

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

NPTEL Video Course - Ocean Engineering - Marine Hydrodynamics

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Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction to Marine Hydrodynamics
Lecture 2 - Law of Conservation of Mass - Continuity of Equation
Lecture 3 - Streamlines and Flow Direction
Lecture 4 - Worked Examples on Various Types of Flow
Lecture 5 - Equation of Motion (Law of Conservation of Momentum)
Lecture 6 - Applications of Equations of Motion
Lecture 7 - Applications of Equations of Motion (Continued...)
Lecture 8 - Two Dimensional Flows
Lecture 9 - Two Dimensional Flows (Continued...)
Lecture 10 - Source, Sink and Doublet
Lecture 11 - Worked Examples on Two Dimensional Flows
Lecture 12 - Conformal Mapping and Joukowski Transformation
Lecture 13 - Uniform Flow Past an Elliptic Cylinder
Lecture 14 - Aerofoil theory
Lecture 15 - Aerofoil theory (Continued...)
Lecture 16 - Aerofoil theory (Continued...)
Lecture 17 - Schwarz - Christoffel Transformation
Lecture 18 - Motion of a cylinder
Lecture 19 - Vertex Motion
Lecture 20 - Irrotational Flow - A Bird's eyeview
Lecture 21 - Introduction to Water Waves
Lecture 22 - Basic Equation and Conditions of Water Waves
Lecture 23 - Water particle kinematics in wave motion
Lecture 24 - Capillary Gravity Waves
Lecture 25 - Linearised Long Wave Equation
Lecture 26 - Linearised Long Wave Equation (Continued...)
Lecture 27 - Wave motion in two layer fluids
Lecture 28 - Worked Examples on Wave Motion
Lecture 29 - Worked Examples on Wave Motion (Continued...)

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- Lecture 30 - Gravity wave transformation and energy rotation
- Lecture 31 - Gravity wave transformation and energy rotation (Continued...)
- Lecture 32 - Gravity wave transformation and energy rotation (Continued...)
- Lecture 33 - Navier - Stokes equation of motion
- Lecture 34 - Analysis of Basic Flow Problems
- Lecture 35 - Analysis of Basic Flow Problems (Continued...)
- Lecture 36 - Unsteady unidirectional flows
- Lecture 37 - Unsteady unidirectional flows (Continued...)
- Lecture 38 - An introduction to Boundary Layer Theory
- Lecture 39 - Solution methods for Boundary Layer Equations
- Lecture 40 - Solutions Methods for Boundary Layer Equations (Continued...)