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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Applied Mechanics
Subject Co-ordinator - Prof. Sanjeev Sanghi, Prof. R.K. Mittal
Co-ordinating Institute - IIT - Delhi
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Preliminary Concepts
Lecture 2 - Vector Analysis
Lecture 3 - Analysis of Forces
Lecture 4 - Analysis of Equilibrium
Lecture 5 - Structural Mechanics - Part-1
Lecture 6 - Structural Mechanics - Part-2
Lecture 7 - Friction and its Applications - Part-1
Lecture 8 - Friction and its Applications - Part-2
Lecture 9 - Friction and its Applications - Part-3
Lecture 10 - Properties of Surfaces - Part-1
Lecture 11 - Properties of Surfaces - Part-2
Lecture 12 - Properties of Surfaces - Part-3
Lecture 13 - Moments and Products of Inertia
Lecture 14 - Methods of Virtual Work and Potential Energy - Part-1
Lecture 15 - Methods of Virtual Work and Potential Energy - Part-2
Lecture 16 - Stability of Equilibrium
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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Management Science I
Subject Co-ordinator - Prof. Anuradha Sharma
Co-ordinating Institute - IIT - Delhi
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction
Lecture 2 - Motivation
Lecture 3 - Management
Lecture 4 - Work Ethics
Lecture 5 - Comparison Between Theories
Lecture 6 - Job Enrichment
Lecture 7 - Team Building and Participation
Lecture 8 - Other Leadership Styles
Lecture 9 - Empowerment
Lecture 10 - Barriers to Communication
Lecture 11 - Issues in Leadership
Lecture 12 - Participation Management and Team Working Part - 1
Lecture 13 - Participation Management and Team Working Part - 2
Lecture 14 - Participation Management and Team Working Part - 3
Lecture 15 - Participative Management and Team Working Part - 5
Lecture 16 - Organizations
Lecture 17 - Some Management Concepts - Part - 1
Lecture 18 - Some Management Concepts - Part - 2
Lecture 19 - Some Management Concepts - Part - 3
Lecture 20 - Diversity at Work Place and Management Issues
Lecture 21 - Industrial Relations and Conflict Management - Part - 1
Lecture 22 - Industrial Relations and Conflict Management - Part - 2
Lecture 23 - Selection and Training of Employees
Lecture 24 - Performance Management - Part - 1
Lecture 25 - Performance Management - Part - 2
Lecture 26 - Performance Management - Part - 3
Lecture 27 - Management Research
Lecture 28 - Corporate Social Responsibilities
Lecture 29 - Women, Work and Organizations
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Lecture 30 - Women, Work and Organizations

Lecture 31 - Selection, Recruitment and Training

Lecture 32 - Management of Change in Organization

Lecture 33 - Organizational Development

Lecture 34 - Values, Ethics and Corporate Social Responsibilities - Part - 1

Lecture 35 - Values, Ethics and Corporate Social Responsibilities - Part - 2

Lecture 36 - Management

Lecture 37 - Management

Lecture 38 - Management

Lecture 39 - Conclusions
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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Materials Science
Subject Co-ordinator - Prof. S.K. Gupta
Co-ordinating Institute - IIT - Delhi
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction
Lecture 2 - Internal Energy Enthalpy
Lecture 3 - Crystal Geometry
Lecture 4 - Crystal Geometry
Lecture 5 - Crystal Geometry
Lecture 6 - Crystal Structure
Lecture 7 - Close Packing of Spheres of Equal Size
Lecture 8 - Structure of Solid Materials
Lecture 9 - Non Crystalline Solids
Lecture 10 - Polymers (Continued)
Lecture 11 - Crystal Imperfections
Lecture 12 - Crystal Imperfections
Lecture 13 - Crystal Imperfections
Lecture 14 - Crystal Imperfections
Lecture 15 - Crystal Imperfections
Lecture 16 - Phase Diagrams
Lecture 17 - Phase Diagrams
Lecture 18 - Phase Diagrams
Lecture 19 - Diffusion in Solids
Lecture 20 - Diffusion in Solids
Lecture 21 - Phase Transformations
