICAL CLUB ACTIVITIES: The institution has various professional societies like I EEE, IETE, IEI, CSI, SAE, ISI ISO, where the students actively participate in activities



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

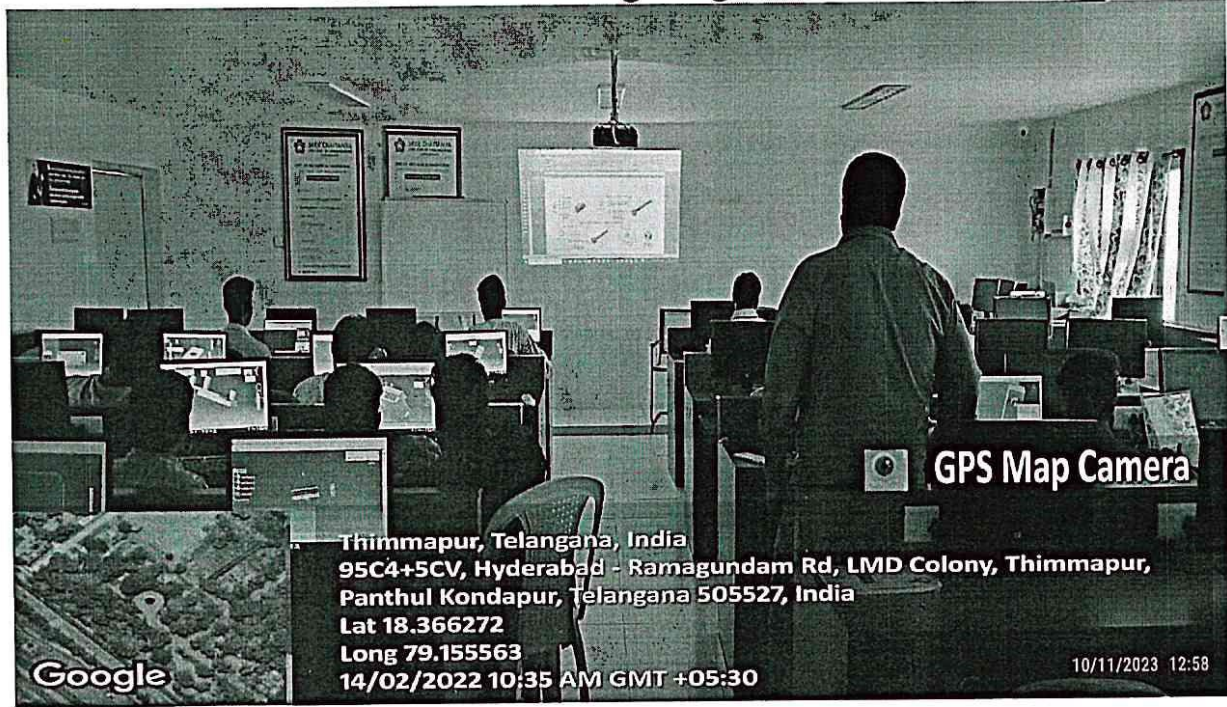


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Hands on Training Program-2023



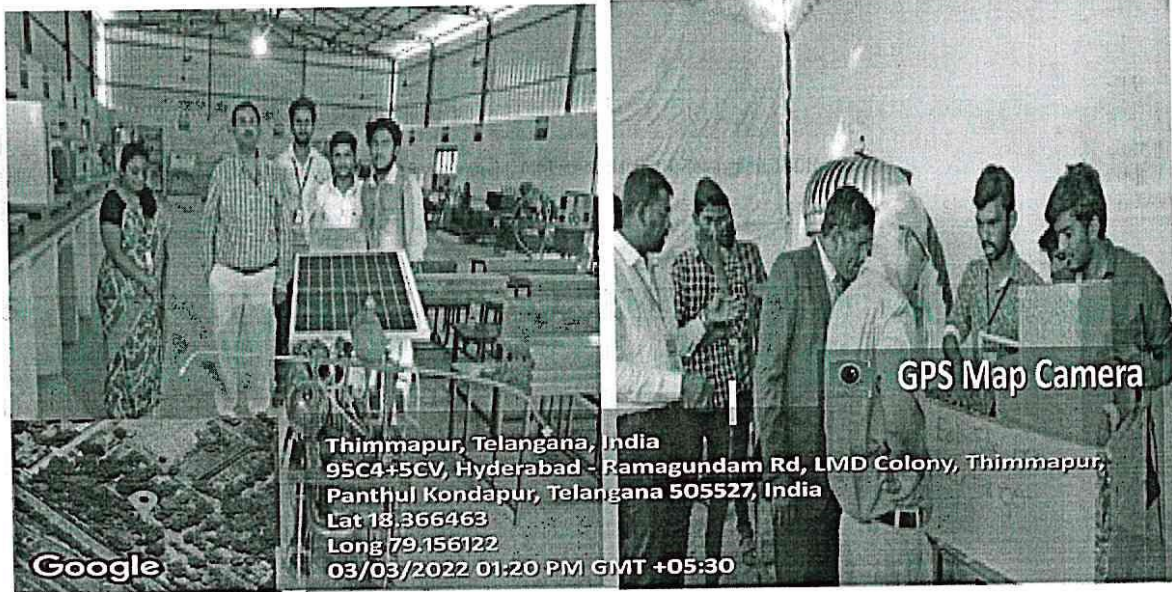
Department of Mechanical Engineering III Year Students attended a Program
(A.Y 2022-23)

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15. INNOVATIVE MODEL DEVELOPMENT:



Faculties along with Students they are with innovative mode done by the Students

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

Assignment - I

D. Poojitha
21/10/2023

1) Write the importance of engineering material in design of component. Explain the classification of engineering material.

Ans- Material are probably more significant in our culture than in modern transportation, housing, communication.

→ These are essential elements in material science of engineering.

1) Processing / synthesis

2) Structure / composition

3) Properties

4) Performance / application

→ The structure of material usually refers to arrangement of its internal components.

→ Important properties of materials-

1) Mechanical properties

2) Thermal properties

3) Thermal expansion

4) Thermal resistance

5) Thermal stability

6) Thermal fatigue

Classification of engineering materials:-

→ classified according to their nature like metals, ceramics, polymers and composites.



→ classified into six groups:-

1) Metals and alloys:- are organic materials composed of one or more elements. They contain very small % of non-metallic elements. They are usually good conductors and thermal conductors. At ordinary temp metals are solid. To some extent metals are malleable and ductile.

2) Composites:- are inorganic materials consisting of both metallic and non-metallic elements bonded together chemically. Composites are high melting points and high electrical insulators. They have high hardness.

3) Polymers:- are organic materials with consists of long molecular chains or repeat containing carbon. Most polymers are non-crystalline. They are low conductors and are mechanically ductile.

4) Composites:- are mixture of two or more types of materials. They are light weight, high strength, corrosion resistant, high impact strength and high strength to weight ratio.

5) Semiconductors:- These are materials which have electrical properties that are intermediate between the electrical conductors and insulators.

