



Late Shri Vishnu Waman Thakur Charitable Trust's

# VIVA INSTITUTE OF TECHNOLOGY

Shirgaon, Virar ( E), Tal: Vasai, Dist: Palghar – 401 305.



## STTP Report on “Innovative Trends in Civil Engineering”

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

Topic covered in the STTP on “Recent trends in Civil Engineering’

- Restoration of RCC structure
- Biomedical Waste Management
- Net Zero Energy Building
- Road Safety Audit
- Metro construction

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

- Seepage and effective waste water management techniques with calculations and design.
- Vehicular traffic volume calculation and urban transport planning.
- Pros and cons with design aspects of transparent concrete.
- Mix design and materials used in manufacturing of concrete using 50% GGBS.
- New mix design calculations and clauses associated to it.
- Why, where , when and how rain water harvestment is necessary in today’s life
- Rehabilitation and repair of any existing construction



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With the dynamic changes happening in the field of civil engineering it was felt necessary that the teaching faculties also become competent in the said technology. With keeping this as an intention the ISTE approved STTP was conducted from 19th June, 2017 to 23th June, 2017 in VIVA Institute of Technology, Civil Department.

## **Details of the Speakers are as under :**

One week online short term training program on “Sustainable Development in Civil Engineering “under ISTE was organised by Civil Engineering department, VIVA Institute of Technology during 22<sup>nd</sup> June to 26<sup>th</sup> of June 2020.

There were 110 participants in the STTP. The participant were from Civil Engineering Discipline. The STTP was inaugurated on 22<sup>nd</sup> of June 2020, Monday at 9.00 am by HOD civil Engineering Prof.Lissy

Jose via gmeet virtually in the presence of guest speaker Mr.Rushabh Karnavat. The participants were addressed by Prof. Monica More and the details of STTP were shared.

## **Day 1: 9 am to 10.30 am**

**Speaker: Mr. Rushabh Karnavat**

**Topic: Restoration of RCC structure**

Every building has some life span. After time passes certain problems arises like paint deterioration, corrosion seepage problems, deflection in beams etc. so buildings becomes unstable due to all these problems. Restoration is necessary to save these hazardous failure of structures. It is recommended for old structures which have some signs like cracks, corrosion of embedded material etc.

Therefore timely maintenance of structure is required. The selection of technique is used as per cost, location of site and other factors.

## **Day 2: 9 am to 10.30 am**

**Speaker: Prof. S. Raji**

**Topic: Biomedical Waste Management**

The main aim was to study the different bio medical waste and to dispose them off accordingly. For the sorting different colour codes are used so that it is identifiable.



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## **Day 3: 9 am to 10.30 am**

**Speaker: Prof. Vivek Mamdapur**

**Topic: Net Zero Energy Building**

With the advancement in renewable technology, Net Zero Energy Buildings are the future. The building designed as a NET ZERO ENERGY building produces its own electricity, thus it can save a huge amount of electricity bill. Many governments have framed Zero Energy building laws. But the goal of Zero Energy buildings would not be fulfilled till the time all the people don't understand their responsibility and contribute towards reducing energy consumption.

## **Day 4: 9 am to 10.30 am**

**Speaker: Dr. Yogeshwar Navandar**

**Topic: Road Safety Audit**

The aim was to explore the perception of safety and security problems on the part of those parties involved in the operation of public transportation. This perception is used as a base to develop an improvement agenda for the particular context of developing countries.

## **Day 5: 9 am to 10.30 am**

**Speaker: Mrs. Yojana Patil**

**Topic: Metro construction**

Mumbai is the commercial capital of India and its fast growth especially in the suburbs is causing heavy stress on all infrastructure, especially the transport. Being a linear city, the existing suburban rail services are very effective. Since the existing transport infrastructure has been heavily loaded and population of private vehicle is also increasing it was proposed by MMRDA to introduce a rail based Mass Transportation System in Greater Mumbai.

The proposal of this corridor is technically feasible but involves acquisition of land as well as rehabilitation of some hutments and shops. This is socio-economic problem and has to be tackled for execution of the project. The project has many positive environmental impacts like reduction in traffic congestion, saving in travel time, reduction in traffic etc.