

ELL 301

01.01.2019

ELECTRICAL & ELECTRONIC INSTRUMENTATION

Instruments

↳ Examples (electric/electronic-based)

① Oscilloscope, Ammeter (Clamp-based)

Digital Multimeter, Voltmeter, Wattmeter

Energy meter, Tachometer, Spectrum Analyzer

Instrument: A device to measure quantity of a variable.

↳ Sensors & Transducers

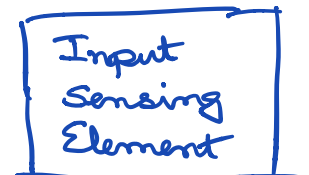
② Temperature (Thermistors, RTDs, Thermocouples, ...)

Humidity

Pressure

Strain

Application: Soil & Water sensors.



↳ Theory of Measurement

③ • Characteristics of instruments
- linearity, accuracy, precision, sensitivity

• Units & Standards

Grading Policy

MAJOR TEST - 35%

MINOR TESTS (2) - 40%. (20% EACH)

HOMEWORK - 25%

[AUDIT PASS - 60%.]

Rest as per Institute rules.

Books for Reference

- Bouwens, Digital Instrumentation
 - A.K. Sawhney, A course in electronic measurement and Instrumentation
 - Nakra & Chandhury,
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