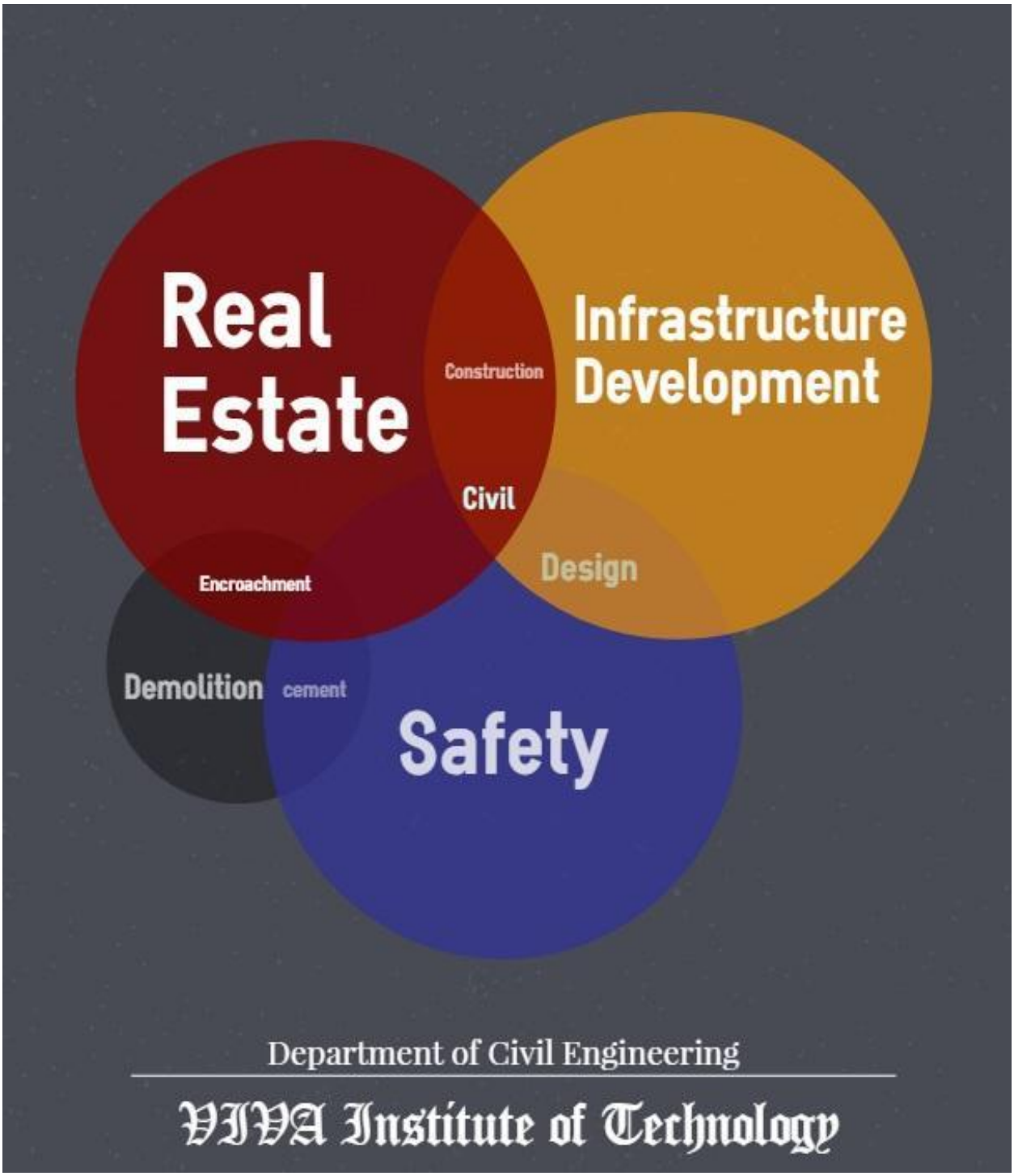
DEPARTMENT OF CIVIL ENGINEERING

NEWSLETTER 2017-18



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VISION

- To carve and contribute to the society and the world at large, a group of civil engineers with excellent & high technical competency, who can give the best solutions to the current & future challenges in civil engineering.
- To provide an environment that promotes personal growth, self-confidence, urge for high esteem coupled with high moral and ethical values.