6) Examples

1) Advanced materials.

2) Explain how do you select the material for engineering purpose?

Ans:- The material selection process selection of materials for design of the machine is an essential step of accomplish the whole functionality of machine.


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→ The selected material should satisfy both reliability and function and many other factors.

→ Factors affecting the selection of material for engineering purpose.

i) Mechanical stress or loads.

ii) Wear and tear.

iii) Electrical resistance.

iv) Thermal properties.

v) Availability & cost.

→ The material selection process for a component or part follows below component follows these steps.

i) Identify the design requirement.

ii) Identify the material solution criteria.

iii) Identify candidate materials.

iv) Identify candidate materials.

v) Select materials.

3) Define and write application of mechanical properties of material.

Stress - Strength is a property of material which gives the information or breakdown of material when load or external force applied.

→ Hardness.

Assumptions of 'bending stress':

- The values of young's modulus of elasticity is same in tension and compression and constant.
- The transverse sections which were plane before bending remain plane after bending also.
- The material of beam is homogeneous and isotropic.
- Initially straight beam.

Principal stress and planes:-

- principal stress are maximum and minimum value of normal stress on a plane when rotated through an angle on which there is no shear stress.

→ It is that plane on which the principal stresses act and shear stress is zero.

Then,

$$\text{Principal stress } \sigma_{1,2} = \frac{\sigma_x + \sigma_y}{2} \pm \sqrt{\left[\frac{\sigma_x - \sigma_y}{2} \right]^2 + \tau^2}$$

$$\tan 2 \theta_p = \frac{2\tau}{\sigma_x - \sigma_y}$$

Max - shear stress:-

$$\text{Max. to plane} = \sqrt{\left[\frac{\sigma_x - \sigma_y}{2} \right]^2 + \tau^2}$$

$$\tan 2 \theta_s = \frac{-(\sigma_x - \sigma_y)}{2\tau}$$

Handwritten signature



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SET-III

SREE CHAITANYA COLLEGE OF ENGINEERING (NO): KARIMNAGAR

IV B.Tech II SEM I MID EXAMINATIONS MARCH-2024

Date: 16-03-24-2024 Basic Power Plant Engineering

Time: 60Min

Branch: Mechanical Engineering

Max.Marks:10


Answer any TWO of the following:

Q.No	Questions	CO	BTL	Time	Marks
1	Draw and explain the Fluidized Bed Combustion (FBC) boiler's operating concept. Also explain its types.	CO1	2	30 mins	5
2	Explain how combined cycle power plants operate.	CO2	3	30 mins	5
3	Explain the Pressurised Water Reactor's operation.	CO3	2	30 mins	5
4	4. a. What is meant by Condenser? b. What is meant by compressor? c. Draw the schematic of Fast Breeder Reactor.	CO1	1	06 mins	1
		CO2	1	12 mins	2
		CO3	1	12 mins	2

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16 II

MECH

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
SREE CHAITANYA COLLEGE OF ENGINEERING
IV B. Tech. II SEM I Mid Examinations, March - 2024
BASICS OF POWER PLANT ENGINEERING

Name: Alex Saju Hall Ticket No. 20N01A0302

Objective Exam

Answer All Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct alternative:

Q.NO	QUESTION	CO	BTL
1	Which is the most common type of Evaporator? a) Flooded Evaporator b) Plate Evaporator c) Coil Evaporator d) Brine Evaporator	[] CO1	1
2	Apart from feed heating, what should a plant have to obtain a gain in thermal efficiency? a) Lubrication b) Differential heating c) Reheating cycles d) Regenerative cycles	[] CO1	1
3	Which of the following is also known as Coal used in power plant? a) coke b) soft coal c) charcoal d) steam coal	[] CO1	1
4	Which of these is sometimes neglected? a) Turbine work b) Pump work c) Condenser heat d) Boiler heat	[] CO1	1
5	Which of the following is a type of Gas Turbine Plant? a) Single Acting b) Double Acting c) Open d) None of the mentioned	[] CO2	1
6	Power is produced when the working fluid does some work on the? a) Shaft b) Fins c) Blades d) None of the mentioned	[] CO2	2
7	For the same maximum pressure and heat input, the most efficient cycle is? a) Brayton cycle b) Carnot cycle c) Rankine cycle d) Dual cycle	[] CO2	2
8	What happens to the availability in a combined cycle plant? a) decreases b) increases c) remains same d) cannot say	[] CO3	1
9	What is the decay product of tritium? a) Hydrogen b) Deuterium c) Lithium d) Helium	[] CO3	2
10	Which one is different for the neutral atoms of the isotopes of an element? a) Number of electrons b) Atomic weight c) Atomic number d) Number of Protons	[] CO3	2

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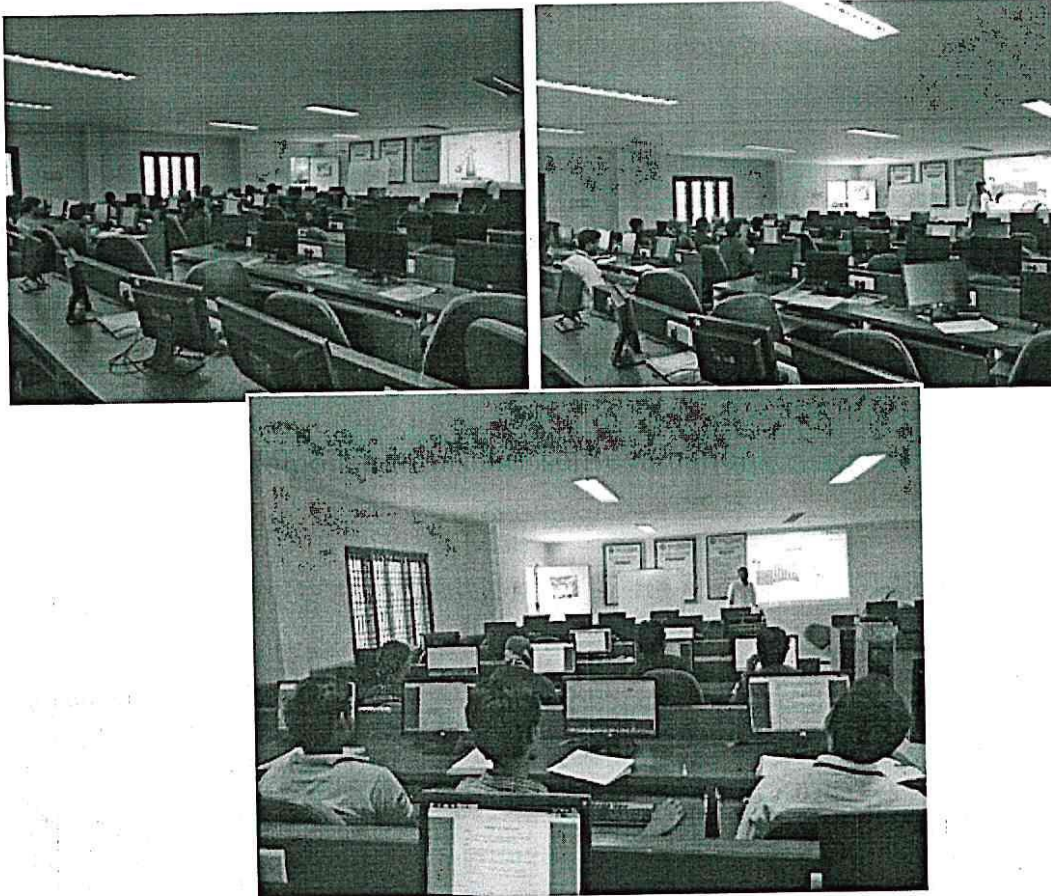
n Boilers x n Turbine x n Gen

