



NAAC Accredited

Vidarbha Bahu-uddeshiya Shikshan Sanstha's

**TULSIRAMJI GAIKWAD-PATIL**  
College of Engineering & Technology

— An Autonomous Institute —



## Department of Electronics & Communication Engineering

"Where IDEAS flow without RESISTANCE"



News Letter  
Session 2023-24



## About TGPCET

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## Vision & Mission(Dept.)

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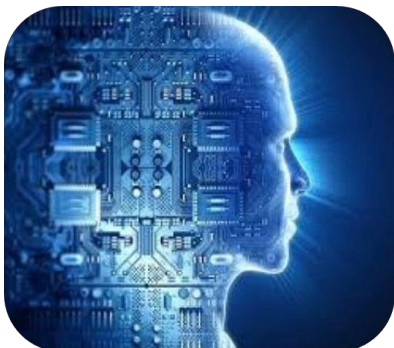
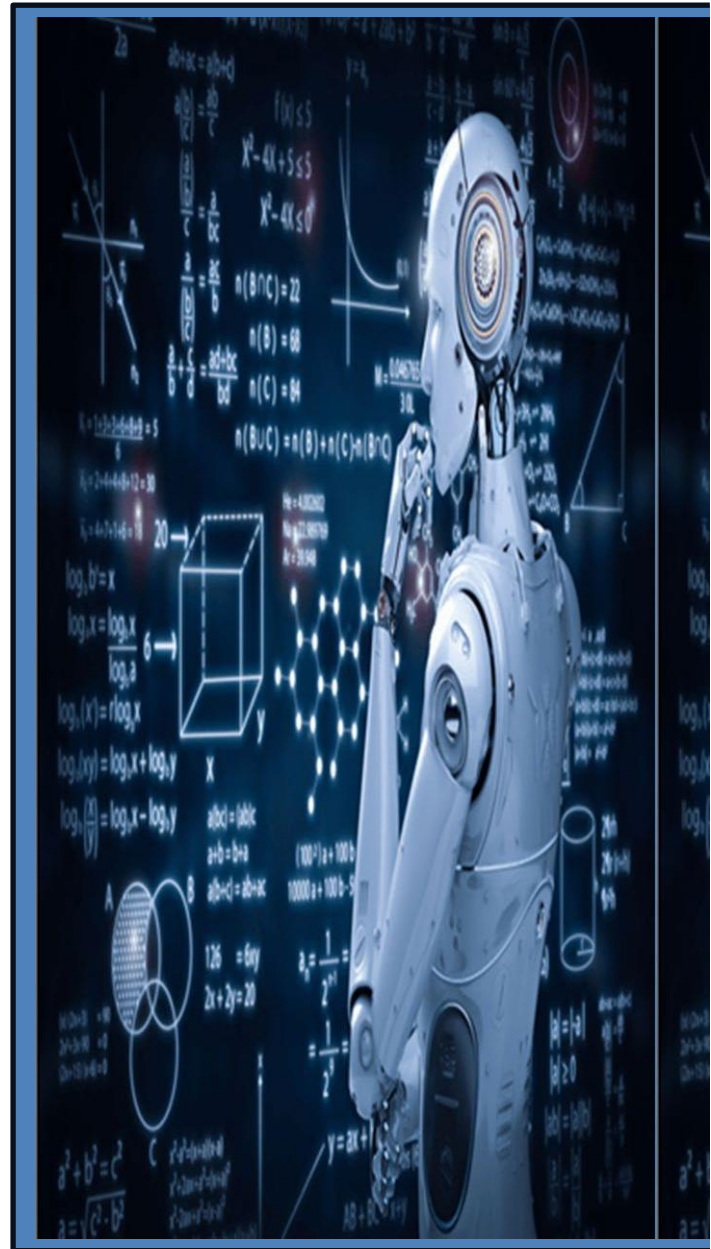
## Events

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## About TGPCET

Tulsiramji Gaikwad-Patil College of Engineering and Technology (TGPCET) was established in the year 2007 by Vidarbha Bahu-uddeshiya Shikshan Sanstha (VBSS), a registered society. It is a self-financed Private Engineering College, which is affiliated to Rashtrasant Tukadoji Maharaj Nagpur University (RTMNU) Nagpur and is approved by All India Council for Technical Education, New Delhi. Also, college is approved by Directorate of Technical Education (DTE), Mumbai, and Maharashtra State. The Institute is Accredited with A+ (3.32 CGPA) by NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL (NAAC) and NBA. An Autonomous Institute affiliated to RTM Nagpur University, Nagpur

# Vision

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- ✚ To emerge as a learning Center of Excellence in the National Ethos in domains of Science, Technology and Management.