Lecture 22 - Phase Transformations
Lecture 23 - Phase Transformations
Lecture 24 - Transformations in Steels
Lecture 25 - Phase Transformations; Precipitation Hardening
Lecture 26 - Mechanical Behaviour of Materials
Lecture 27 - Plastic Deformation
Lecture 28 - Plastic Deformation
Lecture 29 - Plastic Deformation
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Lecture 30 - Strengthening Mechanisms Creep

Lecture 31 - Fracture

Lecture 32 - Conductors and Resistors Lecture 33 - Conductors and Resistors

Lecture 34 - Superconductors Lecture 35 - Superconductors Lecture 36 - Semiconductors

```
NPTEL Video Course - Basic Courses (Semester 1 and 2) - Numerical Methods and Computation
Subject Co-ordinator - Prof. S.R.K. Iyengar
Co-ordinating Institute - IIT - Delhi
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Errors in Computation and Numerical Instability
Lecture 2 - Solution of Nonlinear Algebraic Equations - Part 1
Lecture 3 - Solution of Nonlinear Algebraic Equations - Part 2
Lecture 4 - Solution of Nonlinear Algebraic Equations - Part 3
Lecture 5 - Solution of Nonlinear Algebraic Equations - Part 4
Lecture 6 - Solution of Nonlinear Algebraic Equations - Part 5
Lecture 7 - Solution of Nonlinear Algebraic Equations - Part 6
Lecture 8 - Solution of Nonlinear Algebraic Equations - Part 7
Lecture 9 - Solution of Nonlinear Algebraic Equations - Part 8
Lecture 10 - Solution of Nonlinear Algebraic Equations - Part 9
Lecture 11 - Solution of a System of Linear Algebraic Equations - Part 1
Lecture 12 - Solution of a System of Linear Algebraic Equations - Part 2
Lecture 13 - Solution of a System of Linear Algebraic Equations - Part 3
Lecture 14 - Solution of a System of Linear Algebraic Equations - Part 4
Lecture 15 - Solution of a System of Linear Algebraic Equations - Part 5
Lecture 16 - Solution of a System of Linear Algebraic Equations - Part 6
Lecture 17 - Solution of a System of Linear Algebraic Equations - Part 7
Lecture 18 - Solution of a System of Linear Algebraic Equations - Part 8
Lecture 19 - Solution of a System of Linear Algebraic Equations - Part 9
Lecture 20 - Solution of a System of Linear Algebraic Equations - Part 10
Lecture 21 - Solution of a System of Linear Algebraic Equations - Part 11
Lecture 22 - Solution of a System of Linear Algebraic Equations - Part 12
Lecture 23 - Solution of a System of Linear Algebraic Equations - Part 13
Lecture 24 - Solution of a System of Linear Algebraic Equations - Part 14
Lecture 25 - Interpolation and Approximation - Part 1
Lecture 26 - Interpolation and Approximation - Part 2
Lecture 27 - Interpolation and Approximation - Part 3
Lecture 28 - Interpolation and Approximation - Part 4
Lecture 29 - Interpolation and Approximation - Part 5
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Lecture 30 - Interpolation and Approximation - Part 6
Lecture 31 - Interpolation and Approximation - Part 7
Lecture 32 - Interpolation and Approximation - Part 8
Lecture 33 - Interpolation and Approximation - Part 9
Lecture 34 - Numerical Differentiation and Integration - Part 1
Lecture 35 - Numerical Differentiation and Integration - Part 2
Lecture 36 - Numerical Differentiation and Integration - Part 3
Lecture 37 - Numerical Differentiation and Integration - Part 4
Lecture 38 - Numerical Differentiation and Integration - Part 5
Lecture 39 - Numerical Differentiation and Integration - Part 6
Lecture 40 - Numerical Differentiation and Integration - Part 7
Lecture 41 - Numerical Differentiation and Integration - Part 8
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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Engineering Mechanics
Subject Co-ordinator - Prof. Manoj K Harbola
Co-ordinating Institute - IIT - Kanpur
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Engineering Mechanics
Lecture 2 - Equilibrium - I
Lecture 3 - Equilibrium - II
Lecture 4 - Equilibrium - III
Lecture 5 - Plan Trusses - I
Lecture 6 - Plan Trusses - II
Lecture 7 - Friction
