

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

NPTEL Video Course - Mechanical Engineering - NOC:Design of Mechanical Transmission Systems

Subject Co-ordinator - Prof. Ramkumar

Co-ordinating Institute - IIT - Madras

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

- Lecture 1 - Course Introduction, Evaluation, and Application of Gearbox
- Lecture 2 - Machine Tool Gearbox: GP, Step Ratio, Preferred Numbers, Structural Formula and Rules of Optimum
- Lecture 3 - Machine Tool Gearbox: Ray Diagram Construction
- Lecture 4 - Machine Tool Gearbox: Kinematic Diagram Construction
- Lecture 5 - Machine Tool Gearbox: Centre Distance and Teeth Calculation
- Lecture 6 - Machine Tool Gearbox: Problem Solving
- Lecture 7 - Automobile Gearbox: General Engine Operation and Transmission Types
- Lecture 8 - Automobile Gearbox: Saw Tooth Diagram and Design Procedure for Gearbox
- Lecture 9 - Automobile Gearbox: Problem Solving and Tyre Specification
- Lecture 10 - Automobile Gearbox: Basic Transmission Types and Kinematic Diagram
- Lecture 11 - Automobile Gearbox: Gear Failures and Material Selection
- Lecture 12 - Automobile Gearbox: Module Calculation Concept - Part I
- Lecture 13 - Automobile Gearbox: Module Calculation Concept - Part II
- Lecture 14 - Automobile Gearbox: Shaft Design, Lubrication Selection and Method
- Lecture 15 - Automobile Gearbox: Bearing Selection and Gearbox Losses
- Lecture 16 - Brake: Introduction, Working Principle and Types
- Lecture 17 - Brake: Torque Requirement for Drum Brake Systems
- Lecture 18 - Brake: Problem Solving
- Lecture 19 - Brake: Torque Requirement for Disc Brake Systems
- Lecture 20 - Brake: Static and Dynamic Analysis
- Lecture 21 - Brake: Dynamic Analysis - Brake Force Distribution and Optimum
- Lecture 22 - Brake: Problem Solving
- Lecture 23 - Brake: Braking Efficiency and Distance and Brake Factor
- Lecture 24 - Brake: Problem Solving and Friction Materials
- Lecture 25 - Brake: Thermal Analysis and Braking Conditions
- Lecture 26 - Brake: Energy and Power, Braking Power Absorbed by Lining and Drum/Disc
- Lecture 27 - Brake: Single Stop Braking and Repeated Braking - Temperature Analysis
- Lecture 28 - Brake: Thermal Analysis Problem Solving
- Lecture 29 - Clutch: Types and Working Method

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- Lecture 30 - Clutch: Torque Transmitting Capacity - Uniform Pressure and Wear Theories
- Lecture 31 - Clutch: Multiple Discs and Cone Clutches, Problem Solving
- Lecture 32 - Clutch: Centrifugal Clutch
- Lecture 33 - Clutch: Dynamic Analysis
- Lecture 34 - Clutch: Dynamic Analysis Problem Solving