

GUJARAT TECHNOLOGICAL UNIVERSITY

B. E. SEMESTER: V

INSTRUMENTATION AND CONTROL ENGINEERING

Subject Name: **Practices in Measurement**

Subject Code: **151705**

Teaching Scheme				Evaluation Scheme		
Theory	Tutorial	Practical	Total	University Exam (Theory) (E)	Mid Sem Exam (Theory) (M)	Practical (I)
0	0	4	4	0	0	100

Sr. No.	Course content
1.	Obtain RTD curve. Temperature measurement using RTD (two wire, three wire, and four wire configuration in Wheatstone Bridge)
2.	Temperature measurement using RTD (Four wire configuration with constant current excitation)
3.	Thermoelectricity law's verifications and obtaining and verifying thermocouple tables.
4.	Temperature measurement with thermocouple. Implement cold junction compensation
5.	Design resistive level transducer
6.	Measuring level using capacitive transducer
7.	Observing flow dynamics in pipe with various pressure tapping
8.	Flow measurement with orifice
9.	Flow measurement with venturi
10.	Flow Measurement with rotameter
11.	Using Dead weight tester and calibrating bourdon pressure gauge
12.	Obtain characteristic of thermistor. Designing On-OFF temperature controller with thermistor
13.	Level measurement using air – purge system
14.	Level measurement using ultrasonic transducer
15.	Level switch design using float

Note:

In this laboratory course instructor has to plan minimum 10 experiments, depending on laboratory facilities available, out of above experiments

Instructor can device advance experiment other than above listed experiments, from the course on Industrial Measurement – 1, if facilities are available.