MISSION

- To provide students with upgraded technical knowledge through innovative teaching & learning processes.
- To provide interactive sessions with experienced technical experts.
- To associate students with the construction industry by taking up live projects with industry and expose them to the current scenario.
- To motivate them for research and development activities

PROGRAMME OUTCOMES

Engineering Graduates will be able to:

- PO1: Engineering Knowledge: apply knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.
- PO2: Problem Analysis: identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3: Design & Development of Solutions: design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

- PO4: Conduct Investigation of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.
- PO5: Modern Tools Usage: create, select and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- PO6: The Engineer and Society: apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7: Environment & Sustainability: understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8: Ethics: apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice.
- PO9: Individual & Team work: function effectively as an individual and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10: Communication: communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- PO11: Project management & Finance: demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- PO12: Life-long Learning: recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME SPECIFIC OUTCOMES

- Students will be able to carry out planning, design, preparation of all sets of drawing of various small civil engineering projects and manage the construction activities with skill, adhering to the principles learnt during the programme.
- Students will be confident to undertake various projects as entrepreneurs.
- Students will be able to inovate research projects as per the needs of the society.

ABOUT THE DEPARTMENT

The Department of Civil Engineering had its humble beginning in 2011.Now We have got Ten full-fledged laboratories, a dedicated team of 16 faculty members along with four supporting staff and their untiring efforts to our credit. Our motto is to carve and contribute to the society and the nation, a group of competent civil engineers with sound ethical values.

The department takes initiative in giving the students practical knowledge, exposing them to the industry by conducting site visits, industrial visits, arranging internships etc. Eight of our faculty members are ME degree holders and all others are ME pursuing. They presented papers in various conferences at national and international level and published papers in national and international journals.

They are associated with professional bodies like ISTE, AMIE, IGS etc. Many of our students scored well in exams like GRE, TOFFIL and secured admission for post graduate programme in universities abroad. Many of them secured admission for ME through GATE. Students participate in Tech Fest, sports and cultural festival competitions at inter collegiate level and won the awards. Civil engineering student's association(CESA)is in function coordinating various activities of the department.

Our young and dynamic team of faculty members guide the students to make wonderful BE project work, technical working models of Civil Engineering Structures. Our faculty members give expert lectures to other institutes in topics of their interest and specialization. We also invite eminent people from the industry and other institutes in order to promote department - industry -

professional relationships conducting special lectures in current developments. One week ISTE sponsored STTP is conducted at department level and college level every year for faculty development for faculties in and outside the department.

LIST OF LABORATORIES

Sr No.	Laboratory Name	Location
1	BMC LAB	WORKSHOP Gr. Floor
2	ENG. GEOLOGY LAB	CIVIL-MECH BUILDING 5TH FLOOR
3	SOM LAB	MAIN BUILDING A – 009 Gr. Floor
4	FM LAB	WORKSHOP Gr. Floor
5	SURVEY LAB	MAIN BUILDING Gr. Floor A-002
6	CT LAB	WORKSHOP Gr. Floor
7	TRANSPORTATION LAB	MAIN BUILDING Gr. Floor A-003
8	ENVIRONMENTAL LAB	MAIN BUILDING Gr. Floor A-001
9	GEOTECH LAB	WORKSHOP Gr. Floor & MAIN BUILDING
10	APPLIED HYDRAULICS	WORKSHOP Gr. Floor
11	Project Lab	L - 306

Late Shri Vishnu Waman Thakur Charitable Trust
Shirgaon, Post: Virar (W), Tal: Vasai, Dist: Palghar – 401 305.

