

Courses

Mechanical Engineering

Refrigeration and Air Conditioning (Web)

Syllabus

Co-ordinated by : IIT Kharagpur

Available from : 2009-12-31

Lec :1

Modules / Lectures

History Of Refrigeration

- History Of Refrigeration ()

History Of Refrigeration ? Development Of Refrigerants And Compressors

Applications Of Refrigeration & Air Conditioning

Review of fundamental principles ? Thermodynamics : Part I

Review of fundamental principles ? Thermodynamics : Part II

Review of fundamentals: Fluid flow

Review of fundamentals: Heat and Mass transfer

Methods of producing Low Temperatures

Air cycle refrigeration systems

Vapour Compression Refrigeration Systems

Vapour Compression Refrigeration Systems:Performance Aspects And Cycle Modifications

Multi-Stage Vapour Compression Refrigeration Systems

Multi-Evaporator And Cascade Systems

Vapour Absorption Refrigeration Systems

Vapour Absorption Refrigeration Systems Based On Water-Lithium Bromide Pair

Vapour Absorption Refrigeration Systems Based On Ammonia-Water Pair

Refrigeration System Components: Compressors

Performance Of Reciprocating Compressors

Rotary, Positive Displacement Type Compressors

Centrifugal Compressors

Condensers & Evaporators

Expansion Devices

Analysis Of Complete Vapour Compression Refrigeration Systems

Refrigerants

Psychrometry

Psychrometric Processes

Inside And Outside Design Conditions

Psychrometry Of Air Conditioning Systems

Evaporative, Winter And All Year Air Conditioning Systems

Cooling And Heating Load Calculations - Estimation Of Solar Radiation

Cooling And Heating Load Calculations -Solar Radiation Through Fenestration - Ventilation And Infiltration

Cooling And Heating Load Calculations -Heat Transfer Through Buildings - Fabric Heat Gain/Loss

Cooling And Heating Load Calculations -Estimation Of Required Cooling/Heating Capacity

Selection Of Air Conditioning Systems

Transmission Of Air In Air Conditioning Ducts

Design Of Air Conditioning Ducts

Space Air Distribution

Ventilation For Cooling

Web Content

Downloads