Lecture 8 - Properties of Surfaces - I
Lecture 9 - Properties of Surfaces - II
Lecture 10 - Properties of Surfaces - III
Lecture 11 - Method of Virtual Work
Lecture 12 - Motion of Particles Planar Polar Coordinates
Lecture 13 - Motion With Constraints
Lecture 14 - Motion of Particle With Friction
Lecture 15 - Motion of Particles With Drag
Lecture 16 - Momentum
Lecture 17 - Work and Energy - I
Lecture 18 - Work and Energy - II
Lecture 19 - Work and Energy - III
Lecture 20 - Work and Energy - IV
Lecture 21 - Rotational Motion - I
Lecture 22 - Rotational Motion - II
Lecture 23 - Rotational Motion - III
Lecture 24 - Rotational Motion - IV
Lecture 25 - Rotational Motion - V
Lecture 26 - Rotational Motion - VI
Lecture 27 - Simple Harmonic Motion - I
Lecture 28 - Simple Harmonic Motion - II
Lecture 29 - Simple Harmonic Motion - III
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Lecture 30 - Motion in Uniformly Accelerating Frames
Lecture 31 - Motion In Rotating Frame

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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Engineering Physics II
Subject Co-ordinator - Prof. V. Ravishankar, Prof. S. Raychaudhuri
Co-ordinating Institute - IIT - Kanpur
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Module - 1 lecture - 1
Module - 1 lecture - 2
Module - 1 lecture - 3
Module - 1 lecture - 4
Module - 2 lecture - 1
Module - 2 lecture - 2
Module - 2 lecture - 3
Module - 2 lecture - 4
Module - 2 lecture - 5
Module - 3 lecture - 1
Module - 3 lecture - 2
Module - 3 lecture - 3
Module - 3 lecture - 4
Module - 3 lecture - 5 (Lecture Missing)
Module - 3 lecture - 6
Module - 3 lecture - 7
Module - 3 lecture - 8
Module - 4 lecture - 1
Module - 4 lecture - 2
Module - 4 lecture - 3
Module - 4 lecture - 4
Module - 4 lecture - 5
Module - 4 lecture - 6
Module - 4 lecture - 7
Module - 4 lecture - 8
Module - 4 lecture - 9
Module - 4 lecture - 10
Module - 4 lecture - 11
Module - 4 lecture - 12
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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Mathematics I
Subject Co-ordinator - Prof. Swagato K. Ray, Prof. Shobha Madan, Dr. P. Shunmugaraj
Co-ordinating Institute - IIT - Kanpur
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Real Number
Lecture 2 - Sequences I
Lecture 3 - Sequences II
Lecture 4 - Sequences III
Lecture 5 - Continuous Function
Lecture 6 - Properties of Continuous Function
Lecture 7 - Uniform Continuity
Lecture 8 - Differentiable Functions
Lecture 9 - Mean Value Theorem
Lecture 10 - Maxima - Minima
Lecture 11 - Taylor's Theorem
Lecture 12 - Curve Sketching
Lecture 13 - Infinite Series I
Lecture 14 - Infinite Series II
Lecture 15 - Tests of Convergence
Lecture 16 - Power Series
Lecture 17 - Riemann Integral
Lecture 18 - Riemann Integrable Functions
Lecture 19 - Applications of Riemann Integral
Lecture 20 - Length of a curve
Lecture 21 - Line Integrals
Lecture 22 - Functions of Several Variables
Lecture 23 - Differentiation
Lecture 24 - Derivatives
Lecture 25 - Mean Value Theorem
Lecture 26 - Maxima Minima
Lecture 27 - Method of Lagrange Multipliers
Lecture 28 - Multiple Integrals
Lecture 29 - Surface Integrals
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Lecture 30 - Green's Theorem Lecture 31 - Stokes Theorem

Lecture 32 - Gauss Divergence Theorem

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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Human Resource Management-I
Subject Co-ordinator - Prof. Kalyan Chakravarti
Co-ordinating Institute - IIT - Kharagpur
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Nature and Scope of HRM
Lecture 2 - Analysing and Designing Job - I
Lecture 3 - Analysing and Designing Job - II
Lecture 4 - Human Resource Planning - I
Lecture 5 - Human Resource Planning - II
Lecture 6 - Recruitment and Selection
Lecture 7 - Performance Evaluation and Appraisal - I
Lecture 8 - Performance Evaluation and Appraisal (Continued...)