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FROM PRINCIPAL'S DESK:

Dear All,

It gives me an immense pleasure to welcome you to VIVA Institute of Technology, Virar affiliated to University of Mumbai, governed by Late Shri. Vishnu Waman Thakur Charitable Trust's. We believe in the fact that "Education is a journey from Information to Knowledge and from Knowledge to Wisdom. The Engineering graduate should be capable to apply knowledge to real time engineering problems and provide solutions, which are technically sound as well as economically viable. Only creative minds can accomplish this task.

A Newsletter mirrors the success story of an institution and acts as a great medium to reach out to the outer world. It reflects upon the persistent and committed efforts made by faculty, and students for taking the institution one-step ahead. Continuing the same tradition, this issue of newsletter reflects upon commendable contributions made by all members of the Civil engineering department in their fields of expertise as well as for the overall growth of the institute. I congratulate everyone for their value adding work for the institution and do expect the same in times to come. I also congratulate the editorial team for bringing out the present issue of the newsletter.

VIVA INSTITUTE OF TECHNOLOGY nurtures a unique system of education for creating dynamic leaders in the corporate sector, entrepreneurs, academicians, researchers and professionals who contribute to the development of society and nation at large. It has an aesthetically designed and elegantly built campus furnished with state of art equipment and facilities. Here, education is not only focusing on a 4 years B.E. degree course but also creating for the students a platform to realize their dreams, hone their cognition, sharpen their competence and carve out a wholesome personality.

Wishing you all the best for the fruitful learning journey at VIVA Institute of Technology and for a bright future

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FROM H.O.D.'S DESK:

We as a department are happy to bring out this bulletin for this term during which the humble efforts of four of our faculty members are recognized in completing M.E. Other faculty members with B E secured admission for ME and are pursuing success. Civil engineering department has a long way to go in the pursuit of excellence, but their dedication and diligent efforts in training the students is a clear indication of our growth and quality. This will surely take our students to commendable heights in the field of higher education and entrepreneurship. We believe in excellence with ethics and are very particular in striving towards the same. We begin to realize the fact that any sort of technical lacuna today is like a credit card "enjoy today and pay later.

Many of our students are from lower middle class families who have a lot of hidden potential in them but really struggle to come to good positions to support their families. Some of our students showed many commendable beginning which are useful to the Public by writing and publishing a technical book and inventing economical construction material which even fetch them patent.

Our frequent field visits, yearly surveying project, drawing project and frequent guest lectures by eminent speakers are remarkable memories for them. They are given opportunities inside the classrooms to express their talents in the language and style of their heart. I am sure that we can make commendable contributions to society which will lift the name of our college high in the near future.

FACULTY DETAILS:

Sr. No.	Name of the Faculty	Experience in Years	Journal Publications
1	Lissy Jose	18	9
2	Akshay Mistry	7	7
3	Ramya Raju	4	5
4	Monica More	4	4
5	Sagar Sundaran	4	4
6	Meena Bhagat	4	3
7	Ashish Shetty	2	3
8	Abhijit Wasave	4	2
9	Jimit Chotai	3	2
10	Pratibha Patil	3	2
11	Asmita Bhalke	3	2
12	Yadnesh Patil	3	2
13	Ghufran khan	3	2
14	Akshay Naik	2	2
15	Vishal Urade	2	2
16	Purva Awari	3	2
17	Prashant Gondane	2	2
18	Mayur Patel	2	2

19	Prerana Patil	2	2
20	Arathy Menon	3	3
21	Prachi Bari	2	2

FACULTY DEVELOPMENT INITIATIVES

Department Library

The department strives to provide with the best possible opportunity for the staff and the students to enhance their knowledge, and the departmental library is one initiative taken by the department in this regard.

The departmental library is managed by a staff in-charge. The library gives easy access to the books and research projects for both the faculty and students. Currently the departmental library has over 300 books.

Appraisal System

An effective performance appraisal system is a vital instrument for gauging and improving the performance and contribution of the faculty. The institute has a well-defined appraisal and well formatted appraisal system and it is effectively implemented in the department. Every teaching faculty submits self-appraisal forms to the head of the department. The head of the department evaluates the self-appraisal form filled by the faculty and comments on the performance of the faculty. This form is then sent to the principal.

