

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Civil Engineering - NOC:Dynamics of Structures

Subject Co-ordinator - Prof. Manish Kumar

Co-ordinating Institute - IIT - Bombay

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Introduction to Structural Dynamics
Lecture 2 - Idealization of Structures
Lecture 3 - Components of Dynamic System
Lecture 4 - Equation of Motion
Lecture 5 - Free Vibration
Lecture 6 - Damped Free Vibration - Part 1
Lecture 7 - Damped Free Vibration - Part 2
Lecture 8 - Undamped Harmonic Excitations
Lecture 9 - Damped Harmonic Excitations
Lecture 10 - Frequency response curves
Lecture 11 - Transmissibility
Lecture 12 - Energy in Forced Vibrations
Lecture 13 - Unit impulse Functions
Lecture 14 - Step and Ramp Forces
Lecture 15 - Pulse Excitations
Lecture 16 - Numerical Response Methods
Lecture 17 - Seismic Response Spectra
Lecture 18 - Continuous systems
Lecture 19 - Lumped mass systems
Lecture 20 - Equation of motion
Lecture 21 - Equation of motion - examples
Lecture 22 - Mode shapes and frequencies
Lecture 23 - Free vibration - Undamped and Damped
Lecture 24 - Damping in MDOF Systems
Lecture 25 - Forced response of MDOF systems
Lecture 26 - Modal superposition Analysis
Lecture 27 - Response Spectrum Analysis
Lecture 28 - Concept of Seismic Isolation
Lecture 29 - Dynamics of Base-isolation Systems

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