11	The overall efficiency of a power plant is given by	CO1	1
12	Ideal 'Rankine Cycle' is a internally reversible <u>internally reversible</u> process.	CO1	1
13	Steam is generated in a boiler <u>superheated steam generator</u> at a pressure above the critical point.	CO1	2
14	The input to the deaerator is from a low <u>low</u> pressure feed water heater.	CO1	2
15	The compressor has to be started before starting the gas turbine <u>before starting the gas turbine</u>	CO2	1
16	The ratio of heat actually released by 1kg of fuel to heat that would be released by complete perfect combustion is called combustion efficiency <u>combustion efficiency</u>	CO2	2
17	In an electron beam, the average kinetic energy of an electron is given by $KE = \frac{1}{2}mv^2$ <u>$KE = \frac{1}{2}mv^2$</u>	CO2	2
18	In case of Sodium-mercury-steam cycle, which is the topping fluid Sodium <u>Sodium</u>	CO3	1
19	Nuclear fuel complex, Hyderabad is engaged in the job of manufacture of <u>manufacture of</u>	CO3	1
20	Heat is generated in a nuclear reactor (thermal) by fusion of <u>fusion of</u>	CO3	1

fusion of nuclear fuel
 $U-235$ by neutrons



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



2019-20

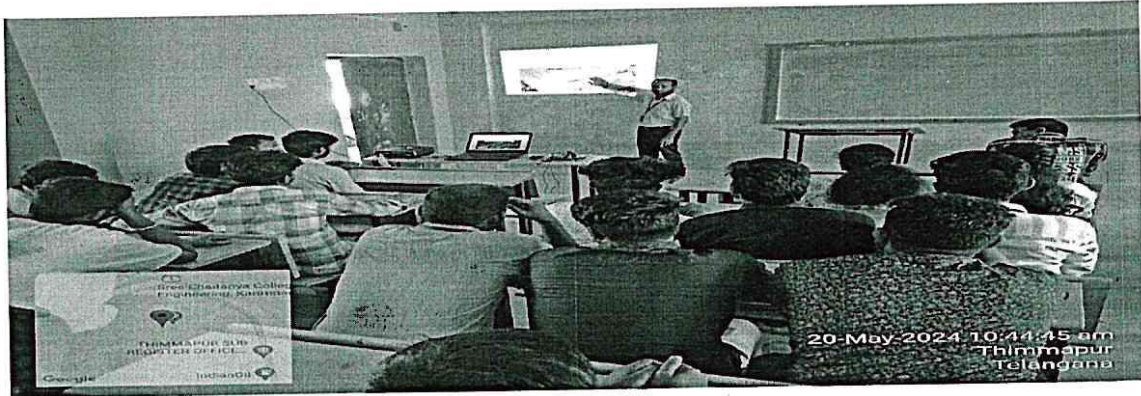
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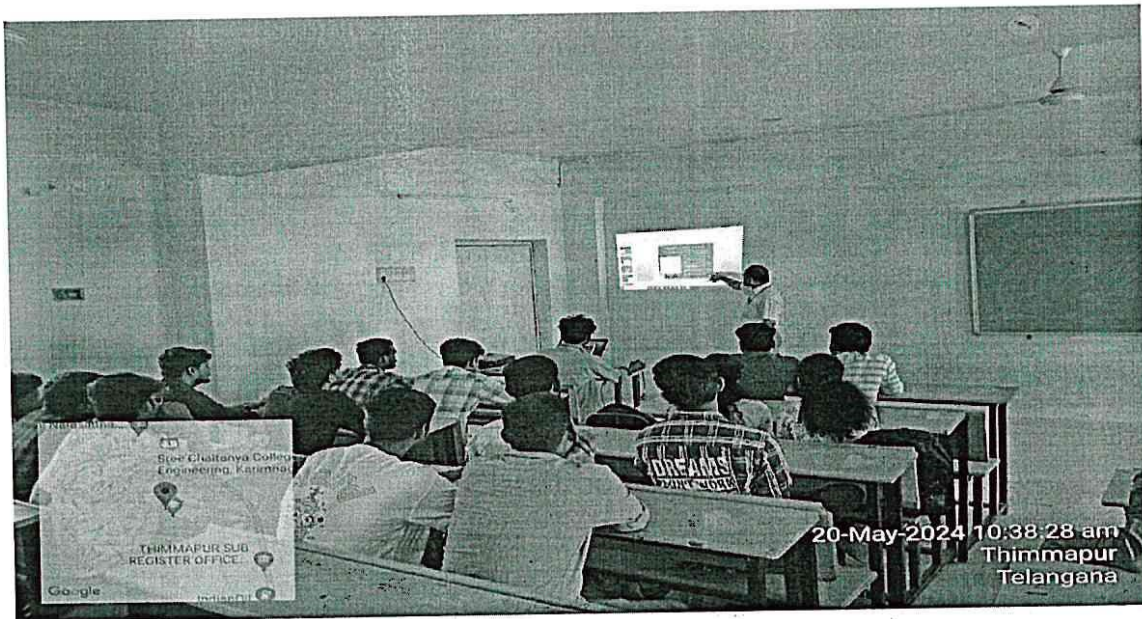