# Mission

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- ✚ To strive for rearing standard and stature of the students by practicing high standards of professional ethics, transparency and accountability.
- ✚ To provide facilities and services to meet the challenges of Industry and Society.
- ✚ To facilitate socially responsive research, innovation and entrepreneurship.
- ✚ To ascertain holistic development of the students and staff members by inculcating knowledge and profession as work practices.



# Vision(Dept.)



- ✚ To impart quality higher education in the field of Electronics and Communication Engineering for catering the needs of society in coherence with current technology.

# Mission(Dept.)



- ✚ To impart quality technical education through effective teaching learning processes.
- ✚ To strengthen industry institute interaction to meet the challenges of Industry and Society.
- ✚ To provide research conducive environment to students for encouraging innovative skills.
- ✚ To ensure overall development of students and staff members by inculcating knowledge and professional ethics as a part of lifelong learning.

# HOD's Talk

**Dear Readers,**

I am glad to present to you the  
News Letter of ELECTRONICS &  
COMMUNICATION ENGINEERING DEPT.



**Dr Sanjay Asutkar**

In 2007-08, our Electronics and Communication Engineering department began with an intake of 60 students. Our faculty boasts rich experience and top-notch qualifications, using innovative teaching methodologies.

Our research and training revolve around cutting-edge labs like VSAT, Atmel,  $\mu$ P &  $\mu$ C, and SATCOM, while a specialized computing facility aids in executing project work and departmental design tasks.

Our infrastructure shines with a state-of-the-art Microwave & Radar Engineering Lab alongside well-equipped facilities covering Electronic Devices and Circuits, Communication Engineering, Digital Signal Processing, Microprocessor and Microcontroller, and Digital Electronics.

Our commitment extends beyond academics through our Industry Institute Partnership Cell (IIPC), developing strong connections with departments, agencies, and industries nationwide. We collaborate closely with industries, facilitating student placements and training, supporting R&D, sponsored projects, and hosting industrial experts for guest lectures. Our aim is to align our curriculum with industry demands and foster an environment of academic-industry synergy.

**Dr. Sanjay Asutkar**

## Editorial Committee



**Prof. Mayuri Harde**  
Faculty Coordinator



Mr. Pratik Patle  
Student Coordinator  
(4<sup>th</sup> Year)



Ms. Nayan Saktel  
Student Coordinator  
(4<sup>th</sup> Year)



Mr. Ashish Hajare  
Student Coordinator  
(3<sup>rd</sup> Year)



Ms. Gaytri Ghode  
Student Coordinator  
(2<sup>nd</sup> Year)

## PEO's:

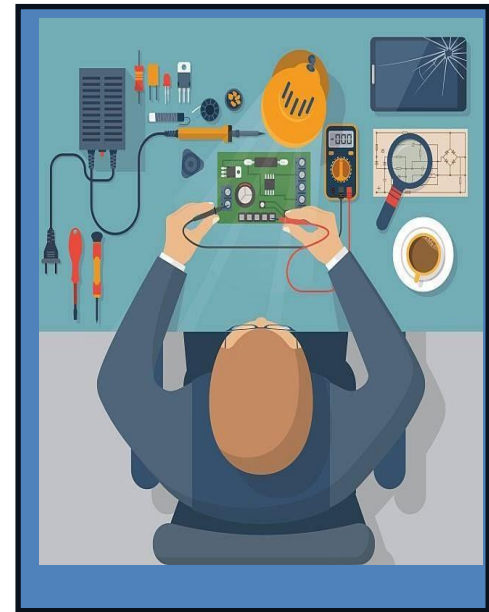
**PEO 1:** Students will apply basic fundamentals in mathematics, physics and electronic engineering discipline to build sound foundations.

**PEO 2:** Students will design, analyze and solve engineering problems to develop them as the professional leaders in the field of Electronics & communication Engineering.

**PEO 3:** Students will get exposure by providing technical training to execute the multidisciplinary projects as a team.

**PEO 4:** Students will channelize their knowledge through lifelong learning to assist in the development of the society.

