

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

NPTEL Video Course - Electrical Engineering - Modelling and Analysis of Electric Machines

Subject Co-ordinator - Dr. Krishna Vasudevan

Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Introduction

Lecture 2 - Magnetic Fields

Lecture 3 - Magnetic Circuit

Lecture 4 - Singly Excited Linear Motion System

Lecture 5 - Linear and Cylindrical Motion Systems

Lecture 6 - Systems with Multiple Excitations

Lecture 7 - Non-linear Magnetic Systems

Lecture 8 - Inductances in Constant Air gap Machines

Lecture 9 - Inductance in Salient Pole Machine - I

Lecture 10 - Inductance in Salient Pole Machine - II

Lecture 11 - Inductance in Salient Pole Machine - III

Lecture 12 - Inductance in Salient Pole Machine - IV

Lecture 13 - Inductance in Salient Pole Machine - V

Lecture 14 - Inductances of Distributed Winding - I

Lecture 15 - Inductances of Distributed Winding - II

Lecture 16 - Inductances of Distributed Winding - III

Lecture 17 - Dynamic Equations of Induction Machines

Lecture 18 - Dynamic Equations of Salient Pole Synchronous Machine

Lecture 19 - Three-to-Two Phase Transformation

Lecture 20 - Induction Machine in Two-Phase Reference Frame

Lecture 21 - The Pseudo-Stationary Reference Frame

Lecture 22 - Induction Machine in Pseudo-Stationary Reference Frame

Lecture 23 - The Primitive Machine Equations

Lecture 24 - Dynamic Equations of DC Machines

Lecture 25 - Small Signal Model of DC Machine

Lecture 26 - Small Signal Behaviour of DC Machine

Lecture 27 - The Arbitrary Reference Frame

Lecture 28 - Induction Machine Equations in Arbitrary, Synchronous Reference Frames and Small Signal Modelling

Lecture 29 - Introduction to Field Oriented Control of Induction Machines

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- Lecture 30 - Space Vector Formulation of Induction Machine Equations
- Lecture 31 - Modelling of Salient Pole Synchronous Machines - I
- Lecture 32 - Modelling of Salient Pole Synchronous Machines - II
- Lecture 33 - Modelling of Salient Pole Synchronous Machines - III
- Lecture 34 - Steady State Models - Induction Machine
- Lecture 35 - Steady State Models - Salient Pole Synchronous Machine
- Lecture 36 - Solution of Dynamic Equations of Induction Machine - I
- Lecture 37 - Solution of Dynamic Equations of Induction Machine - II
- Lecture 38 - Reactances of Salient Pole Synchronous Machines - I
- Lecture 39 - Reactances of Salient Pole Synchronous Machines - II
- Lecture 40 - Reactances of Salient Pole Synchronous Machines - III
- Lecture 41 - Sudden Short Circuit of Three Phase Alternator - Analytical Solution
- Lecture 42 - Sudden Short Circuit of Three Phase Alternator - Numerical Simulation
- Lecture 43 - Course Recapitulation and Assignments