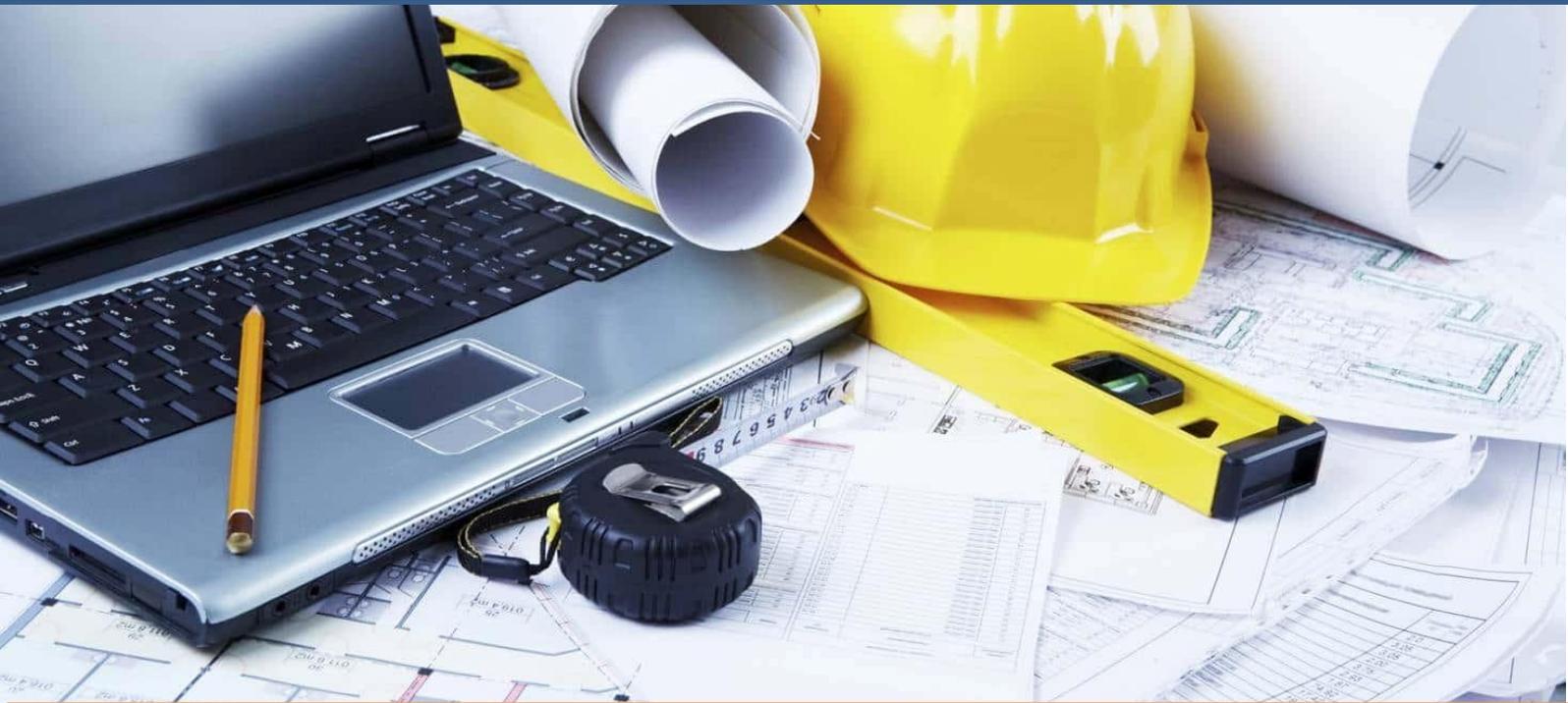




LOKNETE DR. BALASAHEB VIKHE PATIL  
(PADMA BHUSHAN AWARDEE)  
PRAVARA RURAL EDUCATION SOCIETY'S  
**PADMASHRI DR.VITTHALRAO VIKHE PATIL INSTITUTE  
OF TECHNOLOGY & ENGINEERING (POLYTECHNIC)**