**PEO 5:** Students will acquire work ethics and concern for society.





# Faculty Achievement



DTE Code: 4151 www.tgpcet.com  
**TULSIRAMJI GAIKWAD-PATIL**  
 College of Engineering & Technology  
 — AN AUTONOMOUS INSTITUTE —

GAIKWAD-PATIL GROUP OF INSTITUTIONS

for **NPTEL Online Certification**  
 Department of  
**Electronics & Communication Engineering**  
**Introduction to Internet of Things**  
**Elite**

**Successfully Completed**

Mr. Aditya Joshi 69 %  
 Mr. Sagar Manik 65 %  
 Mr. Prasanna Poljey 56 %  
 Mr. Mrunal Padole 54 %

9922966176 / 9763711372 NH-7, Mohgaon, Wardha Road, Nagpur - 441108

B.Tech | B.Arch | M.Tech | MBA | MCA | Diploma | D. Pharm | B. Pharm | B.Sc Nursing | Physiotherapy

भारतीय सूचना प्रौद्योगिकी संस्थान, नागपुर  
**Indian Institute of Information Technology, Nagpur**  
 An Institution of National Importance By An Act of Parliament

**CERTIFICATE OF PARTICIPATION**  
 This is to certify that

Mr/Ms Ashish Hajare  
 Has successfully completed a Three Day's Workshop on  
**Internet of Things (IoT) – A Prototype Designing using Embedded Development Boards**

Organized by  
 Department of Electronics and Communications Engineering  
 &  
 Department of Computer Science and Engineering

Under  
 Institution's Innovation Council (IIC)  
 On  
 06 to 11th May 2023

Dr. Mayuri Digalwar Dept of CSE, IITN  
 Dr. Rashmi Pandhare Dept of ECE, IITN  
 Dr. Aatish Daryapurkar Convener-IIC, IITN  
 Dr. Mayur Parate Associate Dean, IITN  
 Dr. O. G. Kakde Director, IITN

**NU INTELLIGENCE PRIVATE LIMITED**  
 Second Floor, "Planet Kidzee" Building, Plot No. 18, Renghe layout  
 Gajanan Mandir Road, Trimurti Nagar, Nagpur 440022

This Certificate is awarded to Mr/Ms Ashish Dinkar Hajare  
 of Tulsiramji Gaiikwad-Patil College of Engineering & Technology  
 He/She has completed Industrial Training/Workshop on Internet of Things  
 conducted from Date 21/7/23 to 23/7/23  
 with distinction, NU Intelligence Private Limited wishes good luck for all future endeavors.

Faculty/Instructor Director

**NIPAM**  
 Ministry of Commerce and Industry  
 Department for Promotion of Industry and Internal Trade  
 Office of the Controller General of Patents, Designs and Trade Marks

**CERTIFICATE**  
 This is to certify that **MR. ASHISH HAJARE** of **TULSIRAMJI GAIKWAD-PATIL COLLEGE OF ENGINEERING** has successfully participated in IP Awareness Training program under  
**NATIONAL INTELLECTUAL PROPERTY AWARENESS MISSION**  
 on **July 26, 2023**  
**Azadi Ka Amrit Mahotsav**  
 Organized by  
 Intellectual Property Office, India

Date: July 26, 2023

**Certificate of Participation**  
 This Certificate is presented to  
**ASHISH HAJARE**  
 for his/her active and valuable participation during the conduct of a Three Day Workshop On  
**INDUSTRIAL TRAILER, AUTOMOBIL AND RS-232**  
 Held on **20/07/2023**, Organized by Department of Electronics and Computer Technology,  
**KJ Somaiya Institute of Engineering and Information Technology, Nagpur, Maharashtra.**

Mr. Jyoti Joshi  
 Mr. Jyoti Joshi  
 Mr. Jyoti Joshi

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

This certificate is awarded to  
**SAGAR DAVID MANIK**  
 for successfully completing the course  
**Introduction to Internet of Things**  
 with a consolidated score of **65 %**  
 Online Assignments **24.13/25** Proctored Exam **40.63/75**  
 Total number of candidates certified in this course: **14770**

Jan-Apr 2023 (12 week course)

Prof. Debajit Chakraborty  
 Convener, NPTEL

Indian Institute of Technology Kharagpur

Roll No NPTEL23CS51514270941 To validate the certificate No. of credits recommended: 2 or 4

**GPS Map Camera**  
 Nagpur, Maharashtra, India  
 X267+3R2, wardha road, near gaiikwad patil college, Nagpur, Maharashtra  
 441108, India  
 Lat 20.960844°  
 Long 79.014601°  
 20/07/23 01:47 PM GMT +05:30

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**IC-DTSDG-22**  
 International Conference on Disruptive Technology for achieving Sustainable Development Goals

**Certificate**  
 This is to certify that Prof. / Mr. / Ms. Komal Maluware of Tulsiramji Gaiikwad-Patil College of Engg participated / presented a paper titled IoT Based GRID cut off system  
 in the 9<sup>th</sup> International Conference on Disruptive Technology for achieving Sustainable Development Goals.  
 His / Her participation in the Conference is appreciated.

