

32084 – MECHANICAL INSTRUMENTATION PRACTICAL

DETAILED SYLLABUS

OBJECTIVES

- Handle various instruments
- Analyze the result of calibration of thermister
- Interpret calibration curve of a rotameter
- Evaluate the stress induced in a strain gauge
- Test and calibration of a thermocouple
- Draw the calibration curves of rotameter and thermister
- Measure various parameters using instruments
- Study of control system with the help of suitable practical application by arranging
- Know the measurement and control laboratory and study the specifications of measuring Instruments /devices.

EXERCISES

1. Find the static characteristics of instruments with demonstration of any one measuring instrument.
2. Measure displacement by using inductive transducer. (Linear variable displacement transducer i.e. LVDT) and verify its characteristics.
3. Measure negative pressure or vacuum using McLeod gauge / Bourdon tube pressure gauge.
4. Measure temperature by thermocouple and verifying by thermometer.
5. Measure flow of liquid by rotameter.
6. Measure liquid level by capacitive transducer system.
7. Measure speed of rotating shaft by stroboscope / magnetic / inductive pick up.
8. Measure force or weight by load cell.
9. Measure strain by using basic strain gauge and verify the stress induced.
10. Measurement of Torque.