SYMBIOSIS INSTITUTE OF TECHNOLOGY (SIT)

Constituent of Symbiosis International (Deemed University), Pune

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DEPARTMENT OF CIVIL ENGINEERING

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ASCE
STUDENT CHAPTER
Symbiosis Institute of Technology

Quake-Probe'23

Technical Fest event by CESS-ASCE

20th September 2023, Concrete Technology Lab

CESS Faculty In charge – *Prof. Amar Jain*
ASCE Faculty Advisor – *Dr. Sayali Sandbhor*,HOD

CESS President – *Pranav Jadhav*
ASCE President – *Tirth Vaddoria*
CESS-ASCE Vice President – *Arman Joshi*

Event Date: *20th September 2023*
Location: *Concrete Technology Laboratory*

Introduction:

The "Quake Probe" technical fest event, held on 20th September 2023 at Concrete Technology Laboratory, proved to be an exhilarating showcase of engineering prowess and innovation. This event, organized by Civil Engineering Society of Symbiosis (CESS) and American Society of Civil Engineers (ASCE) Student chapter of SIT, Pune, challenged participants to design and construct a framed structure resembling a G+6 building according to given specifications and limitations. The ultimate test awaited them as their structures were subjected to intense tremors on an in-house-made shake table, simulating the effects of an earthquake.

Opening ceremony and ribbon cutting with Deputy Director – Dr. Nitin Khedkar

Decoration in Civil Engineering department

Competition Brief:

The central theme of the event was to foster practical learning and skill development in the field of civil engineering, structural design, and earthquake-resistant construction. Participants were provided with specific design parameters, including material constraints, dimensions, and load-bearing requirements. These constraints were carefully selected to simulate real-world construction challenges.

Participation and Enthusiasm:

The event drew participation from diffferent teams, each consisting of bright and aspiring engineering minds from various institutions. The diversity in participation highlighted the widespread interest in earthquake-resistant structural design.

Participants constructing their structures.

Construction Phase:

Participants were given 90 minutes to design and construct their framed structures. The engineering prowess displayed by the participants was truly commendable. They navigated through various challenges, such as material limitations, design constraints, and time pressures, mirroring the difficulties faced in real-world construction projects.

Participants with their structures.

Shake Table Testing:

The highlight of the event was the shake table testing phase. The in-house-made shake table was meticulously calibrated to replicate the seismic forces experienced during an earthquake. As each structure was placed on the shake table, tension and anticipation filled the room.

The structures were subjected to a range of simulated earthquake scenarios, including varying magnitudes and durations. This testing phase provided invaluable insights into the structural stability and resilience of each design. It was a testament to the participants' ingenuity in developing structures that could withstand the forces of nature.

Sir giving different innovative ideas on Shake table testing machine.

Shake table testing machine.

Judging and Evaluation:

An esteemed panel of judges, comprising experienced professionals in the field of civil engineering and seismic analysis, evaluated the performance of each structure. They assessed factors such as stability, deformations, and overall structural integrity. The judging process was thorough and fair, ensuring that the winning teams truly deserved their accolades.

Judges evaluating and examining structures.

Winners and Prizes:

After careful evaluation, the top-performing teams were announced. The winning teams were awarded cash prices and certificates, recognizing their exceptional engineering skills and innovative design solutions. The prizes served as a testament to their dedication and hard work.

Winning team with judges and committee members

Ist Runner up team with judges and committee members

II[nd] Runner up team with judges and committee members

Conclusion:

The "Quake Probe" technical fest was a resounding success, offering participants a platform to showcase their engineering prowess, creativity, and problem-solving abilities. It fostered a culture of innovation and practical learning, which are vital aspects of the engineering profession.

We extend our heartfelt thanks to all participants, sponsors, judges, and organizers who made this event possible. Your contributions have undoubtedly enriched the technical community and furthered our understanding of earthquake-resistant structural design.

Quake
PROBE

THANK YOU NOTE

We would like to thank all the faculties who guided us in making this event a successful one.The event would not have been this grand without your constant support and encouragement.

- ***Dr. Ketan Kotecha Director, Symbiosis Institute of Technology.***
- ***Dr. Nitin Khedkar Deputy Director of Administration, Symbiosis Institute of Technology.***
- ***Dr. Arundhati Warke Deputy Director ofAcademics, Symbiosis Institute of Technology.***
- ***Dr. Sayali Sandbhor, HOD Civil Engineering Department, Symbiosis Institute of Technology.***