In the presence of head of department, the principal conducts a one to one meeting with all the teachers and gives feedback/suggestions/comments on the performance. The performance appraisal is carried out in each semester. In every academic year awareness is also created among the faculty about the importance of performance appraisal, in the department.

Feedback System

According to the schedule mentioned in the academic calendar, the HOD of the department takes offline feedback from students. Students are provided with a copy of feedback form which assesses the staff on the basis of parameters. Parameters used to assess the faculties are Way of teaching, Extent of understanding the subject & satisfaction, Ability to clear the doubts, Attitude towards the students, Punctuality, Interaction during lecture, Motivation.

Students also give comments about faculties in a written form. Ratings are calculated on the basis of score and comments given by the students. Depending on the comments and ratings by the students, HOD communicates and guides the staff regarding further improvements through corrective actions. Second meeting with the students is conducted in the same semester to assess the effectiveness of the corrective action undertaken.

Departmental Activities:

Every year the Department conducts various events and activities to emphasize student's overall development and improvement. These include academic as well as extracurricular activities. Students are motivated to participate and present papers in national conferences. Industrial visits are also arranged from time to time for getting exposure of industrial environment. Guest lectures are also organized by inviting resource persons from industries of high repute. Faculty development program, approved by ISTE, is also organized for their skill developments.

Short Term Training Programme

Report on the ISTE Approved One Week Short Term Training Program on "Recent Trends in Civil Engineering" from 25th June – 29rd June 2018

Since the dawn of evolution and the ancient civilization known to mankind, humans have always been fascinated about multistoried buildings, their town planning and road construction etc. Some of which have still survived the cruelty of time. Now with the rise of technology and the dynamic nature of the science associated with it, everyday there are inventions and new technologies in the field of transportation, environmental, concrete, rainwater harvesting and repair and restoration Engineering to name a few.

The STTP aims at bridging the gap between the current academics and new technologies used in the field in order to create awareness and better society by guiding, training, and motivating the students to take up projects related to the field of transportation, environmental, concrete, rain water harvesting repair and restoration Engineering.

Topic covered in the STTP on "Recent trends in Civil Engineering'

- Passenger Car Unit
- Effect of RERA in Construction Industry
- Application of Geotechnical Engineering & Marine Transportation.
- Methods of curing of concrete
- Earthquake Engineering
- Pile Retention Systems for Deep Excavations.
- Material Science Engineering
- Advanced Concrete

At the end of the STTP conclusion drawn by the participants.

- Calculations and design concepts required for proper transportation.

- Position of RERA for the present scenario and its importance.
- Combination of Geotechnical with Marine Engineering and its applications.
- Mix design and materials used in manufacturing of concrete using 50% GGBS.
- Designs required to avoid Earthquake hazards.
- Use of material science Engineering for various structures.

Date	Time	Name of Speakers	Topics
25/06/2018	10am-12pm	Prof. Asir Khan	Passenger Car Unit
25/06/2018	1:30pm-3:30pm	Prof. Sudarshan Ashan	Effect of RERA in Construction Industry
26/06/2018	10am-12pm 1:30pm-3:30pm	Mr. Anil Londhe	Application of Geotechnical Engg & Marine Transportation
27/06/2018	1:30pm-3:30pm	Dr. Yashwant Patil	Methods of curing of concrete
27/06/2018	10am-12pm	Dr. Vivek Mandapur	Earthquake Engg
28/06/2018	10am-12pm	Dr. Ramachandra Hegde	Pile Retention Systems for Deep Excavations
28/06/2018	1:30pm-3:30pm	Mr. Sandeep Dubey	Concrete
29/06/2018	10am-12pm	Dr. Dilip Sarode	Material Science Engg

The participants were the teaching faculties of VIVA Institute of Technology and other colleges. Total of 22 faculties took part in the one-week short term training program. The team of the STTP include faculties mentioned as below