Dr. Prasad C. Kulkarni  
 Prof. Prasad C. Kulkarni  
 Dr. Sagar D. Kulkarni  
 Prof. Sagar D. Kulkarni  
 Dr. Sagar D. Kulkarni  
 Prof. Sagar D. Kulkarni

**IRJET**  
 International Research Journal Of Modernization  
 in Engineering Technology and Science  
 (Open Access, Open Access, Voluntary International Journal)  
 e-ISSN: 2582-5208  
 Date: 20/04/2023

**Certificate of Participation**  
 This is to certify that author Nikhil Pawar with paper ID IRJET5040020141 has published a paper entitled "IoT Based Coal Mine Safety Monitoring and Alerting System" in International Research Journal Of Modernization in Engineering Technology And Science (IRJET), Volume 05, Issue 04, April 2023

A. Dinkar  
 Editor in Chief

We Wish For Your Better Future  
 www.irjet.com

Google ISSU



# Student Achievement

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**CONGRATULATIONS!**

**Mr. Prasanna Pojgey**  
**Second Position**

**B. Tech (2<sup>nd</sup> Year) Electronics & Communication Engineering**

Represented Maharashtra State and secured  
**Second Position at 8<sup>th</sup> National Championship organized by National Shotokan Karate Association of India**  
 27<sup>th</sup> & 28<sup>th</sup> May 2023 (Goa)

**We are very proud of you!**

B.Tech | B.Arch | M.Tech | MBA | MCA | Diploma | D. Pharm | B. Pharm | B.Sc Nursing | Physiotherapy



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**LOGO LADDER 2K23**  
**CERTIFICATE**  
**OF ACHIEVEMENT**

This is to certify that Mr./Ms. **NIKHIL TEMBHURNE** of Department **ECE** has secured **First** position in "LOGO LADDER" 2K23 Competition held on 22<sup>nd</sup> May 2023, organized by Students' Council Cell, TGPCET. His/her performance in the event is highly appreciated.

Dr. Bhavna Deshpande  
 Dean Students' Council

Dr. Suresh Salunkar  
 Director Academics

Prof. Prigati Patil  
 Vice-Principal

12/21/23, 3:15 PM SWAYAM JULY SEMESTER 2023

Ministry of Education  
 Government of India

NATIONAL TESTING AGENCY  
 Association of Universities

**Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM) JANUARY (8 COURSES) JULY SEMESTER 2023**  
**Score Card for Final Proctored Exam**

Roll Number :	MR17010351	Application Number:	2315110016524
Candidate's Name :	Ekramul Serajul Haque	Date of Birth :	29-11-1986
Category :	GENERAL	Nationality :	Indian
Gender :	Male	Person with Disability (PwD) :	No

**SCORE DETAILS**

Course Code	nou23-b05		
Course Name	Biomedical Instrumentation & Sensors		
Mode of Exam	CBT		

**IRJMEETS**  
**International Research Journal Of Modernization in Engineering Technology and Science**  
 (Peer-Reviewed, Open Access, Fully Refereed International Journal)  
 e-ISSN: 2582-5208  
 Ref: IRJMEETS/Certificate/Volume 05/Issue 04/50490201841 Date: 30/04/2023

**Certificate of Publication**

This is to certify that author "**Mohnish Sunkinwar**" with paper ID "**IRJMEETS50400205848**" has published a paper entitled "**INTERNET OF THING (IOT) BASED GRID CUTOFF SYSTEM**" in **International Research Journal Of Modernization In Engineering Technology And Science (IRJMEETS)**, Volume 05, Issue 04, April 2023.