Lecture 9 - Training and Development
Lecture 10 - Employee Welfare
Lecture 11 - Safety, Health, Environment
Lecture 12 - Industrial Relations
Lecture 13 - Total Quality Management
Lecture 14 - Organization Culture
Lecture 15 - Change Management - Part - I
Lecture 16 - Change Management - Part - II
Lecture 17 - Wage and Salary Administration
Lecture 18 - Career Planning - Part - I
Lecture 19 - Career Planning - Part - II
Lecture 20 - Contemporary Issues in HRM - I
Lecture 21 - Contemporary Issues in HRM - II
Lecture 22 - Contemporary Issues in HRM - III
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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Leadership
Subject Co-ordinator - Prof. Kalyan Chakravarti
Co-ordinating Institute - IIT - Kharagpur
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction to Leadership
Lecture 2 - Leadership Roles
Lecture 3 - Leadership Styles
Lecture 4 - Leadership Behaviour
Lecture 5 - Leadership Styles
Lecture 6 - Case
Lecture 7 - Leadership Skills
Lecture 8 - Competencies and Skills of Leaders
Lecture 9 - Case
Lecture 10 - Case
Lecture 11 - Case
Lecture 12 - Case
Lecture 13 - Case
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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Management Information System
Subject Co-ordinator - Prof. Biswajit Mahanty
Co-ordinating Institute - IIT - Kharagpur
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction - I
Lecture 2 - Introduction - II
Lecture 3 - Introduction - III
Lecture 4 - Concept of Information - I
Lecture 5 - Concept of Information - II
Lecture 6 - Decision Making Process
Lecture 7 - Impact of IS on Management - I
Lecture 8 - Impact of IS on Management - II
Lecture 9 - Hardware Software Overview - I
Lecture 10 - Hardware Software Overview - II
Lecture 11 - Knowledge Management
Lecture 12 - Learning Organization
Lecture 13 - Decision Analysis - I
Lecture 14 - Decision Analysis - II
Lecture 15 - Decision Analysis - III
Lecture 16 - Data Flow Diagrams - I
Lecture 17 - Data Flow Diagrams - II
Lecture 18 - Data Flow Diagrams - III
Lecture 19 - Data Flow Diagrams - IV
Lecture 20 - System Design - I
Lecture 21 - System Design - II
Lecture 22 - DBMS - I
Lecture 23 - DBMS - II
Lecture 24 - DBMS - III
Lecture 25 - DBMS - IV
Lecture 26 - DBMS - V
Lecture 27 - OOAD - I
Lecture 28 - OOAD - II
Lecture 29 - OOAD - III
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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Physics I - Oscillations and Waves
Subject Co-ordinator - Prof. S. Bharadwaj
Co-ordinating Institute - IIT - Kharagpur
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Simple Harmonic Oscillators
Lecture 2 - Damped Oscillator - I
Lecture 3 - Damped Oscillator - II
Lecture 4 - Oscillator With External Forcing - I
Lecture 5 - Oscillator With External Forcing
Lecture 6 - Resonance
Lecture 7 - Coupled Oscillations
Lecture 8 - Sinusoidal Plane Waves - I
Lecture 9 - Electromagnetic waves - I
Lecture 10 - Electromagnetic Waves - II
Lecture 11 - The Vector Nature of Electromagnetic Waves
Lecture 12 - The Electromagnetic Spectrum
Lecture 13 - The Electromagnetic Spectrum - II
Lecture 14 - Interference - I
Lecture 15 - Interference - II
Lecture 16 - Interference - III
Lecture 17 - Interference - IV
Lecture 18 - Coherence
Lecture 19 - Coherence
Lecture 20 - Diffraction - I
Lecture 21 - Diffraction - II
Lecture 22 - Diffraction - III
Lecture 23 - Diffraction - IV
Lecture 24 - X-Ray Diffraction
Lecture 25 - Beats
Lecture 26 - The Wave Equation
Lecture 27 - Solving the Wave Equation
Lecture 28 - Waves
Lecture 29 - Standing Waves
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Lecture 30 - Standing Waves
Lecture 31 - Polarization
Lecture 32 - Compton Effect
Lecture 33 - Wave - Particle Duality
Lecture 34 - Wave - Particle Duality
Lecture 35 - Probability Amplitude
Lecture 36 - Probability
Lecture 37 - Schrodinger Wave Equation
Lecture 38 - Measurements
Lecture 39 - Particle in a Potential
Lecture 40 - Potential Well
Lecture 41 - Potential Well
Lecture 42 - Potential Well
Lecture 43 - Quantum Tunneling
Lecture 44 - Quantum Tunneling
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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Strategic Management

Subject Co-ordinator - Prof. Kalyan Chakravarti

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Strategy

Lecture 2 - Strategy

Lecture 3 - Case Study - Group Presentation on Case - I (Baddi's Solvent)