Sr.No.	Details of the committee	Name of the faculties
1	Co-Ordinator STTP	Mistry Akshay S. Ramya Raju.
2	Organizing	Bhagat Meena A. Wasave Abhijeet S.
3	Refreshment	Ramya Raju
4	Banner	Ashish Shetty
5	Feedback	Menon Aarthy Patil Prerana
6	Treasurer	Bhalke Asmita
7	Non-Teaching	Gawari Kiran Patil Sunil Vaity Rahul

Valedictory Function was headed by Dr. Yashwant Patil. Feedback from the participants show their interest in the one of a kind STTP and their eagerness to attend the same once again. The overall feedback was encouraging and highly rated by the participants.

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Guest Lecture:

Topic Name:	TRANSPORTATION ENGINEERING II
Name of the Guest Speaker:	Mr. Vivek Mamdapur
Designation:	Visiting Faculty
Organization/Institution:	Saraswati College of Engineering

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Date: 28/02/18

Time: 11.00 Onwards

Programme/ Summary Details: Highway engineering is an engineering discipline branching from civil engineering that involves the planning, design, construction, operation, and maintenance of roads, bridges, and tunnels to ensure safe and effective transportation of people and goods. Use of bituminous concrete and cement concrete are the most important developments. Various advanced and cost-effective construction technologies are used. Development of new equipment helps in the faster construction of roads. Many easily and locally available materials are tested in the laboratories and then implemented on roads for making economical and durable pavement.

Flexible pavements will transmit wheel load stresses to the lower layers by grain-to grain transfer through the points of contact in the granular structure. The wheel load acting on the pavement will be distributed to a wider area, and the stress decreases with the depth. Taking advantage of this stress distribution characteristic, flexible pavements normally have many layers. Hence, the design of flexible pavement uses the concept of a layered system. The lower layers will experience lesser magnitude of stress and low-quality material can be used. Flexible pavements are constructed using bituminous materials. These can be either in the form of surface treatments (such as bituminous surface treatments generally found on low volume roads) or, asphalt concrete surface courses (generally used on high volume roads such as national highways). Flexible pavement layers reflect the deformation of the lower layers onto the surface layer (e.g., if there is any undulation in sub-grade then it will be transferred to the surface layer). In the case of flexible pavement, the design is based on overall performance of flexible pavement, and the stresses produced should be kept well below the allowable stresses of each pavement layer.

Rigid pavements have sufficient flexural strength to transmit the wheel load stresses to a wider area below. Compared to flexible pavement, rigid pavements are placed either directly on the prepared subgrade or on a single layer of granular or stabilized material. Since there is only

one layer of material between the concrete and the subgrade, this layer can be called base or sub-base course. In rigid pavement, load is distributed by the slab action. Rigid pavements are constructed by Portland cement concrete (PCC) and should be analyzed by plate theory instead of layer theory, assuming an elastic plate resting on viscous foundation. Plate theory is a simplified version of layer theory that assumes the concrete slab as a medium thick plate which is plane before loading and to remain plane after loading. Bending of the slab due to wheel load and temperature variation and the resulting tensile and flexural stress.

Topic Name:	CONSTRUCTION ENGINEERING
Name of the Guest Speaker:	Mr. Shudarshan Ashan
Designation:	Asst. Professor
Organization/Institution:	Universal College of Engineering
Date:	05/03/18
Time:	11.00 Onwards

Programme/ Summary Details: He explained about the various roles of construction engineering with real time case studies. In his presentation he addressed all the major facets of construction Project management including Project initiation and planning, scheduling techniques, organizing methods, controlling process and Resource allocation. Later on he discussed the software tools involved in the construction scheduling process and the importance of using the software tools for the accurate estimation of all kinds of resources for a project. Uses of Software tools like Primavera and MS Project in the construction planning and scheduling process also explained to the students. Finally, he discussed various risks involved in construction projects and emphasized the importance of quality and safety in construction projects. Network diagram techniques like Critical Path Method and Project Evaluation and Review Techniques also discussed by the students during the questionnaire session.