A. Dandekar  
 Editor in Chief

**IRJMEETS**  
 Impact Factor 7.868

We Wish For Your Better Future  
 www.irjmeets.com

Google | issuu | Academia.edu | doi | Crossref

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

This certificate is awarded to **SHUBHAM SOPAN NIKHADE** for successfully completing the course **Digital Circuits**

with a consolidated score of **60** %

Online Assignments	24.13/25	Proctored Exam	36/75
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Total number of candidates certified in this course: 2526

Jul-Oct 2023  
 (12 week course)

Indian Institute of Technology Kharagpur

Prof. Haimanti Banerji  
 Coordinator, NPTEL  
 IIT Manager

swayam

Roll No: NPTEL23EE1155542801496 To verify the certificate No. of credits recommended: 3 or 4

# Industrial Visit

## Visit at MAHAMETRO BHAWAN

Department of Electronics & Communications Engineering has arranged Industrial visit for Fourth Sem & Seventh Semester students to MAHA METRO BHAWAN, Nagpur under the \*IIPC, ISTE and IE(I)\*, Students Chapter on 07.07.2023

### Outcome of the visit:

1. Students were able to understand the operation of MAHA METRO RAIL using Different unit.
2. Summarize the various types of operational units and Automation
3. Understand the concept of operation automatic traffic control system

Program objective achieved PO1, PO6, PO7, PO8, PO9, PO10, PO12

Visit was well coordinated by Mr.Sandeep Thakre (Course Co-Ordinator)

Sharing some glimpses of the visit.



### 'टीजीपीसीईटी'च्या विद्यार्थ्यांची मेट्रो भवनला भेट

#### लोकसत्ता प्रतिनिधी

**नागपूर :** तुळशीरामजी गावकवाड पाटील अभियांत्रिकी आणि तंत्रज्ञान महाविद्यालयाच्या इलेक्ट्रॉनिक्स आणि कम्युनिकेशन विभागाच्या विद्यार्थ्यांनी मेट्रो भवन, व्हीआयपी रोड नागपूरला भेट दिली. महामेट्रोचे जनसंपर्क व्यवस्थापक अखिलेश हळवे आणि रश्मी मदनकर यांनी

मेट्रो भवनच्या पायाभूत सुविधा आणि तांत्रिक कार्यक्षमतेबाबत सविस्तर माहिती दिली. या औद्योगिक भेटाला ४७ विद्यार्थी उपस्थित होते. कर्मचाऱ्यांनी डबल डेकर ब्रिज, मनीषनगर अंडरपास, फोर लेव्हल ट्रान्सपोर्टेशन कॉरिडोर आणि मेट्रो स्टेशनची ठिकाणे आणि पुरवलेल्या सुविधांबद्दल चर्चा केली. महामेट्रो हा पहिला हरित मेट्रो

प्रकल्प आहे. महामेट्रोचा आगामी टप्पा दुसरा प्रकल्प प्रक्रियेत आहे. कर्मचाऱ्यांनी विद्यार्थ्यांना अर्रिज लाईन आणि ब्लू लाईन आणि त्यांच्या स्थानकांची माहिती, प्रत्येक स्थानकावर उपलब्ध असलेल्या सुविधा याविषयी समजावून सांगितले. ही औद्योगिक भेट प्रा. रोहिणी पोचो आणि प्रा. संदीप ठाकरे यांच्या मार्गदर्शनाखाली आयोजित करण्यात आली होती.



## Maharashtra Remote Sensing Application Center (MRSAC) Visit:

Department of Electronics & Communications Engineering arranged Industrial visit for Third Year & Second Year students to Maharashtra Remote Sensing Application Center (MRSAC) Near Ambazari, Nagpur under the ISTE, IE(I) & IETE, Students Chapter on 27.09.2023

### Outcome of the visit:

1. Students were able to understand the process of Remote Sensing.
2. Summarize the method of Image Processing & Satellite Imaging.
3. Understand the concept of Space Technology.
4. Various Application of Remote Sensing.

Program objective achieved PO1, PO6, PO7, PO8, PO9, PO10, PO12

Visit was well Co-ordinated by Mr. Sandeep Thakre, Ms. Pallavi Rokade (Course Co-Ordinator)



# Industrial Visit

## •Visit to HORIBA INDIA PVT. LTD.

The Department of Electronics and Communication organized a riveting Industrial Visit at HORIBA India Pvt. Ltd. in MIDC, Butibori Industrial Area, Maharashtra on 01 December 2023.

**Key Insights:** Mr. Aniket Khandaitkar and his team enlightened our students about HORIBA's history, vision, mission, and operations.

In-depth insights in to

1. Innovative hematology solutions
2. Manufacturing processes
3. Hemostasis analyzers
4. Blood testing equipment and
5. Automation in Biomedical field left our students awe-inspire Biomedical Marvels: Witnessed firsthand the intricate processes behind the creation of various Biomedical products.