Lecture 4 - Case Study - Group Presentation on Case - II

Lecture 5 - Case Study - Group Presentation on Case - III

Lecture 6 - Case Study - Group Presentation on Case - IV Form

Lecture 7 - Strategy

Lecture 8 - Strategy

Lecture 9 - Case Study

Lecture 10 - Case Study

Lecture 11 - Group Presentation - II
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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Basic Electronics and Lab
Subject Co-ordinator - Prof. T.S. Natarajan
Co-ordinating Institute - IIT - Madras
Sub-Titles - Available / Unavailable
                                        MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction to Basic Electronics
Lecture 2 - Electronic Devices 1
Lecture 3 - Electronics Devices II Resistor in series and parallel
Lecture 4 - Some Useful Laws in Basic Electronics
Lecture 5 - Some Useful Theorems in Basic Electronics
Lecture 6 - Semi Conductor Diodes
Lecture 7 - Applications of Diodes
Lecture 8 - Wave Shaping using Diodes
Lecture 9 - Zener Diode Characteristics
Lecture 10 - Transistors
Lecture 11 - Transistor Biasing - Common Emitter Circuits, Fixed Bias, Collector to base Bias
Lecture 12 - Transistor Biasing - Emitter Current Bias, Thermal Stability (RC Coupled Amplifier)
Lecture 13 - Basic Characteristic of an Amplifier - Simple Transistor model, Common emitter Amplifier
Lecture 14 - Hybrid Equivalent Circuit, H-Parameters
Lecture 15 - Circuit Analysis using H-Parameters
Lecture 16 - Frequency Response of Amplifiers
Lecture 17 - Frequency Analysis
Lecture 18 - Power Amplifiers
Lecture 19 - Differential Amplifiers Circuit
Lecture 20 - Integrated Chip
Lecture 21 - Typical Characteristic of Operation Amplifier
Lecture 22 - Four Types of Feed Back
Lecture 23 - Four Types of Feed Back
Lecture 24 - Mathematical Operations
Lecture 25 - Mathematical Operations
Lecture 26 - Mathematical Operations
Lecture 27 - Characteristics of Operation Amplifier
Lecture 28 - Characteristics of Operation Amplifier
Lecture 29 - Characteristics of Operation Amplifier
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Lecture 30 - Inverter/Non-Inverter Circuits
Lecture 31 - Applications of Op Amps
Lecture 32 - Non-Linear Op Amp circuits
Lecture 33 - Applications of Op Amps
Lecture 34 - Active Diode Circuits
Lecture 35 - Oscillators
Lecture 36 - Logarithmic and Anti-Logarithmic Amplifier
Lecture 37 - Filters
Lecture 38 - Unit Junction Transistor
Lecture 39 - Silicon Controlled Rectifier
Lecture 40 - Field Effect Transistor

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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Classical Physics
Subject Co-ordinator - Prof. V. Balakrishnan
Co-ordinating Institute - IIT - Madras
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction
Lecture 2 - Newtonian mechanics
Lecture 3 - Dynamics in phase space
Lecture 4 - Linear dynamical systems
Lecture 5 - Autonomous dynamical systems (Part 1)
Lecture 6 - Autonomous dynamical systems (Part 2)
Lecture 7 - Lagrangian formalism
Lecture 8 - Summary of classical electromagnetism
Lecture 9 - Charged particle in an electromagnetic fi eld
Lecture 10 - Hamiltonian dynamics (Part 1)
Lecture 11 - Hamiltonian dynamics (Part 2)
Lecture 12 - Hamiltonian dynamics (Part 3)
Lecture 13 - Dynamical symmetry (Part 1)
Lecture 14 - Dynamical symmetry (Part 2)
Lecture 15 - Randomness in phase space; chaos
Lecture 16 - Discrete-time dynamics
Lecture 17 - Discrete-time dynamics
Lecture 18 - Problems and solutions (Part 1)
Lecture 19 - Problems and solutions (Part 2)
Lecture 20 - Classical statistical mechanics
Lecture 21 - Some probability distributions; isolated system
Lecture 22 - The microcanonical emsemble
Lecture 23 - Thermodynamics
Lecture 24 - The canonical ensemble
Lecture 25 - Connection between statistical mechanics and ther-modynamics
Lecture 26 - Probability distributions
Lecture 27 - Probability distributions (concld.). Phase transitions (Part 1)
Lecture 28 - Phase transitions (Part 2)
Lecture 29 - Phase transitions (Part 3)
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Lecture 30 - Phase transitions (Part 4); misc. topics
Lecture 31 - Problems and solutions (Part 3)
Lecture 32 - Continuous groups in physics (Part 1)
Lecture 33 - Continuous groups in physics (Part 2)
Lecture 34 - Continuous groups in physics (Part 3)
Lecture 35 - Noether's Theorem. Special Relativity (Part 1)
Lecture 36 - Special Relativity (Part 2)