LONI

## Department of Civil Engineering Newsletter



# “CIVIL TECH” 2020-21

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# ABOUT DEPARTMENT

The department of Civil Engineering was established in the year 1981 with an intake of 60 students for diploma in CIVIL ENGINEERING program under the Maharashtra State Board of Technical Education. The program has been rewarded EXCELLENT grade by the External Academic Monitoring Committee of MSBTE, Mumbai. It has spacious laboratories, highly qualified and dedicated staff and above all highly motivated students.

## THE PRINCIPAL'S MESSAGE



*I am profoundly happy that the Department of Civil Engineering release the “**CIVIL TECH**” Newsletter for academic year 2020-21 enumerating the various activities and achievements of our faculty and students. A Newsletter is like a mirror which reflects the clear picture of all activities undertaken by a department.*

*The department offers excellent academic environment with a team of finest young and dynamic faculty members to inspire the students to develop their technical skills and overall personality. I trust that we face the challenges with full steam and vigour so that our students, the engineers of tomorrow, have a strong presence in the world of Civil engineering.*

*I proudly say that this Newsletter gives the motivations to all the faculty and students. I appreciate the Department of Civil Engineering for releasing “**CIVIL TECH**” Newsletter of Department of Civil Engineering for academic year 2020-21.*

**Dr. V. R. Rathi**

Principal,

P. Dr. Vitthalrao Vikhe Patil Institute of Technology & Engineering (Polytechnic), Loni

## MESSAGE FROM H.O.D

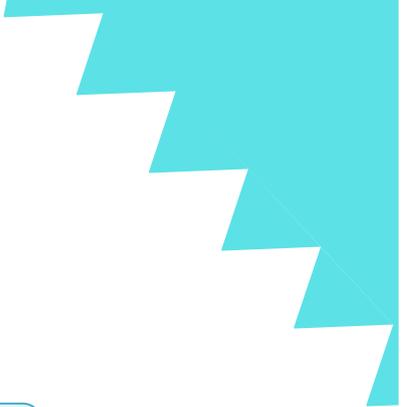


*It gives me an immense pleasure to release the “CIVIL TECH” Newsletter of Department of Civil Engineering for academic year 2020-21 enumerating the various activities and achievements of our faculty and students. It is a great feeling to start the newsletter of a department which has such a glorious track record and which is a part of a very reputed institution. The main aim of starting this newsletter is to appreciate the efforts of our innate students and our vastly experienced faculty. Different activities like paper presentations, expert lectures, industrial visits and many more take place in the department. This newsletter highlights all the important happenings taking place in the department. Hearty thanks to our Principal for his valuable encouragement and wholehearted co-operation.*

*I, as a head of the department would like to thank all the faculty members, non-teaching staffs and students of Civil Engineering for their continuous support and sincere efforts for the betterment and development of department.*

*On this occasion, I congratulate all the team members of the editorial board for bringing up this issue in a better shape.*

**Mr. S. K. Gorde**  
**H.O.D.,**  
**Dept. of Civil Engineering**



## VISION

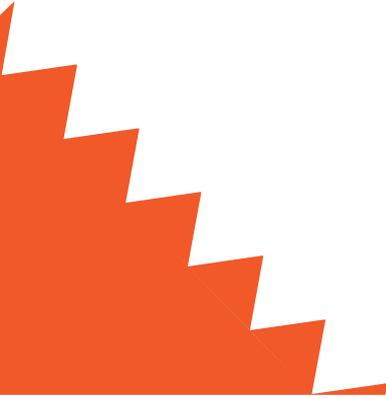
To develop the rural students as skilled civil engineer to build our nation.

