

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

NPTEL Video Course - Mechanical Engineering - NOC: Fundamentals of Conduction and Radiation

Subject Co-ordinator - Prof. Dipankar N. Basu

Co-ordinating Institute - IIT - Guwahati

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

Lecture 1 - Relationship of Thermodynamics with Heat transfer
Lecture 2 - Modes of heat transfer
Lecture 3 - Fourier's law and thermal conductivity
Lecture 4 - Generalized heat diffusion equation
Lecture 5 - Heat diffusion equation in curvilinear coordinates
Lecture 6 - Concept of thermal resistance
Lecture 7 - Use of network of resistances in wall and cylinder
Lecture 8 - Critical thickness of insulation
Lecture 9 - Conduction with energy generation - I
Lecture 10 - Conduction with energy generation - II
Lecture 11 - General Heat Transfer Analysis
Lecture 12 - Fins with uniform cross-section area - I
Lecture 13 - Fins with uniform cross-section area - II
Lecture 14 - Fins with non-uniform cross-section area
Lecture 15 - Method of Separation of Variables
Lecture 16 - Graphical approach
Lecture 17 - Method of Superposition
Lecture 18 - Lumped capacitance approach - I
Lecture 19 - Lumped capacitance approach - II
Lecture 20 - Semi-infinite Solid
Lecture 21 - Steady Heat Conduction
Lecture 22 - Unsteady Heat Conduction
Lecture 23 - Problem solving using Energy Balance Method
Lecture 24 - Introduction to radiative heat fluxes
Lecture 25 - Spectral and directional definitions
Lecture 26 - Blackbody radiation
Lecture 27 - Emissivity
Lecture 28 - Irradiation of real surfaces
Lecture 29 - View factor

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 - Blackbody radiation exchange
Lecture 31 - Radiation networks
Lecture 32 - Gas radiation
Lecture 33 - Radiative Transfer Equation