



SIDDHARTHA

INSTITUTE OF ENGINEERING & TECHNOLOGY

Approved by AICTE, Affiliated to JNTUH & Courses(CSE,ECE,EEE) Accredited by NBA)

Vinobha Nagar, Ibrahimpatnam, Ranga Reddy Dist - 501 506, Telangana, INDIA

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Report on Role Play Activity

A role play activity was conducted for B.Tech Civil Engineering students on the topic “**Urban Floods**” as part of their Environmental Engineering / Disaster Management coursework, on 12-3-2025 in department e-class room. The purpose of this activity was to provide a practical understanding of flood causes, impacts, and mitigation strategies in urban environments.

Urban floods have become a growing concern in Indian cities due to rapid urbanization, inadequate drainage systems, and climate change. Through this interactive session, students simulated real-world flood scenarios and explored the roles of different stakeholders in flood prevention and response.

Objectives of the Activity

- To create awareness about the causes and impacts of urban floods.
- To understand the roles and responsibilities of various stakeholders (engineers, planners, government officials, and citizens).
- To develop communication, teamwork, and decision-making skills among students.
- To connect theoretical knowledge with practical disaster management approaches.

Students were divided into groups, each representing key stakeholders involved in managing urban floods.

The roles included:

- Municipal Engineer – responsible for stormwater drainage design and maintenance.
- Urban Planner – focused on sustainable land use and zoning.
- Disaster Management Officer – coordinated rescue and relief operations.
- Environmental Activist – advocated for ecological restoration and public awareness.
- Resident/Community Representative – represented local citizens affected by flooding.
- Media Reporter – covered the incident and questioned officials on preparedness.

Each team was given a scenario:

“Heavy monsoon rainfall has led to severe flooding in a major city due to blocked drains, encroachments, and poor planning.”

Students enacted a press conference and emergency meeting setup, where they debated causes, immediate actions, and long-term solutions. The discussions covered flood mapping, urban drainage design, rainwater harvesting, green infrastructure, and policy reforms.



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Role play Outcomes

By the end of the activity, students were able to:

- Explain the causes and consequences of urban flooding.
- Demonstrate understanding of multi-disciplinary coordination during disasters.
- Propose engineering and non-engineering measures to mitigate floods.
- Improve public communication and leadership skills.
- Appreciate the importance of sustainable urban design and planning.

Conclusion

The role play on Urban Floods provided a dynamic platform for students to connect theory with practical implications. It emphasized the importance of civil engineers in developing resilient urban infrastructure and the need for community participation in disaster mitigation.

Such experiential learning activities foster teamwork, empathy, and professional responsibility essential qualities for future civil engineers.





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Report on Role Play Activity

A role play activity was conducted for B.Tech Civil Engineering students on the topic “**Types of Pavements**” as part of their Transportation Engineering coursework, on 10-12-2024 in department. The purpose of this activity was to provide a practical understanding of while applying technical knowledge about flexible and rigid pavements in real-life scenarios.

Objectives of the Activity

- To demonstrate understanding of various pavement types and their characteristics.
- To relate theoretical concepts to practical field applications in highway engineering.
- To develop communication, teamwork, and decision-making skills among students.
- To connect theoretical knowledge with practical disaster management approaches.

Students were divided into groups, each representing key stakeholders involved in managing types of Pavements.

The roles included:

- Project Engineer: Explained structural design and reinforcement details.
- Surveyor: Set levels and alignment.
- Workers: Performed concreting, finishing, and curing steps.
- Inspector: Checked joints, cracks, and curing conditions.

Role play Outcomes

By the end of the activity, students were able to:

- Differentiate between flexible, rigid and composite pavements based on structure and performance.
- Understand real-world decision-making in pavement design and maintenance.
- Apply theoretical knowledge to simulate practical engineering challenges.

Conclusion

The role play on Transportation Engineering through interactive participation and hands-on learning experience, students gained a practical understanding of pavement types construction techniques and performance evaluation—essential knowledge for future civil engineers.

Such experiential learning activities foster teamwork, empathy, and professional responsibility—essential qualities for future civil engineers.