## MISION

**M1:** To develop technical skills through trainings.

**M2:** To provide civil engineering skills to students through teaching and learning process.

**M3:** To enhance career opportunities for students through higher education, industry and entrepreneurship.



# Program Educational Objectives (PEOs)

**PEO1:** To prepare graduates to adopt technical skills to face real life problems in civil engineering field.

**PEO2:** To understand latest civil engineering technologies that evolve construction growth through teaching learning process.

**PEO3:** To prepare career oriented students by providing opportunities to work in construction field & higher education.

## Program Specific Objectives (PSOs)

**PSO1:** Implement concepts of Fundamental Engineering & Construction Materials to solve Civil Engineering problems.

**PSO2:** Planning, identifying and solving the construction site problems.

**PSO3:** Analyze, design structural systems to achieve sustainable development in Civil Engineering work.

# **Staff activities: (Webinar/Workshop/FDP/STT/ Symposium)**

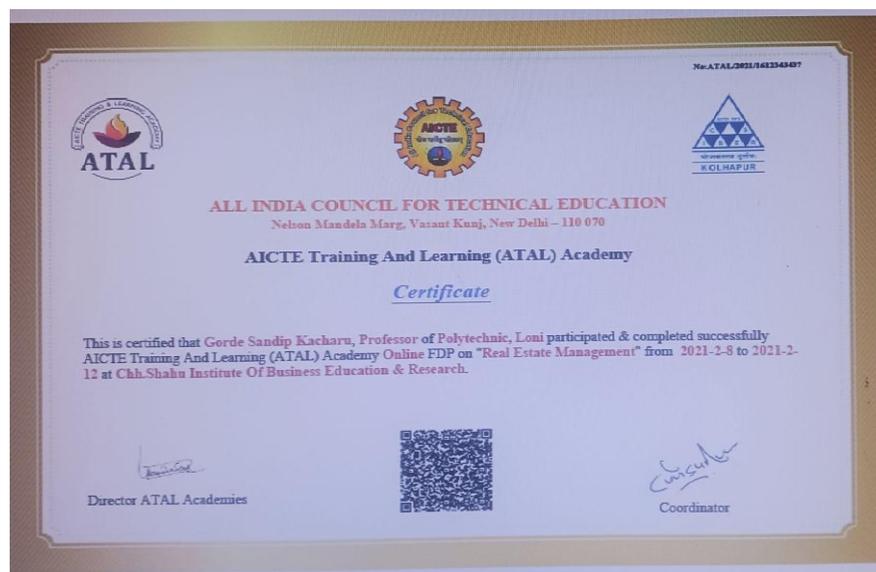
1. 07-09/01/2021, *Online FDP on Recent Trends in Civil Engineering (RTCE 2021) attended by faculty member:*

A faculty member Mr. S. K. Gorde has successfully completed Three Days Online Faculty Development Programme on “Recent Trends in Civil Engineering (RTCE 2021)” from 7<sup>th</sup> to 9<sup>th</sup> January 2021 organized by MGM’s Polytechnic, Aurangabad.



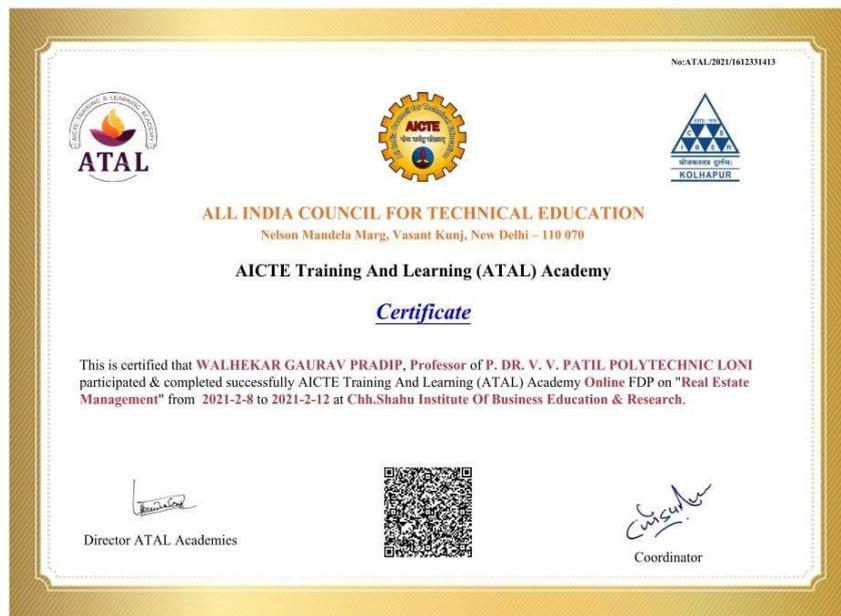
2. 08-12/02/2021, *Online FDP on Real Estate Management attended by faculty member:*