Teachers use ICT Enabled Tools for effective Teaching-Learning Process

1. E-class room with LCD Projection



Class Room No: 103



Class Room No:104

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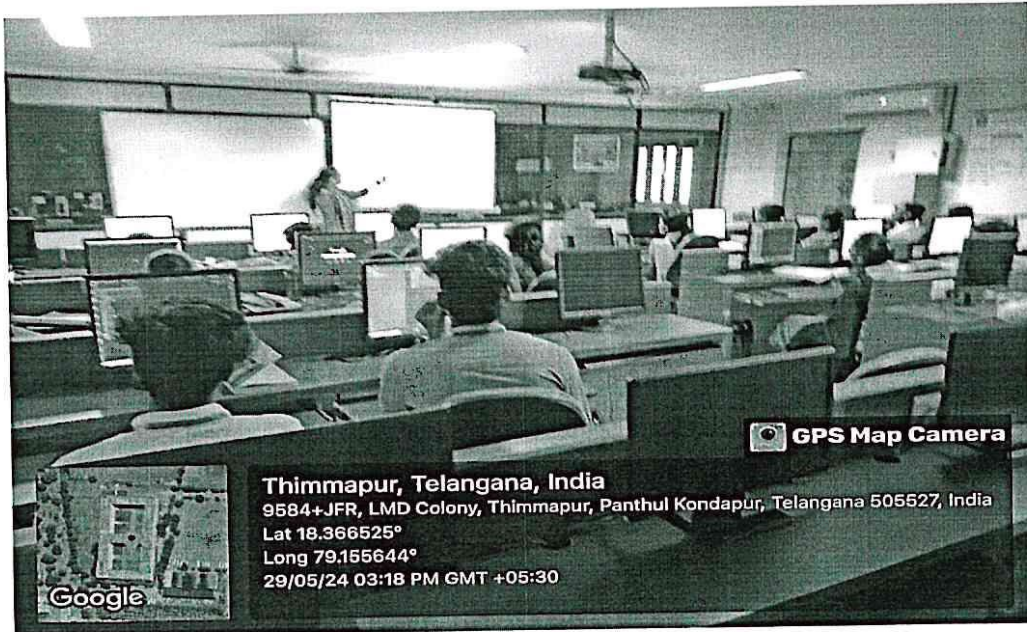


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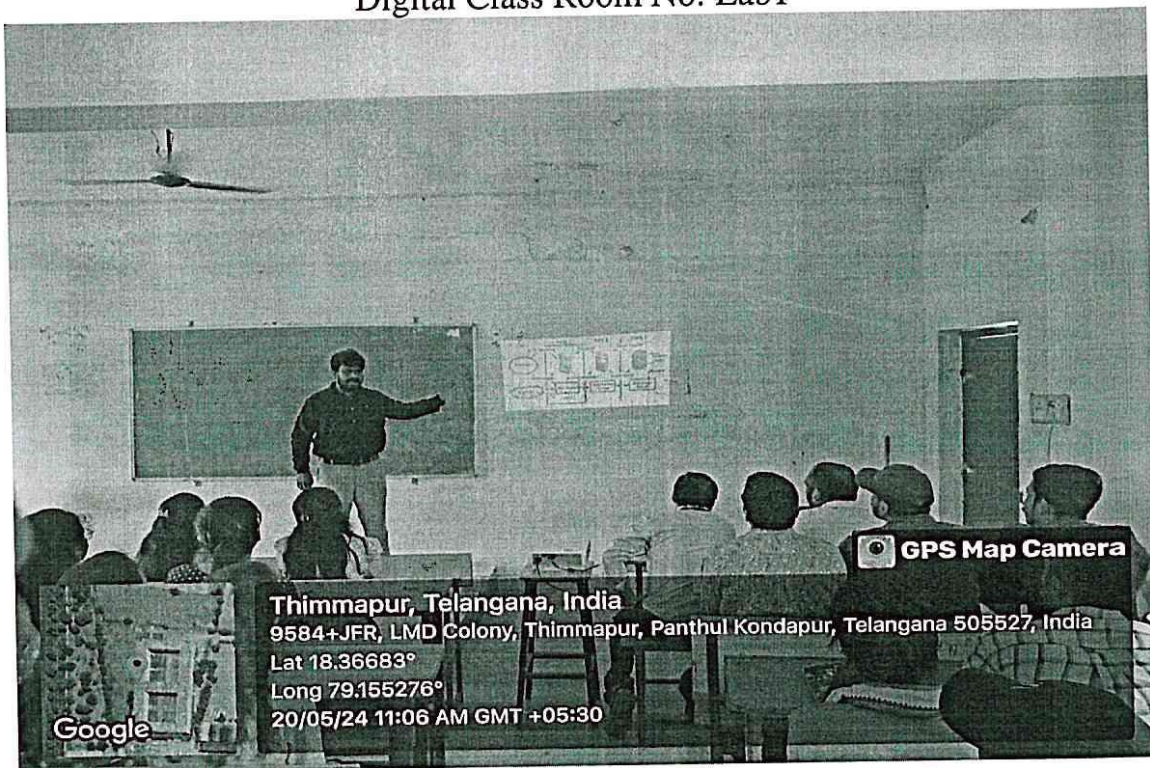
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Estd.1997