Lecture 37 - Special Relativity (Part 3)
Lecture 38 - Special Relativity (Part 4)
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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Engineering Chemistry I

Subject Co-ordinator - Prof. K. Mangala Sunder

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction to Chemistry & Quantum Chemical Mechanics

Lecture 2 - Particle in a box (one and two dimensions)

Lecture 3 - Particle in a box (One and Two Dimensions) Continued

Lecture 4 - Harmonic Oscillator and Molecular Vibration

Lecture 5 - Harmonic Oscillator (Continued)

Lecture 6 - Hydrogen Atom - Radial Solution

Lecture 7 - Hydrogen Atom Part III Angular Solutions

Lecture 8 - Hydrogen Atom - Angular Solutions (Continued)

Lecture 9 - Hydrogen Atom - Angular Solutions (Continued)

Lecture 10 - Oppenheimer Approximation and Superposition
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```
NPTEL Video Course - Basic Courses (Semester 1 and 2) - Numerical Methods and Programing
Subject Co-ordinator - Prof. P.B. Sunil Kumar
Co-ordinating Institute - IIT - Madras
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Programing Basics
Lecture 2 - Introduction to Pointers
Lecture 3 - Pointers And Arrays
Lecture 4 - External Functions and Argument Passing
Lecture 5 - Representation of Numbers
Lecture 6 - Numerical Error
Lecture 7 - Error Propagation and Stability
Lecture 8 - Polynomial Interpolation-1
Lecture 9 - Polynomial Interpolation-2
Lecture 10 - Error In Interpolation Polynomial
Lecture 11 - Polynomial Interpolation
Lecture 12 - Cubic Spline Interpolation
Lecture 13 - Data Fitting
Lecture 14 - Data Fitting
Lecture 15 - Data Fitting
Lecture 16 - Matrix Elimination and Solution
Lecture 17 - Solution To Linear Equations
Lecture 18 - Matrix Elimination
Lecture 19 - Eigen Values of A Matrix
Lecture 20 - Eigen Values And Eigen Vectors
Lecture 21 - Solving NonLinear Equations
Lecture 22 - Solving NonLinear Equations Newton Raphson Method
Lecture 23 - Methods For Solving NonLinear Equations
Lecture 24 - System of NonLinear Equations
Lecture 25 - Numerical Derivations
Lecture 26 - High order Derivatives From Difference Formula
Lecture 27 - Numerical Integration - Basic Rules
Lecture 28 - Comparison of Different Basic Rules
Lecture 29 - Gaussian Rules
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Lecture 30 - Comparison of Gaussian Rules
Lecture 31 - Solving Ordinary Differential Equations
Lecture 32 - Solving ordinary differential equations
Lecture 33 - Adaptive step size Runge Kutta scheme
Lecture 34 - Partial Differential Equations
Lecture 35 - Explicit and Implicit Methods
Lecture 36 - The Crank - Nicholson Scheme For Two Spatial
Lecture 37 - Fourier Transforms
Lecture 38 - Fast Fourier Transforms

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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Quantum Physics
Subject Co-ordinator - Prof. V. Balakrishnan
Co-ordinating Institute - IIT - Madras
                                         MP3 Audio Lectures - Available / Unavailable
Sub-Titles - Available / Unavailable
Lecture 1 - Introduction to Quantum Physics; Heisenberg's uncertainty principle
Lecture 2 - Introduction to linear vector spaces
Lecture 3 - Characteristics of linear vector spaces
Lecture 4 - Functions in a linear vector space
Lecture 5 - Linear operations in a linear vector space and their eigenvalues
Lecture 6 - Classical Vs Quantum Mechanics
Lecture 7 - Quantum Physics
Lecture 8 - Quantum Physics
Lecture 9 - Quantum Physics
Lecture 10 - Quantum Physics
Lecture 11 - Quantum Physics
Lecture 12 - Quantum Physics
Lecture 13 - Quantum Physics
Lecture 14 - Quantum Physics
Lecture 15 - Quantum Physics
Lecture 16 - Quantum Physics
Lecture 17 - Quantum Physics
Lecture 18 - Quantum Physics
Lecture 19 - Quantum Physics
Lecture 20 - Quantum Physics
Lecture 21 - Quantum Physics
Lecture 22 - Quantum Physics
Lecture 23 - Quantum Physics
Lecture 24 - Quantum Physics
Lecture 25 - Quantum Physics
Lecture 26 - Quantum Physics
Lecture 27 - Quantum Physics
Lecture 28 - Quantum Physics
Lecture 29 - Ouantum Physics
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Lecture 30 - Quantum Physics Lecture 31 - Quantum Physics

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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Engineering Physics I
Subject Co-ordinator - Prof. Rajdeep Chatterjee, Prof. B.K. Patra, Prof. M.K. Srivastava, Prof. G.D. Verma