A faculty member Mr. S. K. Gorde has participated & completed successfully AICTE Training and Learning Academy (ATAL) online FDP on “Real Estate Management” from 08.02.2021 to 12.02.2021 at Chh. Shahu Institute of Business Education & Research.



3. 08-12/02/2021, *Online FDP on Real Estate Management attended by faculty member:*

A faculty member Mr. G. P. Walhekar has participated & completed successfully AICTE Training and Learning Academy (ATAL) online FDP on “Real Estate Management” from 08.02.2021 to 12.02.2021 at Chh. Shahu Institute of Business Education & Research.



4. 08-12/02/2021, *Online FDP on Real Estate Management attended by faculty member:*

A faculty member Mr. R. D. Vikhe has participated & completed successfully AICTE Training and Learning Academy (ATAL) online FDP on “Real Estate Management” from 08.02.2021 to 12.02.2021 at Chh. Shahu Institute of Business Education & Research.



5. 09-13/02/2021, *Online Expert Lecture Series attended by faculty member:*

A faculty member Mr. G. P. Walhekar has participated Expert Lecture Series for Civil Engineering student's organized by Samarth Group of Institutions College of Engineering, Belhe, Pune from 09.02.2021 to 13.02.2021.



6. 12-18/02/2021, *Orientation/Refresher Programme attended by faculty member:*

A faculty member Mr. S. K. Gorde has attended AICTE-ISTE approved Orientation/Refresher Programme on "Innovations in Concrete Technology" held during 12.02.2021 to 18.02.2021, organized by Yashwantrao Bhonsale Polytechnic College, Sawantwadi, Sindhudurg, Maharashtra.



7. 22-27/02/2021, *Online FDP on Real Estate Management attended by faculty member:*

A faculty member Mr. G. P. Walhekar has attended One Week Online Short Term Training Program on “DIGITAL SKILL DEVELOPMENT FOR PROFESSIONALS” from 22.02.2021 to 27.02.2021.



8. 22-27/02/2021, *Online FDP on Real Estate Management attended by faculty member:*

A faculty member Mr. R. D. Vikhe has attended One Week Online Short Term Training Program on “DIGITAL SKILL DEVELOPMENT FOR PROFESSIONALS” from 22.02.2021 to 27.02.2021.