Digital Class Room No: Lab1



Class Room No: 205

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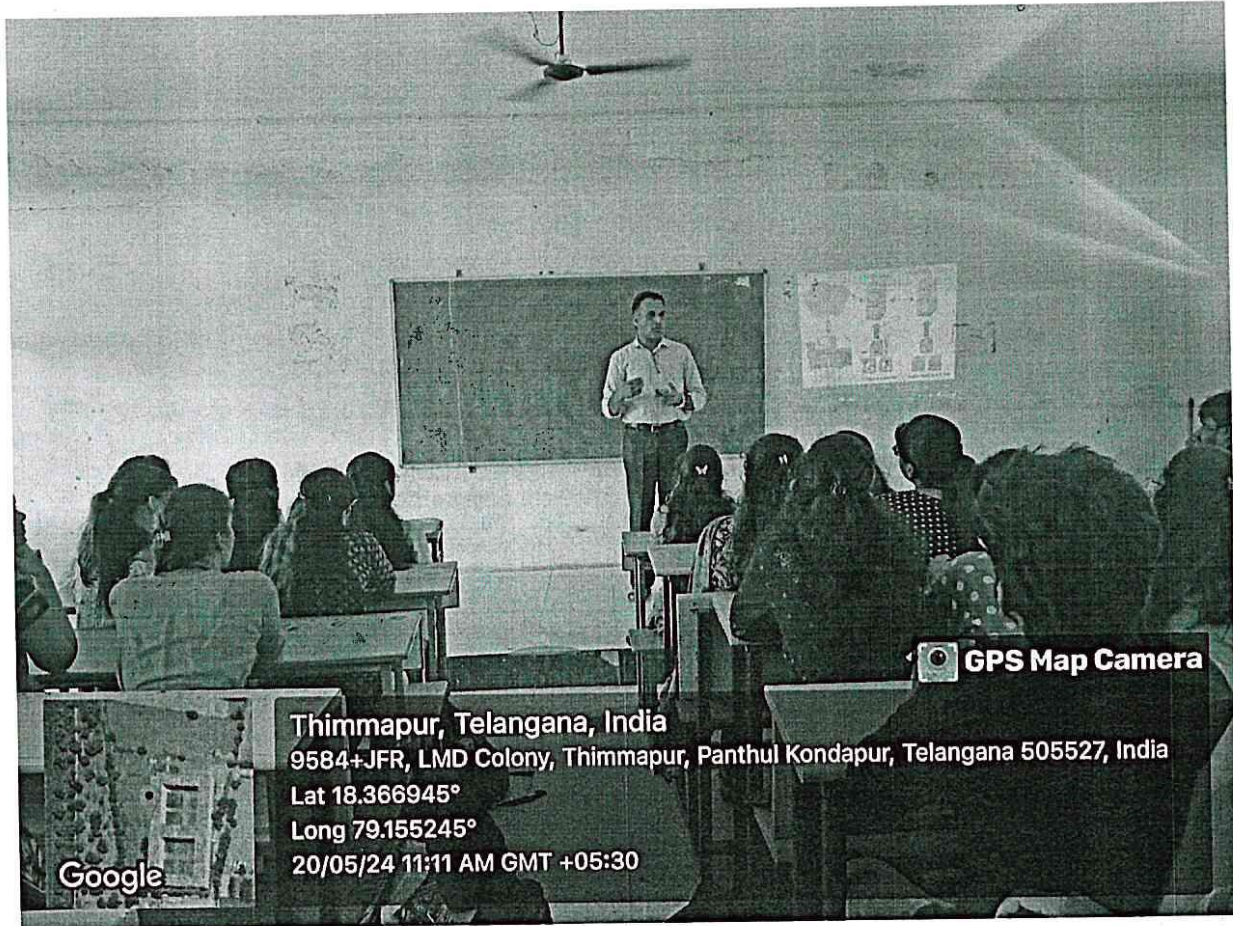
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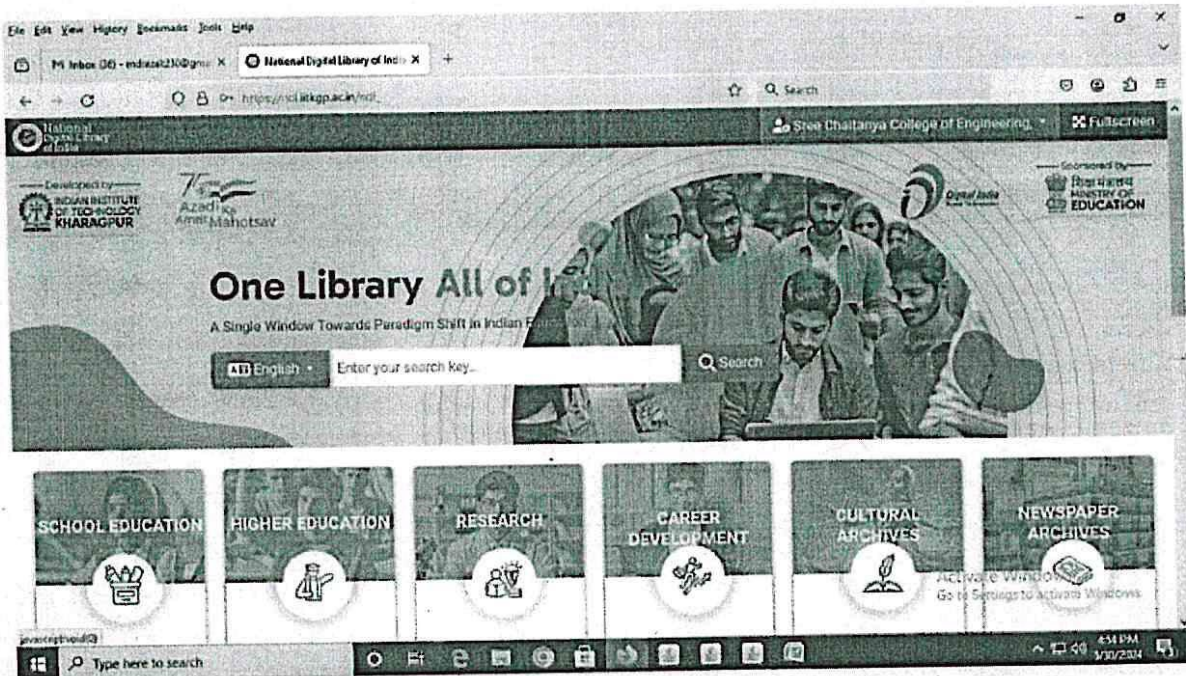
2. Digital Library

1. E- Journals:

Details of Membership	Details of subscription	Name of service subscribed	No of E-resources with full text Access	Whether Remote Access Provided (Yes/No)
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National Digital Library	Yes	National Digital Library	-	Yes

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S.no.	No. of e- Books available	E- resource Link
1	No. of E- Books-326	https://discovery.delnet.in/engg.html
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The screenshot shows a web browser window with a search bar at the top. Below the search bar, there are navigation tabs for various subjects: Engineering & allied operations, Maths, Physics, Chemistry, Botany, Zoology, Engineering, Literature, and History & Geography. The main content area displays search results for 'Transformation of Stresses'. On the left, there are filters for 'Access Restriction', 'Author', 'Education Level', 'Educational Use', 'Language', 'Learning Resource Type', 'Content Provider', and 'Content Type'. The search results list several video lectures with their titles, content providers, authors, and languages. For example, one result is 'Transformation of Stresses' by Chakraborty, J. with content provider 'Faculty Contribution'. Another result is 'Principles of Stresses' by Chakraborty, J. with content provider 'Faculty Contribution'. The bottom of the browser shows a taskbar with the system clock at 4:57 PM on 5/30/2024.

The screenshot shows the home page of the DELNET website. At the top, there is a navigation bar with links for 'Usage Statistics', 'DELNET YouTube Channel', 'Know your ILL-Book Status!', 'Your Account', 'Contact DELNET', and 'Log Out'. Below the navigation bar, there is a banner for 'HAPPY NEW YEAR 2024' with the text 'Wishing you a Year of Infinite Possibilities: Cheers to a Year of Learning and Growth!'. The main content area features a search bar with the text 'Search the DELNET Digital Library Resources'. Below the search bar, there are dropdown menus for 'All Fields', 'All Location', and 'Select Format', along with 'Find' and 'Advanced' buttons. The footer of the page includes 'Knowledge Gainer Portal' and 'VISION Portal'. The system clock at the bottom right shows 12:27 PM on 1/27/2024.