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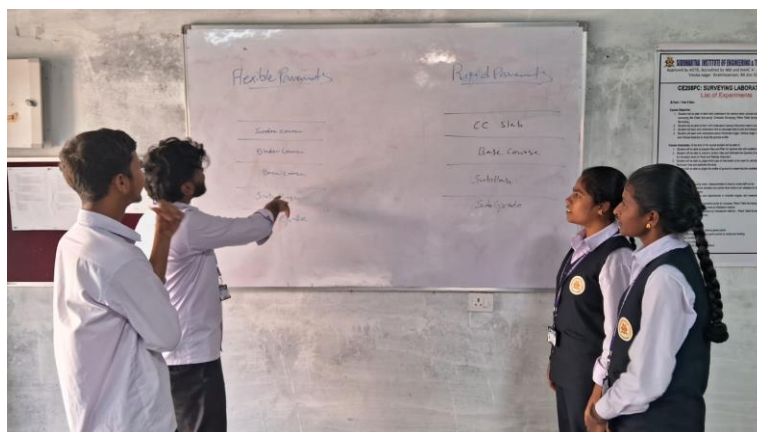
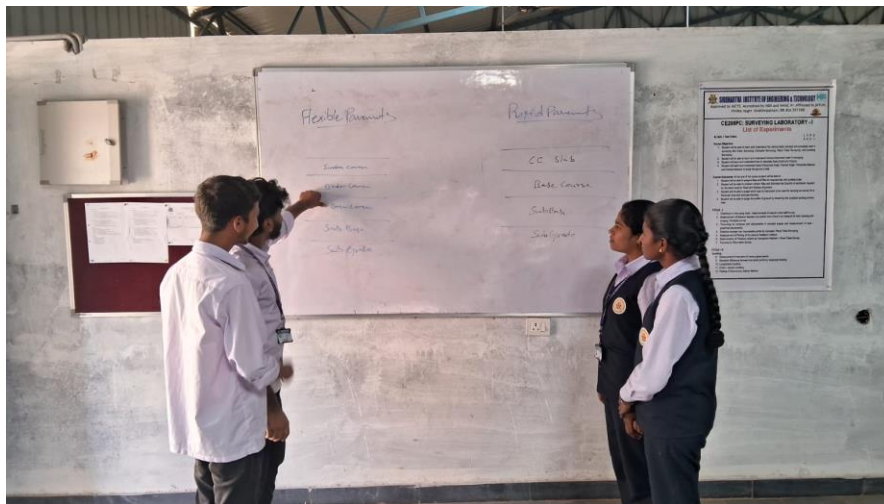
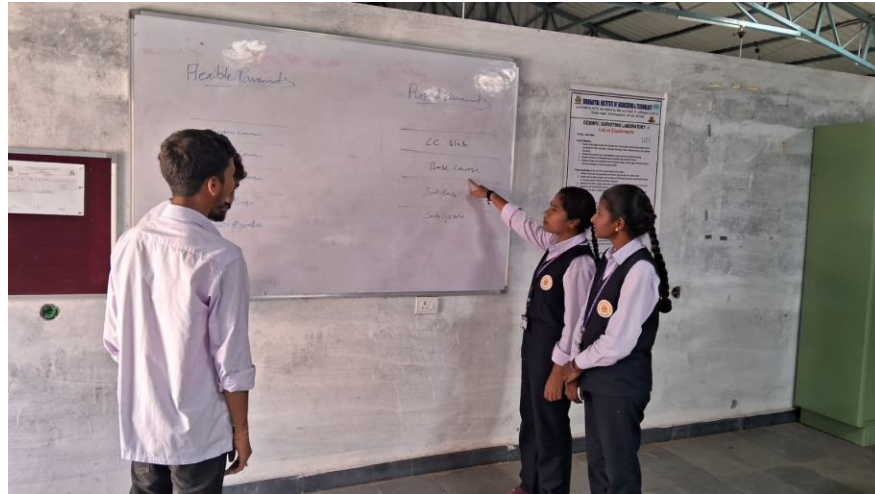
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Report on Role Play Activity

A role play activity was conducted for B.Tech Civil Engineering students on the topic “**Chain Survey and Digital Survey**” as part of their Surveying subject coursework, on 11-12-2023 in department. The purpose of this activity was to provide a practical understanding of while applying technical knowledge about Surveying importance in real-life scenarios.

Objectives of the Activity

- To understand the basic principles and procedures involved in chain and digital surveying.
- To compare traditional manual surveying methods with modern digital surveying techniques.
- To develop communication, teamwork, and presentation skills through practical role play.
- To simulate real-life surveying field conditions and demonstrate data collection methods.

Students were divided into groups, each representing key stakeholders involved in managing types of Surveying tools.

The roles included:

- Survey Engineer: Operated the instrument and explained digital data capture.
- Assistant Surveyor: Set up targets or prisms.
- Data Analyst: Downloaded data and demonstrated digital plotting.
- Presenter: Explained the advantages of digital surveying.

Role play Outcomes

By the end of the activity, students were able to:

- To perform a chain survey and digital survey step-by-step.
- The importance of teamwork, precision, and observation in surveying.
- How digital technology improves efficiency and accuracy in field measurements.
- How to communicate technical concepts effectively during practical work.



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Conclusion

The role play on Chain Survey and Digital Survey through interactive participation and hands-on learning experience to provided students with a practical and interactive learning experience. It bridged the gap between traditional surveying techniques and modern technological practices. The activity enhanced not only technical knowledge but also collaboration and presentation skills among students.

The session concluded with a discussion on how digital advancements are transforming civil engineering practices and making surveying faster, more accurate, and data-driven.





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