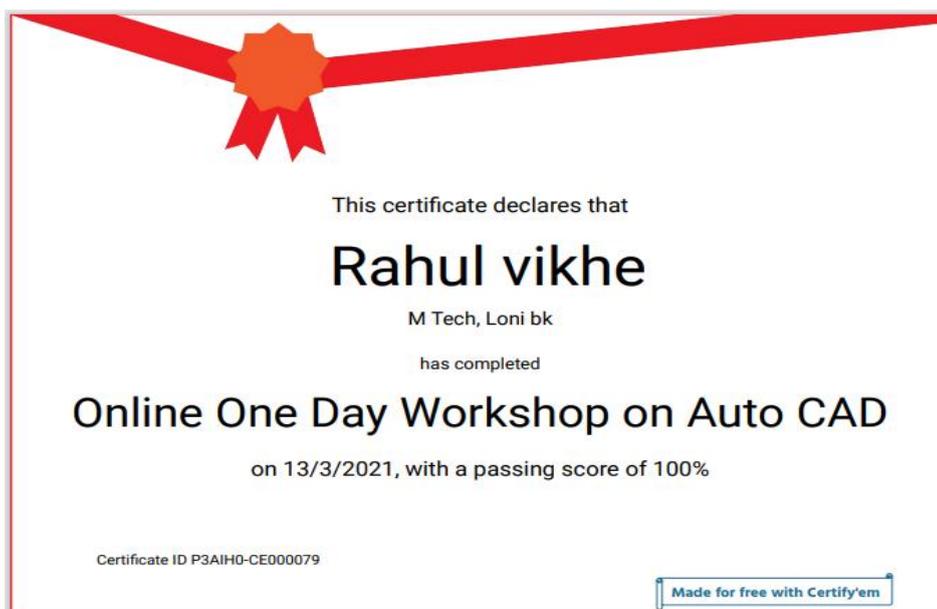
9. 08-13/03/2021, *Online Symposium on "Affective Management" attended by faculty member:*

A faculty member Mrs. N. R. Kadu has attended Online Symposium on "Affective Management" organized for the period March 08-13, 2021 to enhance interpersonal relationship and boost individual personality.



10. 13/03/2021, *Online One Day Workshop on "AutoCAD" attended by faculty member:*

A faculty member Mr. R. D. Vikhe has attended Online One Day Workshop on "AutoCAD" on 13.03.2021.



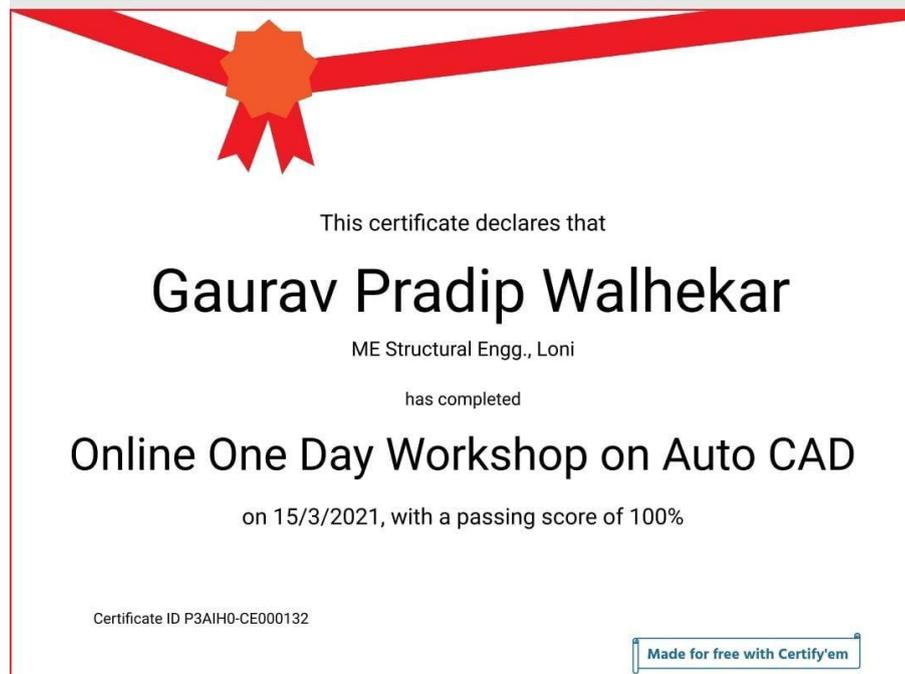
11. 14/03/2021, *Online One Day Workshop on "AutoCAD" attended by faculty member:*

A faculty member Mrs. N. R. Kadu has attended Online One Day Workshop on "AutoCAD" on 14.03.2021.



12. 15/03/2021, *Online One Day Workshop on "AutoCAD" attended by faculty member:*

A faculty member Mr. G. P. Walhekar has attended Online One Day Workshop on "AutoCAD" on 15.03.2021.



