

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

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

Subject Co-ordinator - Dr. Srinivasan Chandrasekaran

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Introduction to Offshore structures
- Lecture 2 - Introduction to Offshore structures (Continued...)
- Lecture 3 - Environmental Loads
- Lecture 4 - Structural action of Ocean structures
- Lecture 5 - Single Degree of Freedom
- Lecture 6 - Equations of Motion
- Lecture 7 - Free Vibration of SDOF systems
- Lecture 8 - Damped and Undamped Forced Vibration
- Lecture 9 - Damped Forced Vibration
- Lecture 10 - Response building
- Lecture 11 - Numerical Example (SDOF)
- Lecture 12 - Numerical Example II
- Lecture 13 - Numerical Example
- Lecture 14 - Numerical Example - MDOF
- Lecture 15 - Numerical Example - Eigen value problems
- Lecture 16 - Orthogonality of modes - MDOF system models
- Lecture 17 - Numerical Methods for MDOF systems
- Lecture 18 - Influence Coefficient Method - MDOF
- Lecture 19 - STODLA Method - MDOF
- Lecture 20 - Stodla Method - Examples
- Lecture 21 - Rayleighs Method
- Lecture 22 - Modal Response Analysis for MDOF
- Lecture 23 - Rayleigh Damping
- Lecture 24 - Caughey Damping
- Lecture 25 - Damping Matrix by Super Positioning Method
- Lecture 26 - Duhamels Integral
- Lecture 27 - Modal superposition and truncation
- Lecture 28 - Modal participation and missing mass corrections
- Lecture 29 - Fluid Structure Interaction

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- Lecture 30 - Fluid Structure Interaction - II
- Lecture 31 - Retrofitting and Rehabilitation - Application through Dynamics
- Lecture 32 - Drag and Earthquake Forces
- Lecture 33 - Articulated Towers
- Lecture 34 - Fluid Structure Interaction Application in Ocean Structure
- Lecture 35 - Response Control of Compliant Structures (MLAT)
- Lecture 36 - MLATs with Passive Dampers
- Lecture 37 - Tension Leg Platforms
- Lecture 38 - Tension Leg Platforms - II
- Lecture 39 - Fluid Structure Interaction.
- Lecture 40 - Dynamic Analysis of TLPs under Springing and Ringing Waves
- Lecture 41 - Numerical Integration
- Lecture 42 - Dynamic Analysis of Offshore Triceratops
- Lecture 43 - Stochastic Process
- Lecture 44 - Stochastic Process (Continued...)
- Lecture 45 - Response Spectrum - I
- Lecture 46 - Response Spectrum - II
- Lecture 47 - Return Period and Fatigue Damage