

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

NPTEL Video Course - Mechanical Engineering - NOC:Applied Thermodynamics

Subject Co-ordinator - Prof. Niranjan Sahoo

Co-ordinating Institute - IIT - Guwahati

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

- Lecture 1 - Thermodynamic Systems and Pure Substance
- Lecture 2 - Heat and Work Transfer - First Law of Thermodynamics
- Lecture 3 - Second Law of Thermodynamics
- Lecture 4 - Entropy and Exergy
- Lecture 5 - Introduction to Steam Power Plant
- Lecture 6 - Thermodynamics aspects of Steam Power Plant-Efficiency and Work ration
- Lecture 7 - Rankine Cycle and its analysis
- Lecture 8 - Improvement in Rankine Cycle Efficiency: Superheating and Reheating
- Lecture 9 - Improvement in Rankine Cycle Efficiency: Reheating and Regenerative Methods
- Lecture 10 - Improvement in Rankine Cycle Efficiency: Regenerative Methods
- Lecture 11 - Regenerative Cycles
- Lecture 12 - Impulse Steam Turbine: Velocity Diagrams,Work Transfer,Blade Efficiency
- Lecture 13 - Impulse Steam Turbine: Velocity Diagrams,Work Transfer,Blade Efficiency (Continued...)
- Lecture 14 - Reaction Steam Turbine
- Lecture 15 - Reaction Steam Turbine: Velocity Diagram, Work transfer, Blade Efficiency
- Lecture 16 - Steam Nozzle: Analysis and Efficiency
- Lecture 17 - Steam Nozzle: Analysis and Efficiency (Continued...)
- Lecture 18 - Boilers and Condensers
- Lecture 19 - Condensers and Second Law Analysis of Steam Power cycle
- Lecture 20 - Exergy Analysis of a Steam Turbine
- Lecture 21 - Numerical Problems: Steam Power Cycle
- Lecture 22 - IC engine-Components, Nomenclature and Classifications
- Lecture 23 - Basic Engine Cycle and Engine Kinematic Analysis
- Lecture 24 - Engine Operating Characteristics
- Lecture 25 - Thermodynamics Analysis of Air Standard Cycles
- Lecture 26 - Valve Timing Diagram and Fuel-Air Cycle
- Lecture 27 - Thermochemistry and Fuel Characteristics
- Lecture 28 - Combustion Phenomena in Engines
- Lecture 29 - Heat Transfer Analysis in Engines

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- Lecture 30 - Exergy Analysis and Engine Emission/Pollution
- Lecture 31 - Gas Turbine Engine-Components and Thermal Circuit
- Lecture 32 - Gas Turbine Performance Cycle - I
- Lecture 33 - Gas Turbine Performance Cycle - II
- Lecture 34 - Real Gas Turbine Performance Cycle
- Lecture 35 - Aircraft Propulsion Cycle - I
- Lecture 36 - Aircraft Propulsion Cycle - II
- Lecture 37 - Vapour Compression Refrigeration System - I
- Lecture 38 - Vapour Compression Refrigeration System - II
- Lecture 39 - Absorption Refrigeration and Refrigerants
- Lecture 40 - Fundamentals of Psychrometrics
- Lecture 41 - Air-Conditioning Processes
- Lecture 42 - Cooling Tower and Air Washers
- Lecture 43 - Reciprocating Compressor - Analysis and Modelling
- Lecture 44 - Multistage Compression - Analysis and Modelling