13. 15-20/03/2021, *Orientation/Refresher Programme attended by faculty member:*

A faculty member Ms. V. S. Mhaske has attended AICTE-ISTE approved Orientation/Refresher Programme on “Non-conventional Energy Sources (Green Energy)” held during 15.03.2021 to 20.03.2021, organized by Government Polytechnic College, Hingoli, Maharashtra.



14. 15-20/03/2021, *Orientation/Refresher Programme attended by faculty member:*

A faculty member Mrs. N. R. Kadu has attended AICTE-ISTE approved Orientation/Refresher Programme on “Non-conventional Energy Sources (Green Energy)” held during 15.03.2021 to 20.03.2021, organized by Government Polytechnic College, Hingoli, Maharashtra.



15. 20/03/2021, *Online Technical Quiz Competition attended by faculty member:*

A faculty member Mr. S. K. Gorde has participated in Technical Quiz competition RAILMIT 2021 held on 20<sup>th</sup> March 2021 and organized by MIT College of Railway Engineering & Research, Barshi.



16. 23-30/03/2021, *Orientation/Refresher Programme attended by faculty member:*

A faculty member Mrs. N. R. Kadu has attended AICTE-ISTE approved Orientation/Refresher Programme on "Non-conventional Energy Sources (Green Energy)" held during 23.03.2021 to 30.03.2021, organized by Sanjivani K. B. P. Polytechnic College, Kopargaon, Maharashtra.



17. 02-08/04/2021, *Orientation/Refresher Programme attended by faculty member:*

A faculty member Mr. S. K. Gorde has attended AICTE-ISTE approved Orientation/Refresher Programme on “Innovations in Concrete Technology” held during 02.04.2021 to 08.04.2021, organized by Yashwantrao Bhonsale Polytechnic College, Sawantwadi, Sindhudurg, Maharashtra.



18. 02-08/04/2021, *Orientation/Refresher Programme attended by faculty member:*

A faculty member Mr. G. P. Walhekar has attended AICTE-ISTE approved Orientation/Refresher Programme on “Innovations in Concrete Technology” held during 02.04.2021 to 08.04.2021, organized by Yashwantrao Bhonsale Polytechnic College, Sawantwadi, Sindhudurg, Maharashtra.



# **Paper/Poster Presented/Published by Staff:**

1.02/01/2021, *Paper Publication:*

Faculty member Mr. D. K. Shirsath and Mr. S. K. Gorde published paper titled “A study of Earthquake Resistant Building” in International Journal of Advances in Engineering and Management (IJAEM), Volume 2, Issue 1.



2. 20/03/2021, *Poster Presentation Competition RAILMIT 2021 attended by faculty member:*

A faculty member Mr. S. K. Gorde has participated in Poster Presentation competition RAILMIT 2021 held on 20<sup>th</sup> March 2021 and organized by MIT College of Railway Engineering & Research, Barshi.



3. 20/03/2021, *Paper Presentation Competition RAILMIT 2021 attended by faculty member:*

A faculty member Mr. S. K. Gorde has participated in Paper Presentation competition RAILMIT 2021 held on 20<sup>th</sup> March 2021 and organized by MIT College of Railway Engineering & Research, Barshi.



# Staff activities: Conference Attended

## 1. 18-19/02/2021, Conference attended by faculty member:

Mr. G. P. Walhekar attended Conference on “IPR, PATENTS, COPYRIGHTS INNOVATIONS & STARTUPS 2020” organized on February 18-19, 2021.



## 2. 26-27/02/2021, International Virtual Conference attended by faculty member:

Mr. S. K. Gorde attended the International Virtual Conference “Next Generation Education Technology for Science and Engineering” organized by IETE MP Chapter in association with IEEE MP Subsection, and The Institution of Engineers, India on Feb. 26-27, 2021.



