

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

NPTEL Video Course - Electrical Engineering - Control Engineering (Prof. S.D. Agashe)

Subject Co-ordinator - Prof. S.D. Agashe

Co-ordinating Institute - IIT - Bombay

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

- Lecture 1 - The Control Problem
- Lecture 2 - Some More Examples
- Lecture 3 - Different Kinds of Control Systems
- Lecture 4 - History of Feedback
- Lecture 5 - Modern Control Problems
- Lecture 6 - DC Motor Speed Control
- Lecture 7 - System Modelling, Analogy
- Lecture 8 - Causes of System Error
- Lecture 9 - Calculation of Error
- Lecture 10 - Control System Sensitivity
- Lecture 11 - Automatic Control of DC Motor
- Lecture 12 - Proportional Control
- Lecture 13 - Non-Unity Feedback
- Lecture 14 - Signal-Flow Graph
- Lecture 15 - Mason's Gain Formula
- Lecture 16 - Signal-Flow Graph for DC Motor Control
- Lecture 17 - Steady-State Calculations
- Lecture 18 - Differential Equation Model and Laplace Transformation Model
- Lecture 19 - D-Operator Method
- Lecture 20 - Second-Order System Response
- Lecture 21 - Frequency Response
- Lecture 22 - Laplace Transformation Theorems
- Lecture 23 - Final Value Theorem
- Lecture 24 - Transfer Function and Pole-Zero Diagram
- Lecture 25 - 'Good' Poles and 'Bad' Poles
- Lecture 26 - Signal Flow Graph with Transfer Functions
- Lecture 27 - s-Domain and t-Domain
- Lecture 28 - Second-Order System Response in s-Domain
- Lecture 29 - Integral Feedback

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- Lecture 30 - Root-Locus Method
- Lecture 31 - Root-Locus Rules
- Lecture 32 - Asymptotes of Root Locus
- Lecture 33 - Routh Array
- Lecture 34 - Singular Cases
- Lecture 35 - Closed Loop Poles
- Lecture 36 - Controller in the Forwarded Path
- Lecture 37 - Mapping of Control in the Complex-Plane
- Lecture 38 - Encirclement by a Curve
- Lecture 39 - Nyquist Criterion
- Lecture 40 - Application of the Nyquist Criterion
- Lecture 41 - Polar Plot and Bode Plots
- Lecture 42 - Logarithmic Scale for Frequency
- Lecture 43 - 'Asymptotic' DB Gain
- Lecture 44 - Compensating Network
- Lecture 45 - Nichols' Chart
- Lecture 46 - Time Domain Methods of Analysis and Design
- Lecture 47 - State-Variable Equations