

Laboratory Manual

For

TRANSDUCER LAB.

(IE-212)

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DOs and DON'Ts in Transducer lab.

Dos

1. Come prepared and on time for laboratory experiments.
2. Read all the instructions of the experiment carefully.
3. Select the measuring instruments for the designated range of the equipment's.
4. Always wear tight dresses and rubber shoes in the laboratory.
5. Make all the connections neat and tight.
6. Always increase the voltage or current gradually.
7. Use additional safety precautions for particular experiment, if any.

DON'Ts

1. Never touch any live terminal by bare hands.
2. Never turn on the main switches of any experiment without getting checked the circuit by laboratory instructor.
3. Never turn on any circuit at full supply voltage, even if the reading is desired at rated voltage.

COURSE OUTCOMES:

After successful completion of course, the students should be able to

CO1: Introduce different types of transducers.

CO2: Learn the construction and the working principle of Resistive transducer, Inductive transducer, Piezoelectric transducer, Capacitive transducer.

CO3: Study classification and construction of different Digital Encoding transducers.

CO4: Know different types of Photo emissive, Photovoltaic and Photoconductive cells.

CO5: Describe the Load Cell, Strain Gauge and Inductive Torque Meter.

To understand the practicability of sensors and transducers, the list of experiments is given below to be performed in the laboratory.

S. No.	Name of Experiment	Page No.	Remarks
1	To study the characteristics of LVDT	4	
2	To study the characteristics of Variable Capacitor.	6	
3	To study the characteristics of Light Dependent Resistor	9	
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5	To study the characteristics of Crompton Potentiometer.	13	
6	To study the characteristics of Resistance Temperature Detector	16	
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