3. 26-27/02/2021, *International Virtual Conference attended by faculty member:*

Ms. V. S. Mhaske attended the International Virtual Conference “Next Generation Education Technology for Science and Engineering” organized by IETE MP Chapter in association with IEEE MP Subsection, and The Institution of Engineers, India on Feb. 26-27, 2021.



4. 26-27/02/2021, *International Virtual Conference attended by faculty member:*

Mrs. N. R. Kadu attended the International Virtual Conference “Next Generation Education Technology for Science and Engineering” organized by IETE MP Chapter in association with IEEE MP Subsection, and The Institution of Engineers, India on Feb. 26-27, 2021.



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6. 26-27/02/2021, *International Virtual Conference attended by faculty member:*

Mr. R. D. Vikhe attended the International Virtual Conference “Next Generation Education Technology for Science and Engineering” organized by IETE MP Chapter in association with IEEE MP Subsection, and The Institution of Engineers, India on Feb. 26-27, 2021.



7. 08-09/03/2021, *International Conference attended by faculty member:*

Mr. G. P. Walhekar participated in International Conference on “Recent Advancement & Innovations in Civil Engineering (RAICE-20-21)” organized by Technocrats Institute of Technology, Bhopal on 8<sup>th</sup> & 9<sup>th</sup> March 2021.



# ***Student's performance:***

**[For the exam Summer 2021]**

Co-curricular activities aside, academics are always given top priority here. Special guidance & tuitions are given to students who find it difficult to cope up with the rising syllabus. In the academic section, the students of this department simply stand out with good marks.

## **TOPPERS OF TYCE: 2020-21**

<b>Sr. No.</b>	<b>Student Picture</b>	<b>Name of Student</b>	<b>% Of Marks</b>
1		<i>Miss. Rutuja Popalghat</i>	<i>(92.05 %)- First Rank</i>
2		<i>Mr. Saurabh Karanjkar</i>	<i>(89.84 %)- Second Rank</i>
3		<i>Miss. Priti Kadam</i>	<i>(89.68 %) -Third Rank</i>

## TOPPERS OF SYCE: 2020-21

Sr. No.	Student Picture	Name of Student	% Of Marks
1		<i>Miss. Kolpe Samiksha Subhash</i>	<i>(87.33 %)- First Rank</i>
2		<i>Mr. Patel Nomaan Javed</i>	<i>(85.69 %)- Second Rank</i>
3		<i>Mr. Wagh Nitin Appasaheb</i>	<i>(84.84 %) -Third Rank</i>

# Student's Corner:

## SHEAR WALL

Shear wall is a structural member used to resist lateral forces i.e. parallel to the plane of the wall. For slender walls where the bending deformation is more Shear wall resists the loads due to Cantilever Action and for short walls where the shear deformation is more it resists the loads due to Truss Action.