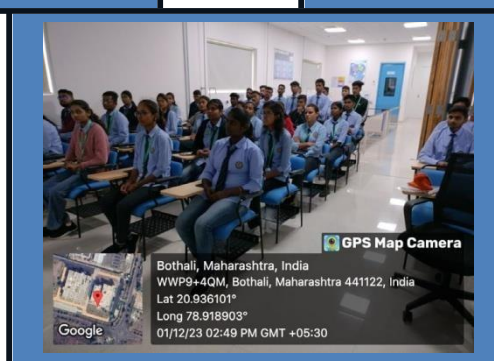
Coordinated By:

Prof. Rohini Pocchi and Prof. Sandeep Thakre

### Program Outcomes Achieved:

PO1, PO7, PO6, PO8, PO9, PO10, PO12.

Glimpses of the Day:



# Expert Lecture

## "Expert Lecture on PLC & SCADA"

Date: 10.10.23

Department of Electronics & Communication Engineering has organized Expert Lecture on "Programmable Logic Controller (PLC) & Supervisory Control & Data Acquisition" by Mr. Shyam Chandurkar Sr. Engineer Mahagenco Koradi Thermal Power Station, Nagpur for III & V sem students of ECE Department.

He has discussed about

1. Control System,
2. Data Acquisition,
3. Advance Monitoring System.
4. Basic Programming for PLC.

Total 67 students have participated in expert lecture. Today's lecture helped in mapping program

Outcomes of lecture PO1, PO2, PO3, PO4, PO5, PO6, PO12 sharing

some glimpses





# Events

## STUDENTFORUM“INVICTUS”RE-INSTALLATION-2023

Under Forum Reinstallation 'INVICTUS'

Date: 07.11.23

Department of Electronics & Communication Engineering has organized Expert Lecture on \* “Recent Trends in Cloud Computing” by Mr. Shailesh Karare Technology Lead, Infosys Nagpur for III, V & VII Sem students of ECE Department\*also Felicitated the RTMNU and Autonomous Examination Toppers

He has discussed about

1. Basics of Cloud Data.
2. Benefits of Cloud Computing.
3. Cloud Models (Deployment & Service).
4. Cloud Architecture.
5. Job opportunities in Cloud Computing.

Total 80 students have participated in expert lecture. Today's lecture helped in mapping program

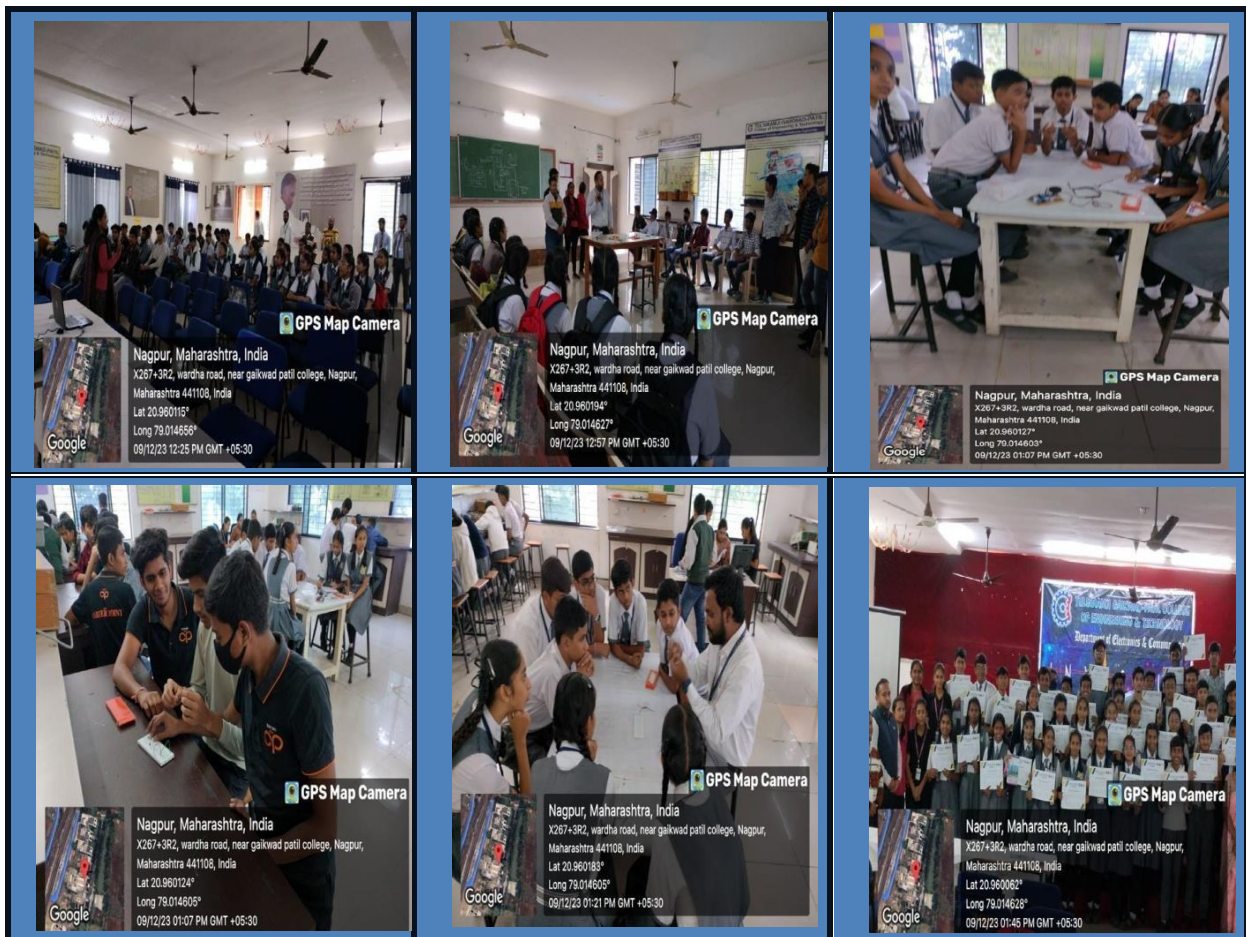
Outcomes of Lecture PO1, PO2, PO3, PO4, PO5, PO6, PO12