Co-ordinating Institute - IIT - Roorkee
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction
Lecture 2 - Malus law & Superposition of ways
Lecture 3 - Double Refraction
Lecture 4 - Interference of polarized light
Lecture 5 - Optical Activity
Lecture 6 - Introduction
Lecture 7 - Stationary Waves & Reflection, Refraction and Diffraction
Lecture 8 - Ultrasonics
Lecture 9 - Acoustics of Buildings - Part I
Lecture 10 - Acoustics of Buildings - Part II
Lecture 11 - Interference of light Part-1
Lecture 12 - Interference of light Part-2
Lecture 13 - Interference of light Part-3
Lecture 14 - Interference by Division of Wave front
Lecture 15 - Interference by Division of Amplitude
Lecture 16 - Coherence and Application of Interference
Lecture 17 - Diffraction Part-1
Lecture 18 - Diffraction Part-2
Lecture 19 - Diffraction Part-3
Lecture 20 - Diffraction by a circular aperture
Lecture 21 - Kinetic theory of gases - Part-1
Lecture 22 - Kinetic theory of gases - Part-2
Lecture 23 - Maxwellian distribution law of velocity - Part-1
Lecture 24 - Maxwellian distribution law of velocity - Part-2
Lecture 25 - Maxwellian distribution law of velocity - Part-3
Lecture 26 - Vanderwaal's equation of states - Part-1
Lecture 27 - Vanderwaal's equation of states - Part-2
Lecture 28 - Vanderwaal's equation of states - Part-3
Lecture 29 - Fluid Mechanics - Part-1
```

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Lecture 30 - Fluid Mechanics - Part-2
Lecture 31 - Introduction of special relativity
Lecture 32 - Consequences of special relativity-1
Lecture 33 - Consequences of special relativity-2
Lecture 34 - Consequences of special relativity-3
Lecture 35 - Consequences of special relativity-4
Lecture 36 - Consequences of special relativity-4
Lecture 37 - Introduction
Lecture 38 - Image formation by lenses
Lecture 39 - Lens aberrations - Part I
Lecture 40 - Lens aberrations - Part II
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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Mathematics II
Subject Co-ordinator - Dr. Sunita Gakkhar, Prof. H.G. Sharma, Dr. Tanuja Srivastava
Co-ordinating Institute - IIT - Roorkee
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Complex Integration
Lecture 2 - Contour Integration
Lecture 3 - Cauchy's Integral Theorem
Lecture 4 - Cauchy's Integral Formula
Lecture 5 - Application of Cauchy Integral Formula
Lecture 6 - Zeros, Singularities and Poles
Lecture 7 - Residue Integration Method
Lecture 8 - Residue Theorem
Lecture 9 - Evaluation of Real Integrals
Lecture 10 - Evaluation of Real Improper Integrals-1
Lecture 11 - Evaluation of Real Improper Integrals-2
Lecture 12 - Evaluation of Real Improper Integrals-3
Lecture 13 - Evaluation of Real Improper Integrals-4
Lecture 14 - Evaluation of Real Integrals - Revision
Lecture 15 - Matrix Algebra Part - 1
Lecture 16 - Matrix Algebra Part - 2
Lecture 17 - Determinants Part - 1
Lecture 18 - Determinants Part - 2
Lecture 19 - Solution of System Equation
Lecture 20 - Linear Algebra Part - 1
Lecture 21 - Linear Algebra part - 2
Lecture 22 - Linear Algebra Part - 3
Lecture 23 - Linear Algebra Part - 4
Lecture 24 - Inner Product
Lecture 25 - Linear Transformation Part - 1
Lecture 26 - Linear Transformation Part - 2
Lecture 27 - Eigenvalues Eigenvectors Part - 1
Lecture 28 - Eigenvalues Eigenvectors Part - 2
Lecture 29 - Ouadratic Forms
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Lecture 30 - Diagonalization Part - 1
Lecture 31 - Diagonalization Part - 2
Lecture 32 - Solution of System of Linear Equation
Lecture 33 - Functions of Complex Variables Part - 1
Lecture 34 - Functions of Complex Variables Part - 2
Lecture 35 - Taylor Series
Lecture 36 - Laurent Series
Lecture 37 - Rank of a Matrix
Lecture 38 - Complex Numbers Their Geometrical Representation
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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Mathematics III
Subject Co-ordinator - Prof. P.N. Agrawal, Dr. Tanuja Srivastava
Co-ordinating Institute - IIT - Roorkee
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Solution of ODE of First Order and First Degree
Lecture 2 - Linear Differential Equations of the First Order
Lecture 3 - Approximate Solution of An Initial Value
Lecture 4 - Series Solution of Homogeneous Linear I
Lecture 5 - Series Solution of Homogeneous Linear II
Lecture 6 - Bessel Functions and Their Properties
Lecture 7 - Bessel Functions And Their Properties (Continued..)
