

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

NPTEL Video Course - Physics - NOC:Experimental Physics-II

Subject Co-ordinator - Prof. Amal Kumar Das

Co-ordinating Institute - IIT - Kharagpur

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

Lecture 1 - Introduction

Lecture 2 - Summary of Experimental Physics - I

Lecture 3 - Summary of Experimental Physics - I (Continued...)

Lecture 4 - Summary of Experimental Physics - I (Continued...)

Lecture 5 - Summary of Experimental Physics - I (Continued...)

Lecture 6 - Basic analysis

Lecture 7 - Basic analysis (Continued...)

Lecture 8 - Basic components

Lecture 9 - Basic components (Continued...)

Lecture 10 - Basic components (Continued...)

Lecture 11 - Basic idea on mirrors and lenses and their applications

Lecture 12 - Determination of focal length of concave mirror

Lecture 13 - Determination of focal length of concave mirror (Continued...)

Lecture 14 - Determination of focal length of convex mirror

Lecture 15 - Determination of focal length of convex lens

Lecture 16 - Determination of focal length of concave lens

Lecture 17 - Determination of focal length of convex lens by displacement method

Lecture 18 - Applications of mirrors and lenses

Lecture 19 - Determination of refractive index of liquid using travelling microscope

Lecture 20 - Basic discussion on spectrometer and prism

Lecture 21 - Basic discussion on spectrometer and prism (Continued...)

Lecture 22 - Basic discussion on spectrometer and prism (Continued...)

Lecture 23 - Schuster's method

Lecture 24 - Discussion on angle of the prism, angular dispersion and dispersive power of given prism

Lecture 25 - Determination of the angle of prism

Lecture 26 - Determination of the angle of minimum deviation for a given prism and hence to determine the refractive index of the material of the prism

Lecture 27 - Discussion on the angle of incidence and corresponding deviation of light through a prism and hence to determine the refractive index of the material of the prism

Lecture 28 - Determination of the angle of minimum deviation from (i-D) plot for a given prism and hence to determine the refractive index of the material of the prism

Lecture 29 - Determination of the calibration plot of deviation versus wavelength for a given prism and hence to determine the refractive index of the material of the prism

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- Lecture 30 - Determination of the dispersive power, Cauchy constant and resolving power of a given prism.
- Lecture 31 - Interference Phenomena
- Lecture 32 - Interference Phenomena (Continued...)
- Lecture 33 - Interference Phenomena (Continued...)
- Lecture 34 - Bi-prism
- Lecture 35 - Bi-prism (Continued...)
- Lecture 36 - Interference phenomena by Newton ring (Theory)
- Lecture 37 - Interference phenomena by Newton ring (Experiment)
- Lecture 38 - Michelson interferometer (Theory)
- Lecture 39 - Michelson interferometer (Experiment)
- Lecture 40 - Theory of diffraction
- Lecture 41 - Theory of diffraction (Continued...)
- Lecture 42 - Theory of diffraction (Continued...)
- Lecture 43 - Single slit diffraction
- Lecture 44 - Double slit diffraction
- Lecture 45 - Plane transmission grating
- Lecture 46 - Plane transmission grating (Continued...)
- Lecture 47 - Theory of polarization
- Lecture 48 - Theory of polarization (Continued...)
- Lecture 49 - Experiment for Verification of Malus law
- Lecture 50 - Experiment for Brewster angle
- Lecture 51 - Experiment for Brewster angle
- Lecture 52 - Experiment on e-ray and o-ray
- Lecture 53 - Polarimeter
- Lecture 54 - Zone-plate Theory
- Lecture 55 - Zone-plate Experiment
- Lecture 56 - Theory of Photoelectric Effect
- Lecture 57 - Experiment on Photoelectric Effect
- Lecture 58 - Thomson experiment to determine the specific charge of an electron (e/m)
- Lecture 59 - Frank-Hertz Experiment
- Lecture 60 - Experiment on Rydberg constant
- Lecture 61 - Experiment on Rydberg constant (Continued...)