## MANTHAN WORKSHOP:

The **MANTHAN** workshop for Junior-grade science students focused on micro projects, particularly water level indicators. Participants engaged in hands-on activities, learning the intricacies of water level measurement and project design. The workshop fostered creativity and problem-solving skills, enabling students to conceptualize, build, and present their micro projects. The resized water level indicators showcased innovative designs and practical applications. This initiative not only enriched students' scientific understanding but also encouraged a culture of experimentation and collaboration. The **MANTHAN** workshop successfully empowered 12th-grade students to apply theoretical knowledge to real-world scenarios, preparing them for future scientific endeavors.



# Placement

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**Congratulations!**  
On the Successful Placement in  
**CapitalVia®**  
Investment Advisor



**PRATIK PATLE**  
ECE

**HARSHAL BAWANE**  
ECE

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**Congratulations!**  
On the Successful Placement in  
**ESAF**  
ESAF SMALL FINANCE BANK  
Joy of Banking



**Ms. Nayan Saktel**  
Electronics & Communication Engineering

**Mr. Ritik Deotare**  
Electronics & Communication Engineering

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**Congratulations!**  
On receiving Campus Placement  
**2023-2024 Batch**



**Ms. Shyamal Patil**  
Business Development Associate  
Electronics & Communication Engineering  
IntelliPaat Software Solutions Pvt Ltd, Bangalore  
7.25 LPA



B.Tech | B.Arch | M.Tech | MBA | MCA | Polytechnic | BAMS | D. Pharm | B. Pharm | B.Sc Nursing | Physiotherapy