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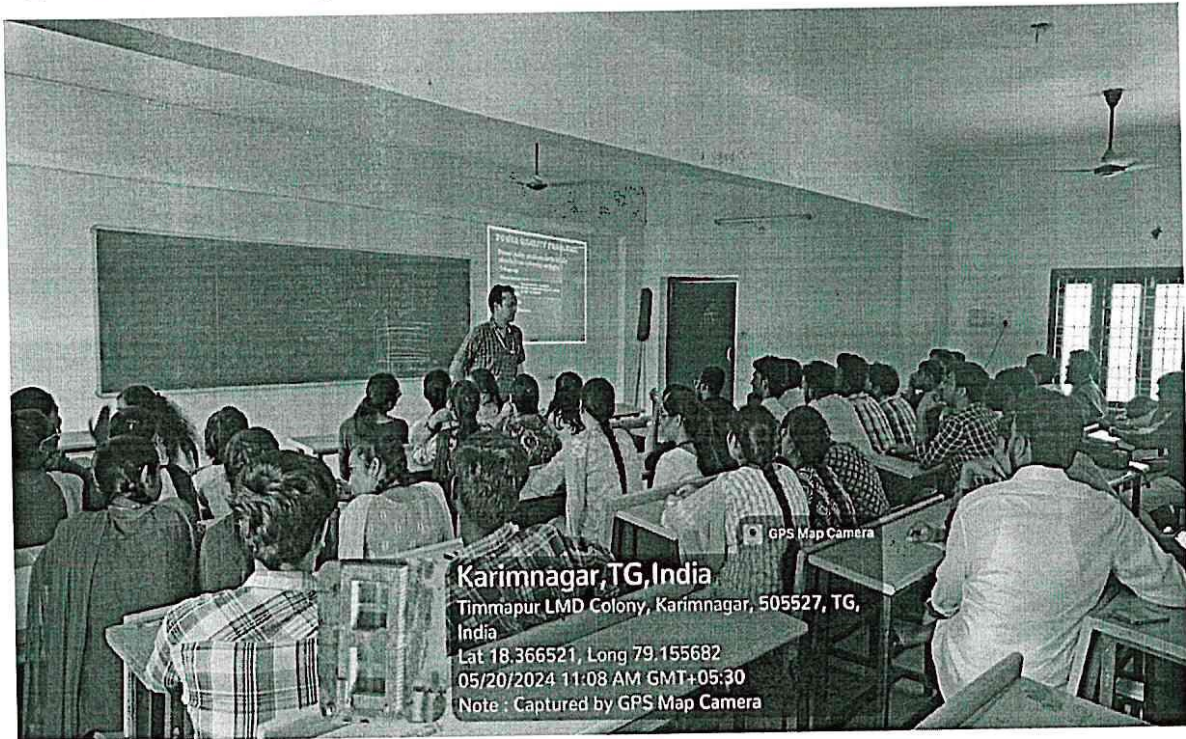
Engineering & Technology (911)	
Automobile Engineering (15)	Chemical Engineering & Technology (40)
Computer Science (160)	Construction & Infrastructure (39)
Electrical and Electronic Engineering EEE (51)	Electronics & Communication Engineering (41)
Electrical and Nuclear Engineering (20)	Hydraulic Engineering (43)
General & Civil Engineering (115)	Manufacturing (25)
Industrial Engineering (46)	Mechanical Engineering (40)
Materials (26)	Mining and Metallurgy (20)
Military Sciences (23)	Transportation (33)
Technology (General) (65)	

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Go to Settings to activate Windows

3. Blended Teaching

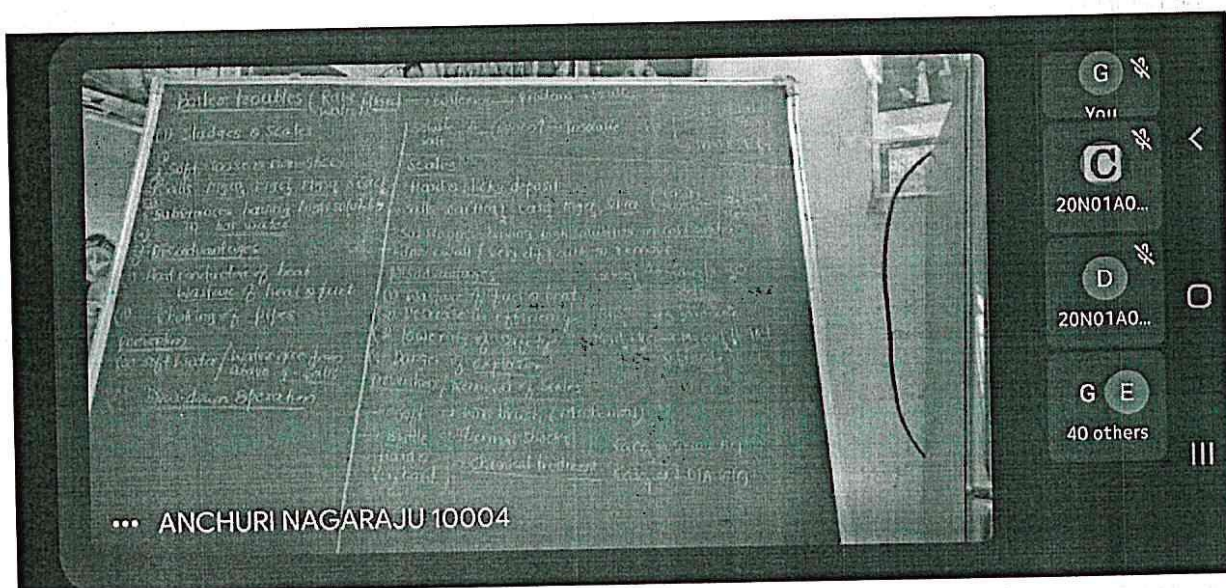
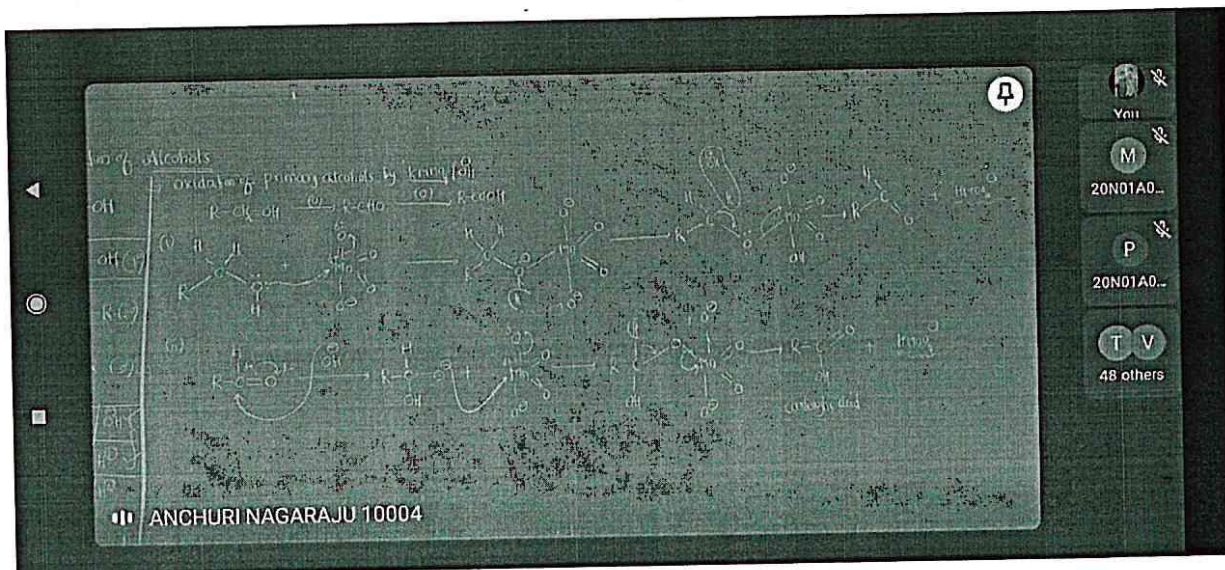