Lecture 8 - Laplace Transformation
Lecture 9 - Laplace Transformation (Continued..)
Lecture 10 - Applications Of Laplace Transformation
Lecture 11 - Applications Of Laplace Transformation (Continued..)
Lecture 12 - One Dimensional Wave Equation
Lecture 13 - One Dimensional Heat Equation
Lecture 14 - Introduction to Differential Equation
Lecture 15 - First Order Differential Equations and Their Geometric Interpretation
Lecture 16 - Differential Equations of First Order Higher Degree
Lecture 17 - Linear Differential Equation of Second Order-Part - 1
Lecture 18 - Linear Differential equation of Second Order-Part - 2
Lecture 19 - Euler-Cauchy Theorem
Lecture 20 - Higher Order Linear Differential Equations
Lecture 21 - Higher Order Non homogeneous Linear Equations
Lecture 22 - Boundary Value Problems
Lecture 23 - Strum Liouville boundary Value Problem
Lecture 24 - Fourier Series-Part - 1
Lecture 25 - Fourier Series-Part - 2
Lecture 26 - Convergence of the Fourier Series
Lecture 27 - Fourier Integrals
Lecture 28 - Fourier Transforms
Lecture 29 - Partial Differential Equation
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Lecture 30 - First Order Partial Differential Equation
Lecture 31 - Second Order Partial Differential Equations - I
Lecture 32 - Second Order Partial Differential Equations - II
Lecture 33 - Solution of One Dimensional Wave Equation
Lecture 34 - Solution of HomogeneousNon Homogeneous Equations
Lecture 35 - Fourier Integral Transform Method for Heat Equation
Lecture 36 - Three Dimensional Laplace Equation
Lecture 37 - Solution of Drichlet Problem
Lecture 38 - Numerical Method for Laplace Poisson equation
Lecture 39 - ADI Method for Laplace and Poisson Equation

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NPTEL Video Course - Basic Courses (Semester 1 and 2) - Concept of Management and Evolution of Management Tho
Subject Co-ordinator - Prof. K.B. Akhilesh
Co-ordinating Institute - IISc - Bangalore
Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable
Lecture 1 - Introduction - Concept of Management
Lecture 2 - Lecture 2
Lecture 3 - Management By Objectives
Lecture 4 - Organizing & Organization
Lecture 5 - Organizing - II
Lecture 6 - Coordinating
Lecture 7 - Communication - I
Lecture 8 - Communication - II
Lecture 9 - Leadership
Lecture 10 - Controlling
Lecture 11 - Motivation and Organization Culture
Lecture 12 - Japanese Management
Lecture 13 - Comparison of Japanese and American Management
Lecture 14 - Managerial Functions in International Business
Lecture 15 - Marketing Functions
Lecture 16 - Management and Society
Lecture 17 - Social Responsibility and Ethics - II
Lecture 18 - Functions of Personnel Management
Lecture 19 - Manpower Planning
Lecture 20 - Selection - I
Lecture 21 - Selection - II
Lecture 22 - Performance Appraisal - I
Lecture 23 - Performance Appraisal - II
Lecture 24 - Training and Development - I
Lecture 25 - Training and Development - II
Lecture 26 - Job Design and Payment Systems - I
Lecture 27 - Job Design and Compensation Systems
Lecture 28 - Organizational Development - I
Lecture 29 - Organizational Development - II
```

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Lecture 30 - Organization Theory - I
Lecture 31 - Organization Theory - II
Lecture 32 - Group Dynamics - I
Lecture 33 - Group Dynamics - II
Lecture 34 - Group Dynamics - III
Lecture 35 - Conflict Management - I
Lecture 36 - Conflict Management - II
Lecture 37 - Managing Creativity and Innovation
Lecture 38 - Creativity and Managing Innovation Process - II
Lecture 39 - Stress Management - I
Lecture 40 - Stress Management - II
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