HEAT TRANSFER LAB

Course Code	20ME3551	Year	III	Semester	I
Course Category	Programme core	Branch	ME	Course Type	Lab
Credits	1.5	L-T-P	0-0-3	Pre-requisites	
Continuous Internal Evaluation	15	Semester End Evaluation	35	Total Marks	50

Course outcomes: At the end of the course, the student will be able to:

CO	Statement	Skill	Blooms	Experiments
CO1	Determine Thermal conductivity of Insulating powder and for given metal Rod.	Apply	L3	1,2
CO2	Evaluate heat transfer through lagged pipe, Drop and Film wise condensation, Pin Fin, Forced convection, Natural Convection.	Apply	L3	3,4,5,6,7
CO3	Measure the Overall Heat transfer coefficient for Composite Wall and for Parallel and Counter Flow Heat Exchanger.	Apply	L3	8,9
CO4	Test Critical Heat flux, Stefan Boltzmann Constant and Emissivity Value	Apply	L3	10,11,12

Contribution of Course Outcomes towards achievement of Program Outcomes & Strength of correlations (H:High, M: Medium, L:Low)

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	1	2		3									3	3
CO2	1	2		3									3	3
CO3	1	2		3									3	3
CO4	1	2		3									3	3

LIST OF EXPERIMENTS

Expt No	Contents	Mapped CO
I	Determination of Thermal Conductivity for a given Asbestos Insulating powder	CO1
II	Determination of Thermal Conductivity for a Given Copper Metal Rod.	CO1
III	Determination of Heat Transfer through Lagged Pipe.	CO2
IV	Determination of Heat Transfer through Drop Wise and Film Wise Condensation.	CO2
V	Determination of Heat Transfer through Pin-Fin.	CO2
VI	Determination of Heat Transfer through Forced Convection	CO2
VII	Determination of Heat Transfer through Natural Convection.	CO2
VIII	Determination of Overall Heat Transfer Coefficient for Composite Wall.	CO3
IX	Determination of overall heat transfer coefficient for Parallel and Counter Flow Heat Exchanger.	CO3
X	Determination of Critical Heat Flux for a given Nichrome wire.	CO4
XI	Measurement of Stefan Boltzmann constant.	CO4
XII	Emissivity Measurement	CO4