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4. Google Class room

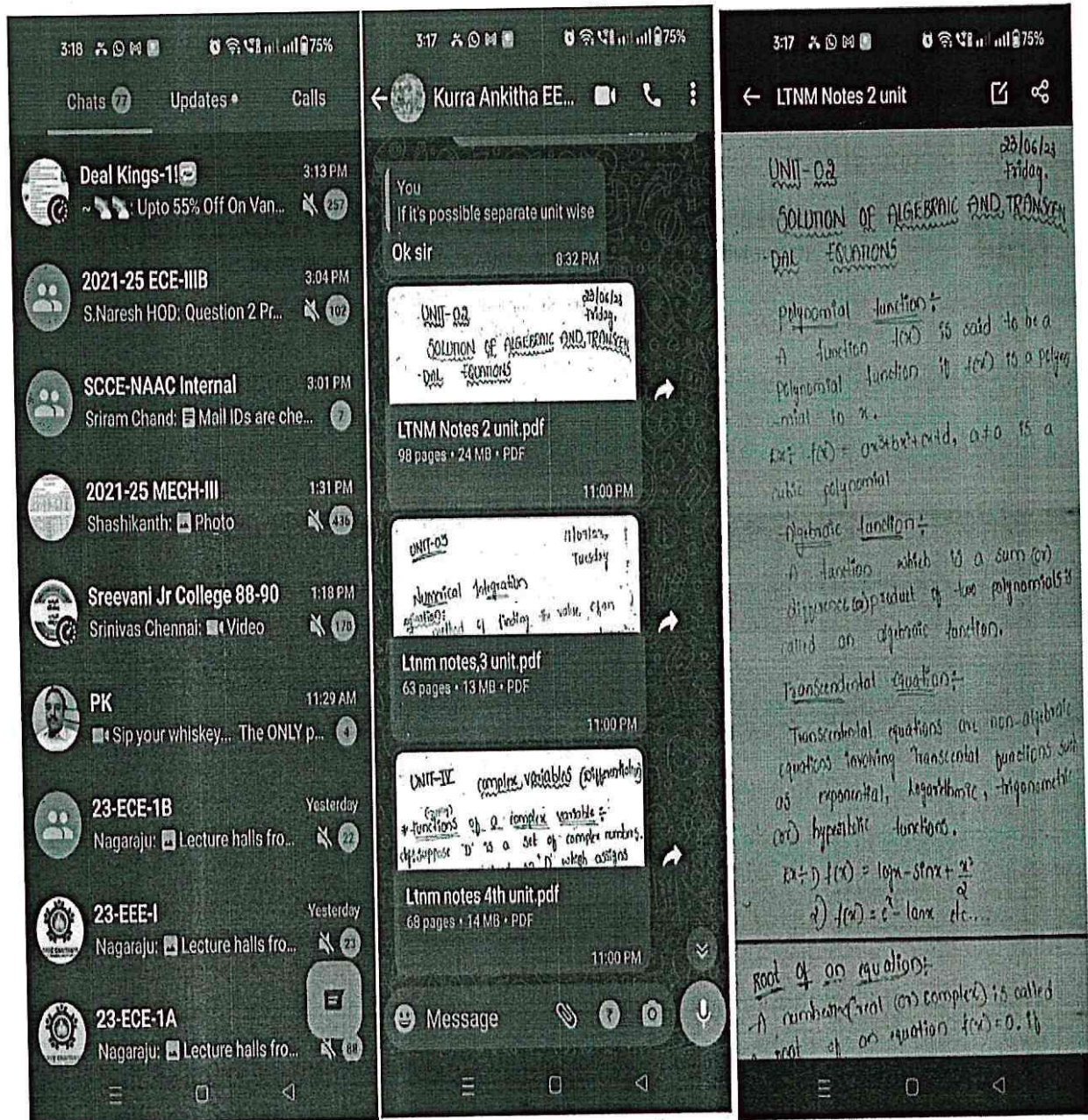


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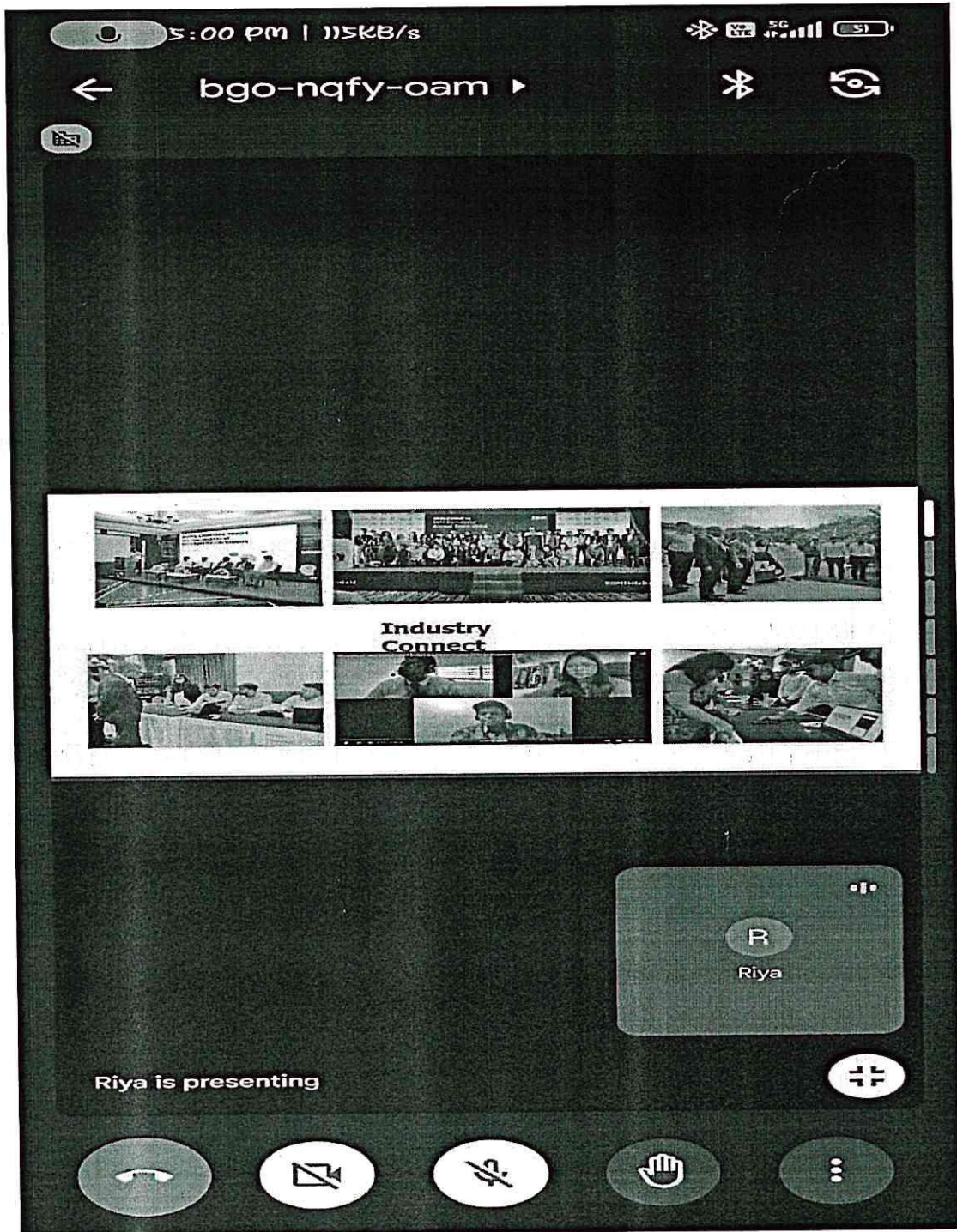


