

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

NPTEL Video Course - Electrical Engineering - NOC:Electromagnetic Waves in Guided and Wireless Media

Subject Co-ordinator - Dr. Pradeep Kumar K

Co-ordinating Institute - IIT - Kanpur

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

Lecture 1 - Introduction and Types of Transmission Lines
Lecture 2 - Distributed Circuit Model of Uniform Transmission Line
Lecture 3 - Voltage and Current Equation of the Transmission line
Lecture 4 - Sinusoidal Excitation of Transmission Line (Propagation constant, Characteristic Impedance)
Lecture 5 - Properties of Transmission Line (Reflection Coefficient, Input Impedance, Standing Wave Ratio)
Lecture 6 - Power Calculations and Introduction to Smith Chart
Lecture 7 - Smith Chart
Lecture 8 - Additional Applications of Smith Chart
Lecture 9 - Time domain Analysis of Transmission Line - I
Lecture 10 - Time domain Analysis of Transmission Line - II
Lecture 11 - Usage of Lattice Diagrams
Lecture 12 - TDR analysis of Transmission Lines
Lecture 13 - Introduction to Propagation of Electromagnetic Waves
Lecture 14 - Uniform Plane Waves - I
Lecture 15 - Uniform Plane Waves - II
Lecture 16 - Poynting Vector, Average Power, Polarization
Lecture 17 - Uniform Plane Waves in Lossy Medium
Lecture 18 - Normal Incidence of Plane Waves
Lecture 19 - Oblique Incidence of Plane Waves - I
Lecture 20 - Oblique Incidence of Plane Waves - II
Lecture 21 - Total Internal Reflection
Lecture 22 - Slab Waveguides
Lecture 23 - Optical Fibers
Lecture 24 - Parallel Plate Waveguides
Lecture 25 - Rectangular Waveguides
Lecture 26 - Modes of Rectangular Waveguides
Lecture 27 - Waveguides summary and Introduction to Radiation
Lecture 28 - Solution to Electric Scalar Potential and Magnetic Vector Potential Equations
Lecture 29 - Further discussion on Magnetic Vector Potential and Elementary Hertzian Dipole

Get Digi-MAT (Digital Media Access Terminal) For High-Speed Video Streaming of NPTEL and Educational Video Courses in LAN

www.digimat.in

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

- Lecture 30 - Near field and Far-field Antenna and Properties of Antennas
- Lecture 31 - Linear antenna - I
- Lecture 32 - Linear antenna - II and Properties of Transmitting and Receiving Antenna
- Lecture 33 - Friis Transmission Formula
- Lecture 34 - Antenna Array
- Lecture 35 - Wireless Channel
- Lecture 36 - Further discussion on Wireless Channel Modelling
- Lecture 37 - Diffraction - I
- Lecture 38 - Diffraction - II
- Lecture 39 - Distribution of Laser Beam
- Lecture 40 - Interference (Double slit experiment, Fabry Perot Interferometer)
- Lecture 41 - Summary