# Lecture 6.41: Corrosion of reinforcement, causes and prevention.

## Concrete Technology (DI04006011)

Civil Engineering Department

# Lecture Agenda

- 1. Corrosion of reinforcement, causes and prevention.
- 2. Summary and Q&A

# 6.3 Corrosion of reinforcement, causes and p...

- Corrosion of reinforcement is the most common cause of concrete deterioration globally.
- Mechanism: Depassivation of steel due to carbonation or chloride ingress, leading to rust formation.
- Rust has 3-6 times the volume of steel, creating massive internal tensile stress that spalls concrete.
- Prevention: Adequate concrete cover depth, dense/impermeable concrete, fusion-bonded epoxy coated rebars.
- Cathodic protection and corrosion inhibiting admixtures are advanced preventive measures.

# Summary

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