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**Congratulations!**

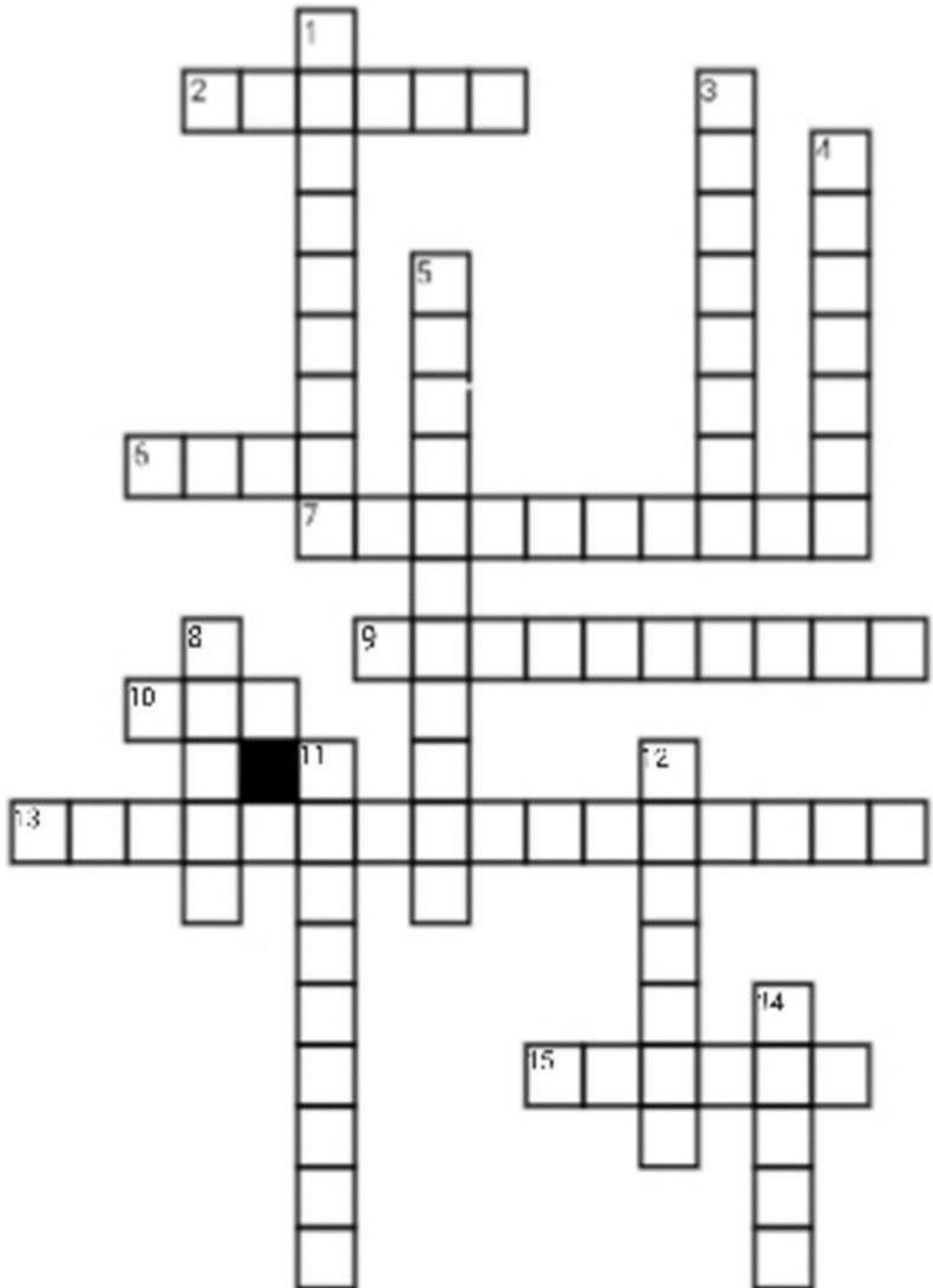


 **GPS Map Camera**

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GROUP OF INSTITUTIONS

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# Games





# Games

## **Down:**

- 1) Electrical element which stores energy
- 3) A method of charging in which two Bodies are charged by rubbing
- 4) Another term for potential difference
- 5) Can convert A Cat low voltage to high voltage and vice versa
- 8) SI unit of self-inductance
- 11) Converts AC to DC
- 12) An elemental semiconductor
- 14) Converts electrical energy into mechanical energy

---

## **Across:**

- 2) The fundamental quantity of electricity
- 6) Electric field inside a uniformly charged thin spherical shell
- 7) opposes flow of current
- 9) materials which allow current of low easily
- 10) semiconductor element which emits light when current flow through it
- 13) type of electricity which uses water for power generation
- 14) appositively charged particle

**Answers:-**

**DOWN**

1) CAPACITOR

3) FRICTION

4) VOLTAGE

5) TRANSFORMER

8) HENRY

11) RECTIFIER

12) SILICON

14) MOTOR

**ACROSS**

2) CHARGE

6) ZERO

7) RESISTANCE

9) CONDUCTORS

10) LED

13) HYDROELECTRICITY

15) PROTON





**Nikhil Tembhurne**  
4<sup>th</sup> Sem



**Nikhil Tembhurne**  
4<sup>th</sup> Sem



**Riya Chauvhan**  
4<sup>th</sup> Sem



**Tejas Rokade**  
4<sup>th</sup> Sem



**Tejas Rokade**  
4<sup>th</sup> Sem



# **Department of Electronics & Communication Engineering**