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Site Visit:

(1.)Name of Subject: ENGINEERING GEOLOGY

Place: Gargoti Museum, Sinnar, Malegaon, Maharashtra

Date: 19/7/2017

Visit Details:

Place of Visit: Gargoti Museum, Sinnar, Malegaon, Maharashtra

Date of Visit: 19th July 2017.

Department of Civil Engineering, VIVA Institute of Technology, Virar organized a site visit to Gargoti Museum, Sinnar for the Subject Engineering Geology. All the students of III semester and four faculties from the Civil Engineering Department were visited the Museum on 19th July 2017.

The Gargoti Museum is a museum in the town Sinnar near Nashik in Indian state of Maharashtra that houses a collection of natural mineral & gem specimens collected by K.C.Pandey over 40 years. The word "goti" refers to a Marathi word meaning stone or pebble. This is India's 1st & only Gem, Mineral & Fossil Museum.The collection of stones was huge and explanations given by the guide of the Museum was fruitful. Visit was very informative and together the faculties and students enjoyed the tip and gained much knowledge about stone.

(2.)Name of Subject: IRRIGATION ENGINEERING

Place: Tansa Dam, Shahapur, Thane

Organization/Institution: Viva Institute of technology virar

Date: 10/08/2017 & 11/08/2017

Visit Details:

Place of Visit: Tansa Dam, Shahapur, Thane

Date of Visit: 10th & 11th August 2017.

Department of Civil Engineering, VIVA Institute of Technology, Virar organized a site visit to Tansa Dam Thane, for the Subject Irrigation Engineering. All the students of III semester and four faculties from the Civil Engineering Department were visited the Dam on 10th & 11th August 2017.

"Tansa lake (Dam) is one of those 3 major drinking water reservoir out of total 6 lakes for Mumbai, Located at Mahuli hills (Atgaon, Thane District) about 85.3 km from Mumbai Airport, this lake was the only freshwater lake built back in 1892 which has its Tansa Dam project done by 1925 supplying 430 MLD water to city."

(3.)Name of Subject: GEOTECHNICAL ENGINEERING

Place: Advance Geotech Solutions

Organization/Institution: Viva Institute of technology virar

Date: 02/02/2018

Place of Visit: C/O Advanced Geotech Solutions, Dahanukarwadi, Kandivali West

Date of Visit: 2nd February 2018.

Department of Civil Engineering, VIVA Institute of Technology, Virar organized a site visit to Pile Foundation Site, Kandivali West, for the Subject Geotechnical Engineering II. All the students of VI semester and four faculties from the Civil Engineering Department visited the site on 2nd February 2018.

The construction of foundation of a residential building was going on at the site. Pile foundations are provided for the building as the area was limited and the bearing capacity of the soil was less. The site engineer and an engineer from Geotech-solutions were there and they explained the piling procedures and showed the samples of each layer of soil. The visit was worth it for students and faculties.

(4.) Name of the subject	BUILDING MATERIALS AND CONSTRUCTION
Place	Ameya RMC Plant
Organization name	Viva Institute of Technology
Date	6/3/2018 and 7/1/2018

Place of Visit: Ameya RMC Plant, Nalasopara East, Maharashtra

Date of Visit: 6th & 7th March 2018.

Department of Civil Engineering, VIVA Institute of Technology, Virar organized a site visit to Ameya RMC Plant for the Subject Building Materials and Construction Technology. Students of semester IV accompanied by 4 faculties of our department visited the site on 6th and 7th (Tuesday & Wednesday) of March 2018. 73 students were there for each day of visit.

Ameya RMC Plant in Nalasopara East, Palghar, Mumbai is known to satisfactorily cater to the demands of its customer base. It stands located at Valaipada, Manevale Pada, Nalasopara East. Students understood the procedures carried out in an RMC Plant. The in charge of the plant explained the mix design to students.

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Contact:

Department of Civil Engineering

Viva institute of Technology

Shirgaon

Maharashtra 401303.