



Maharaja Agrasen Institute of Technology

(Approved by AICTE & Affiliated to GGSIP University, New Delhi)

PSP area, Plot No.-1 Sector-22, Rohini, New Delhi – 110085

Ph. No. : 011-27582095 , 65151162/63 , 65162001

Website: www.mait.ac.in

Paper Code(s): ETEE-258	L	P	C
Paper: Electrical and Electronic Measuring Instruments Lab	-	2	1

Marking Scheme:

1. Teachers Continuous Evaluation : 40 marks
2. Term end Theory Examinations: 60 marks

Instructions:

1. The course objectives and course outcomes are identical to that of (Network Analysis and Synthesis) as this is the practical component of the corresponding theory paper.
2. The practical list shall be notified by the teacher in the first week of the class commencement under intimation to the office of the Head of Department / Institution in which the paper is being offered from the list of practicals below. Atleast 10 experiments must be performed by the students, they may be asked to do more. Atleast 5 experiments must be from the given list.

Course Outcome(CO)

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

CO.ETEE.258.1	Calculate passive elements R,L,C using various ac bridges.
CO.ETEE.258.2	Illustrate the method of measuring phase,frequency,inductance and capacitance using CRO.
CO.ETEE.258.3	Evaluate 3-phase power by two wattmeter methods.
CO.ETEE.258.4	Testing of 1-phase and 3-phase energy meters.

List of Experiments:

1. Testing of single phase and three phase electromechanical and electronic energy meters.
2. Measurement of three phase power by two wattmeters using instrument transformer.
3. Study and demonstration of Trivector Meter.
4. Calibration of D.C. and A.C. potentiometers.
5. Measurement of low resistance using Kelvin's double bridge.
6. Measurement of inductance using Maxwell's bridge/ Hay's bridge/ Anaderson's bridge/ Owen's bridge.
7. Measurement of capacitance using Desauty Bridge/ Schering Bridge.
8. Study and demonstration of universal / electronic counter and measurement of frequency and time period.
9. Measurement of inductance and capacitance using C.R.O.
10. Measurement of phase and frequency using C.R.O.
11. R.F. Power Measurement.
12. Study and use of different types of Recorders / Printers.

NOTE: Atleast 8 Experiments out of the list must be done in the semester.

List of Experiments		
Exp No	CO	Experiment
Exp 1	CO4	Testing of single phase and three phase electromechanical and electronic energy meters.
Exp 2	CO3	Measurement of three phase power by two wattmeters using instrument transformer.
Exp 3	CO1	Measurement of low resistance using Kelvin's double bridge.
Exp 4	CO1	Measurement of inductance using Maxwell's bridge/ Hay's bridge/ Anderson's bridge/ Owen's bridge.
Exp 5	CO1	Measurement of capacitance using Desauty Bridge/ Schering Bridge.
Exp 6	CO2	Measurement of inductance and capacitance using C.R.O.
Exp 7	CO2	Measurement of phase and frequency using C.R.O.
Exp 8	CO3	Study and use of different types of Recorders / Printers.
Extra 1	CO2	Study of Temperature Sensors.
Extra 2	CO2	Study characteristics of NTC Thermistor and K Type Thermocouple.