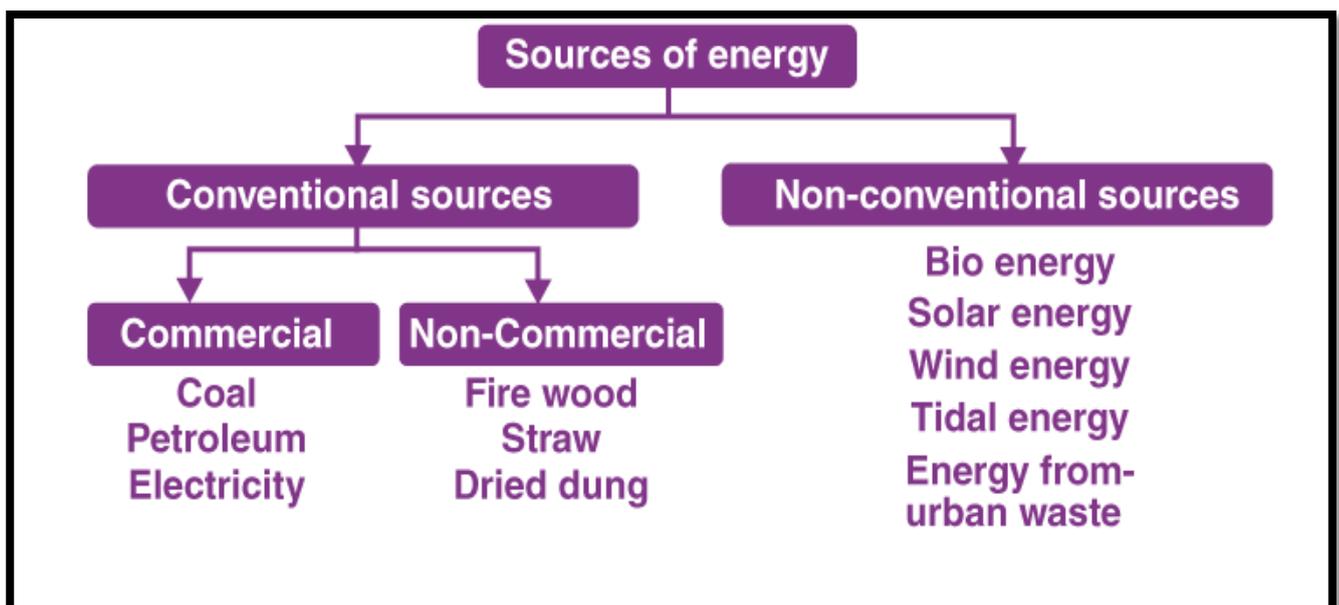
These walls are more important in seismically active zones because during earthquakes shear forces on the structure increases. Shear walls should have more strength and stiffness. When a building has a story without shear walls, or with poorly placed shear walls, it is known as a soft story building. Shear walls provide adequate strength and stiffness to control lateral displacements. Shear walls perform dual action that is, they act as lateral as well as gravity load-bearing elements.

The strength of a wall system depends on many factors including the strength of the sheathing; the type, size, and spacing of the fasteners; the panel aspect ratio (ratio of long to short dimension of shear panel); and the strength of the studs. Because of these variables, the design strength of shear walls is usually based on tests of full height specimens.

Shear walls that are perforated with openings are called coupled walls. These walls act as isolated cantilevered walls connected by coupling beams (also called spandrel beams or lintels) designed for bending and shear effects.

-By Mr. Nitin A. Wagh

## SOURCES OF ENERGY



-By Mr. Aman Shaikh

## SETTING OUT SURVEY

The method of setting out is the reverse of the surveying process. The process involves the positions and levels of building lines and road alignments shown on the construction plans to be established on the ground by various techniques and instruments.

In the field of civil engineering, accurate surveying and setting out is essential for the successful execution of construction projects. Setting out involves transferring the dimensions and locations from engineering designs and plans to the actual site. This process ensures that the construction aligns with the intended specifications and helps maintain precision throughout the project. Several methods are employed in setting out surveys, each suited to different types of projects and terrain. Here, we will discuss some common methods of setting out surveys used in civil engineering, focusing on surveying and leveling techniques.

### **Methods of Setting Out Survey:**

1. Setting out buildings by coordinates
2. Setting out with theodolite and level
3. Checking verticality
4. Setting out and alignment in steel-framed buildings
5. Alignment and verticality in formwork
6. Control and calculation for route surveying

-By Ms. Rutuja Popalghat



**Padmashri Dr. Vitthalrao Vikhe Patil Institute of Technology & Engineering (Polytechnic), Loni**

**Student Representative:**

Mr. Vishal Perane

**Section Editor:**

Mrs. Nikita R. Kadu  
[nikita.yeole@pravara.in](mailto:nikita.yeole@pravara.in)

**Visit us at:**

<https://www.pravara.in/polytechnic>

**Chief Editor:**

Mr. Sandip K. Gorde, HOD, CE  
[sandip.gorde@pravara.in](mailto:sandip.gorde@pravara.in)