

## B.Tech EEE IV Year I- Semester

### ELECTRICAL MEASUREMENTS LAB

#### Course Outcomes:

	<b>ELECTRICAL MEASUREMENTS LAB</b>
	<b>A student will be able to</b>
C418.1	To calibrate - voltmeters, ammeters, single phase energy meter.
C418.2	Analysis based on comparing true and actual value of potentiometer & Power factor meter.
C418.3	To verify dielectric property of oil insulation, Analyze the measuring parameters of Anderson & Schering bridge.
C418.4	To verify practically the concepts of displacement, force, strain, inductance, capacitance & resistance.
C418.5	Examine the output of turns ratio and ratio error of CT.

#### Any ten of the following experiments are required to be conducted

1. Calibration and Testing of single phase energy Meter.
2. Calibration of dynamometer type power factor meter.
3. Crompton D.C. Potentiometer - Calibration of PMMC ammeter and PMMC voltmeter.
4. Kelvin's double Bridge - Measurement of resistance - Determination of Tolerance.
5. Dielectric oil testing using H.T. testing Kit.
6. Schering Bridge & Anderson Bridge.
7. Measurement of 3 Phase reactive power with single-phase wattmeter.
8. Measurement of parameters of a choke coil using 3 voltmeter and 3 ammeter methods.
9. LVDT and capacitance pickup - characteristics and Calibration.
10. Resistance strain gauge - strain measurements and Calibration.
11. Transformer turns ratio measurement using A.C. Bridge.
12. Measurement of ratio error and phase angle of given C.T. by comparison.

#### REFERENCE BOOKS:

1. A Course in Electrical and Electronics Measurements and Instrumentation, A.K.Sawhney, Dhanpat Rai & Co.
2. Electrical and electronics measurements and instrumentation, R.K.Rajput, S.Chand & Company Ltd.