Techno India NJR Institute of Technology

Academic Administration of Techno NJR Institute

Syllabus Deployment

Name of Faculty	: Mr. Harish Bairwa	Subject Code: 5ME4-22
Subject	: Heat Transfer Lab	
Department	: Mechanical Engineering	Sem: V
Total No. of Labs Planned: 12		

COURSE OUTCOMES:

At the end of this course students will be able to:

CO1: Determine Thermal Conductivity.
CO2: Determine Stefan Boltzmann Constant.
CO3: Estimate heat transfer coefficient.
CO4: Measure heat transfer coefficient in free convection
CO5: To Study and Compare LMTD and Effectiveness
CO6: Analyze rates of heat transfer for different materials

S. No.	Name Of Experiment
1	To Determine Thermal Conductivity of Insulating Powders.
2	To Determine Thermal Conductivity of a Good Conductor of Heat (Metal Rod).
3	To determine the transfer Rate and Temperature Distribution for a Pin Fin.
4	To Measure the Emissivity of the Test plate Surface.
5	To Determine Stefan Boltzmann Constant of Radiation Heat Transfer.
6	To Determine the Surface Heat Transfer Coefficient For Heated Vertical Cylinder in Natural Convection.
7	Determination of Heat Transfer Coefficient in Drop Wise and Film Wise condensation.
8	To Determine Critical Heat Flux in Saturated Pool Boiling.
9	To Study and Compare LMTD and Effectiveness in Parallel and Counter Flow Heat Exchanger
10	To Find the Heat transfer Coefficient in Forced Convection in a tube

11	To study the rates of heat transfer for different materials and geometries
12	To understand the importance and validity of engineering assumptions through the lumped heat capacity method.

TEXT/REFERENCE BOOKS

1. J.P. HALMAN, HEAT TRANSFER, MC GRAW HILL
2. CENGEL, HEAT AND MASS TRANSFER, MC GRAW HILL