Lecture 3.23: Methods of NDT for Concrete- Rebound Hammer Test, Ultrasonic Pulse Velocity T...

Concrete Technology (DI04006011)

Civil Engineering Department

Lecture Agenda

- 1. Methods of NDT for Concrete- Rebound Hammer Test, Ultrasonic Pulse Velocity Test.
- 2. Summary and Q&A

3.7 Methods of NDT for Concrete- Rebound Ham...

- Rebound Hammer Test (Schmidt Hammer): Evaluates surface hardness of concrete.
- Rebound number correlates empirically with compressive strength; affected by surface smoothness and moisture.
- Ultrasonic Pulse Velocity (UPV) Test: Measures the velocity of an ultrasonic pulse passing through concrete.
- Higher UPV indicates dense, good-quality concrete; lower velocity indicates voids, cracks, or deterioration.
- UPV can determine dynamic modulus of elasticity and estimate the depth of cracks.

Summary

- Recap of the specific material properties and methods discussed.
- Always refer back to the standard IS codes for parameter limits.