

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

NPTEL Video Course - Physics - NOC:Wave Optics

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Co-ordinating Institute - IIT - Kharagpur

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

- Lecture 1 - Introduction
- Lecture 2 - Introduction (Continued...)
- Lecture 3 - Concept of wave, Wave Equation
- Lecture 4 - Plane wave, Spherical wave
- Lecture 5 - Maxwell's wave equation, Poynting Vector
- Lecture 6 - Superposition of waves
- Lecture 7 - Superposition of wave (Complex method)
- Lecture 8 - Random and coherent source, standing wave formation
- Lecture 9 - Group and Phase velocity
- Lecture 10 - Material Dispersion
- Lecture 11 - Material Dispersion (Continued...)
- Lecture 12 - Concept of Coherence
- Lecture 13 - Concept of Coherence (Continued...)
- Lecture 14 - Concept of Coherence (Continued...)
- Lecture 15 - Concept of Coherence (Continued...)
- Lecture 16 - Two beam interference
- Lecture 17 - Young's double slit experiment
- Lecture 18 - Young's double slit experiment (Continued...)
- Lecture 19 - Interference by division of amplitude
- Lecture 20 - Interference by division of amplitude (Continued...)
- Lecture 21 - Newton's Ring
- Lecture 22 - Newton's Ring (Continued...)
- Lecture 23 - Newton's Ring (Continued...)
- Lecture 24 - Optical Interferometers
- Lecture 25 - Michelson Interferometer
- Lecture 26 - Multiple beam interference
- Lecture 27 - Fabry-Perot Interferometer
- Lecture 28 - Fabry-Perot Interferometer (Continued...)
- Lecture 29 - Resolving power of Fabry-Perot interferometer

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- Lecture 30 - Diffraction of Light
- Lecture 31 - Huygenâ s Theory
- Lecture 32 - Fraunhofer Diffraction
- Lecture 33 - Single-slit Diffraction
- Lecture 34 - Single-slit Diffraction (Continued...)
- Lecture 35 - Doubleâ Slit Diffraction
- Lecture 36 - Multiâ Slit Diffraction
- Lecture 37 - Multi-Slit Diffraction (Continued...)
- Lecture 38 - Grating spectra
- Lecture 39 - Grating spectra (Continued...)
- Lecture 40 - Resolving power of grating
- Lecture 41 - Fraunhofer diffraction for a circular aperture
- Lecture 42 - Fraunhofer diffraction for a rectangular aperture
- Lecture 43 - Fresnel Diffraction
- Lecture 44 - Fresnelâ s half period zone
- Lecture 45 - Fresnelâ s half period zone (Continued...)
- Lecture 46 - Zone Plate
- Lecture 47 - Fresnelâ s diffraction from an aperture
- Lecture 48 - Fresnelâ s diffraction for a circular aperture
- Lecture 49 - Fresnelâ s diffraction for a rectangular aperture
- Lecture 50 - Fresnelâ s diffraction for a rectangular aperture (Continued...)
- Lecture 51 - Fresnelâ s diffraction for semi-infinite opaque screen
- Lecture 52 - Polarization of light (Basic concept)
- Lecture 53 - Circularly polarized light
- Lecture 54 - Matrix treatment of polarization
- Lecture 55 - Jones Matrix for polarization
- Lecture 56 - Jones Matrix for polarization (Continued...)
- Lecture 57 - Jones Matrix for polarization (Continued...)
- Lecture 58 - Jones Matrix for polarization (Continued...)
- Lecture 59 - Jones matrix for polarization (Continued...)
- Lecture 60 - Production of polarized light
- Lecture 61 - Production of polarized light (Continued...)
- Lecture 62 - Birefringent Crystal
- Lecture 63 - Birefringent Crystal (Continued...)
- Lecture 64 - Index Ellipsoid
- Lecture 65 - Analyzing Polarised Light
- Lecture 66 - Babinet Compensator