NIIST BHOPAL		NRI INSTITUTE OF INFORMATION SCIENCE & TECHNOLOGY DEPARTMENT NAME: MECHANICAL ENGINEERING LIST OF EXPERIMENTS	FORM NO	NIIST/A/10
BRANCH	ME		REV. NO	0
SESSION			REV. DT	30/06/2011

SUBJECT NAME: Heat & Mass Transfer SUBJECT CODE: ME-701

1	Conduction through a rod to determine thermal conductivity of material
2	Forced and free convection over circular cylinder
3	Free convection from extended surfaces
4	Parallel flow and counter flow heat exchanger effectiveness and heat transfer rate
5	Calibration of thermocouple
6	Experimental determination of Stefen-Boltzman constant

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BRANCH	ME		REV. NO	0
SESSION			REV. DT	30/06/2011

SUBJECT NAME: CAD/CAM /CIM SUBJECT CODE: ME-704

1	2D and 3D modeling on CAD software
2	Use of CAM software for writing CNC programs
3	Study of automatic and semi automatic control system and writing the electrical analogy.
4	Production & layout for GT for group of jobs to be manufactured
5	A case study / tutorial using CAPP Software
6	Writing M & G codes for given operations.
7	Robot and AGV programming
8	Modelling and simulation of computer integrated manufacturing system'
9	Modelling,offline manual part programming and simulation of the operation of 3 axis CNC milling machine
10	Programming and operation of a 5 axis robot Manipulator
11	Remote monitoring and operation of Computer integrated manufacturing system
12	To write the part program for any component (stepped cylindrical rod) . Assuming the work piece is Aluminum and the speed is 1200 rpm, feed 20 mm/min and maximum depth of cut is 1 mm. a. With Canned cycle b. Without Canned cycle.

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BRANCH	ME		REV. NO	0
SESSION			REV. DT	30/06/2011

SUBJECT NAME: MATLAB and R Programming **SUBJECT CODE: ME-705**

1	Introduction to MATLAB
2	Working with matrices
3	Rational and logical operation of MATLAB
4	Creating a plot using Plot function
5	Complex and stastical functions (e.g.: Produce ten elements vector of random complex numbers and find the summation of this vector)
6	Numbers and strings (1.Write a program in M-File to read 3 x 3 Matrix, then display the diagonal of matrix as shown below: The Diagonal of This Matrix = [ ]
7	Write a program to read a string, then replace each character in the string with its following character in ASCII code*.)

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