5. Sample Copy of Social Media in Education





6. Massive Open Online Courses



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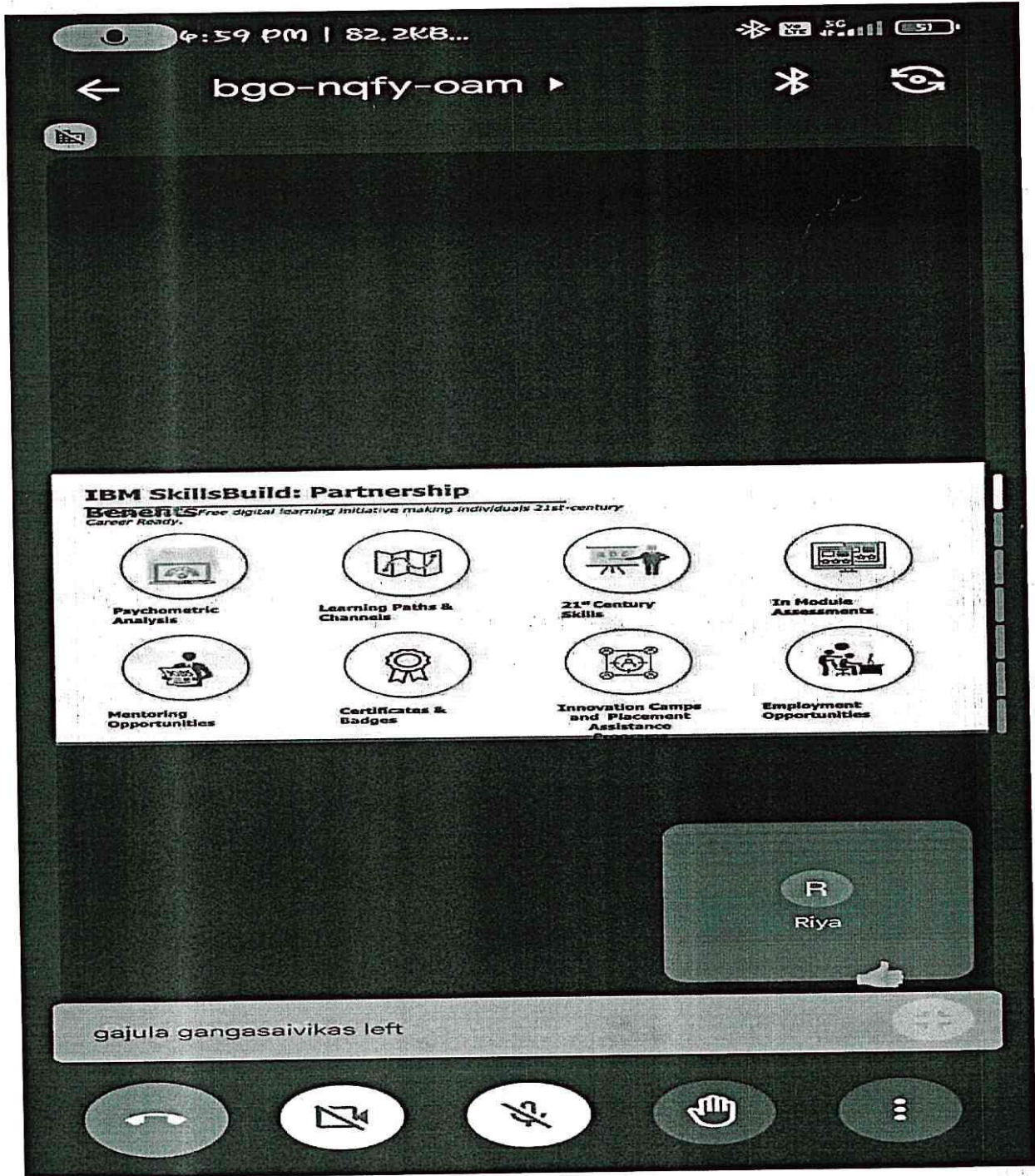
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7. Online Class by using Graphic Tablet

The screenshot shows a Google Meet interface. The main window displays a presentation slide with the following text:

Proportioning of control matrix (CS1) with only PPC, in a fixed w/c ratio of 0.35 and PCE based chemical admixture in the ratio from 0.8% to 1.0% by weight of cement, was carried out in various ratios of cement and sand the 1:1, 1:1.25, 1:1.5, 1:1.75 and 1:2. After several trials, the ratio of 1:1.5 found to achieve the targeted criteria of flowable mortar.

Combined effect of GGBFS and Meta-silica (MK) on cement mortar properties

S/N	W/C	PPC	PCE	Meta-silica	GGBFS	Flowability (mm)	Setting Time (min)	Compressive Strength (MPa)
1	0.35	100	0	0	0	100	120	10.0
2	0.35	100	0.8	0	0	100	120	10.5
3	0.35	100	1.0	0	0	100	120	11.0
4	0.35	100	0.8	5	0	100	120	11.5
5	0.35	100	1.0	5	0	100	120	12.0
6	0.35	100	0.8	5	5	100	120	12.5
7	0.35	100	1.0	5	5	100	120	13.0
8	0.35	100	0.8	5	10	100	120	13.5
9	0.35	100	1.0	5	10	100	120	14.0
10	0.35	100	0.8	5	15	100	120	14.5
11	0.35	100	1.0	5	15	100	120	15.0

Target for Characteristics:

- 1) Target Workability (Flow Diameter): 280-290 mm
- 2) Final setting Time: Max 2 hrs
- 3) Compressive strength: 30MPa @ 28 Days

The participant list on the right includes: CIVIL ENGINEERIN..., Pavan Kumar, CIVIL ENGINEERIN..., 19N05A0153 MAD..., Mukhi Shivanjali, M Sowmya, habi munny, DIVIJN GRACIA, VANGOUJI BHAVYA, Santosh Power, 20N05A0104 ANJ., and 17N01A0116 DAS..

The screenshot shows a handwritten engineering problem on a digital whiteboard. The text reads:

Determine the forces in the given Warren type cantilever truss using Method of joints.

The diagram shows a Warren truss with a horizontal top chord and a horizontal bottom chord. The top chord has points A, B, and C. The bottom chord has points F, E, and D. The vertical height of the truss is 8m. The horizontal distance between A and B is 4m, between B and C is 8m, and between F and E is 8m. The horizontal distance between E and D is 8m. The angle between the top chord and the diagonal members is 60 degrees. The forces are: 3kN at B, 3kN at C, and 2kN at D. A reaction force of 2kN is shown at F.

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